Boston University School of Public Health

Student Practicum Abstracts

Spring 2012



BUSPH STUDENT PRACTICUMS SPRING 2012

The BUSPH Office of Public Health Practice is pleased to present the Spring 2012 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 fall practicum students?

20 Cities and Towns 4 States across the U.S. 5 Countries



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BIOSTATISTICS

Name: Sheryl Kelley

Practicum Site: Boston Medical Center, Section of Geriatrics

Location: Boston, MA

Title: Research Assistant - Long Life Study

Introduction: The Section of Geriatrics at Boston Medical Center participates in the largest and most comprehensive studies of centenarians and their families in the world. The two major studies are the New England Centenarian Study and the Long Life Family Study. With funding from the National Institute on Aging (NIA), these studies pursue the goal of understanding the determinants of longevity. Extensive data is collected on socioeconomic, physical, emotional, and the cognitive health of all study participants.

Methods: Participating as a research assistant for both the New England Centenarian Study and Long Life Family Study required the attainment of both a broad understanding of both studies in addition to a working knowledge of each study protocol. Various types of telephone interviews were conducted with study participants and the data collected was entered into study specific databases. Research on previous publications for both studies was pursued regularly and the data set for Long Life Family Study was explored for future research interests.

Conclusion: While the Long Life Study is now closed to enrollment, data continues to be collected for both studies and analysis of the data collected is ongoing. The pursuit of future research interests and exploration of the Long Life Family Study has led to a statistical analysis of Episodic Memory that is ongoing at this time.

Name: Ainsley Ross

Practicum Site: Boston University - India Research and Outreach Initiative

Location: Boston, MA

Title: Health Status and Social Determinants of Health Assessment Among Women in Rural India

Introduction: The BU India Research and Outreach Initiative is collaboration between students and faculty of the BU Sargent School of Health Sciences and Charutar Arogya Mandal (CAM), a medical school and teaching hospital in the Gujarat province of rural India. Their first research project consisted of a survey administered to approximately 700 women ages 18-45 in rural India, covering questions about heath status and access to health care. The survey was designed to describe the population of women served by CAM, and help identify needs of the community.

Methods: Working with students and faculty, I cleaned the survey data and created descriptive statistics that summarized the demographic characteristics of the women and their health status and health care seeking behaviors. Using multinomial -logistic regression and McNemar's tests, I also performed analysis that examined the relationship between demographic factors and influences on the mothers' choice of health care providers for themselves and for their children. This analysis was submitted as an abstract to the Pediatric Academic Societies Annual Meeting and is currently being adapted for publication.

Conclusion: The results of the analysis provide a clear picture of the demographics, health status, and health care seeking behaviors of women living in the communities served by CAM. In the future; CAM and other local health institutions may use this information to develop future research and outreach programs for their community.

Name: Daniel Stein

Practicum Site: Boston Medical Center - Otolaryngology Department

Location: Boston, MA **Title:** Research Assistant

Introduction: Chronic laryngitis is thought to be common in the population, but there are no published estimates of incidence. My project was to determine the incidence, using data from the Boston Medical Center (BMC) electronic medical record (EMR). I worked with the Otolaryngology department on this project.

Methods: I started by working with the EMR analyst at BMC to identify new cases of chronic laryngitis from within the primary care population within a two-year period using preset criteria. I then collected detailed demographic, symptom and treatment information for 100 randomly selected cases. Using this information and an existing comprehensive database of a specific sub-type of chronic laryngitis, I was able to estimate an incidence rate for this population.

Conclusion: The estimate of the yearly incidence of chronic laryngitis was 19.1 per 1000 people (95% CI 17.8 to 20.4). The 100 subjects consisted of 62 women and 38 men. Race was recorded as Black (46), Hispanic (25), White (17), other (12). Age ranged from 20 to 75, with a mean of 52.6 (standard deviation 12.6) years. Therapies included a proton-pump inhibitor (77%), voice therapy (21%), nasal steroid (15%), anti-histamine (6%), amitriptyline (4%) and no treatment (10%). The most common symptoms reported were hoarseness (59%), cough (37%), pain/soreness (37%), foreign-body sensation (36%), excessive throat clearing (31%), subjective trouble swallowing (26%), and throat irritation (19%). 92% were seen by an otolaryngologist. This data was submitted for poster presentation at the 2012 American Academy of Otolaryngology—Head and Neck Surgery conference.

BIOSTATISTICS

Name: Michael Tobias

Practicum Site: Boston University Center for Global Health & Development - ZamCAT Study

Location: Choma, Zambia **Title:** ZamCat Study Intern

Introduction: The Center for Global Health and Development runs a number of studies in various parts of the world. The ZamCAT study in the Southern Province of Zambia compares application of chlorhexidine to dry cord care, trying to determine if use of the antiseptic during the first 10 days of life will improve the survival rate of infants as compared to dry cord care.

Methods: I joined the data group at the study headquarters in Choma, Zambia. My goal was to help implement and streamline data collection and initial analysis. In particular, I worked with the Teleforms data entry program, to standardize data collection and to make data collection more efficient. In addition, I developed tools in Microsoft Access to help detect and reduce data errors, and to keep track of the overall progress of data collection. I also did some work in Microsoft Excel to help with analysis of data collection efforts. **Conclusion:** Through my work and the work of others, we standardized and streamlined data entry; we also developed tools for detecting data collection and entry errors. In addition, we are able to routinely amalgamate data entered on several computers in a limited network environment. Intelligent users can run a variety of reports to check ongoing data collection without being required to have expertise in design of Access queries or programming. They are also able to run a data export to send an updated set of collected data for further analysis.

ENVIRONMENTAL HEALTH

Name: Zoe Bider-Canfield

Practicum Site: Framingham Board of Health

Location: Framingham, MA

Title: Public Health Environmental Impact Intern

Introduction: The Town of Framingham Massachusetts is the largest Town in the Commonwealth of Massachusetts, and a MassDEP designated Environmental Justice (EJ) Community with a diverse population of over 67,000. Under the guidance of Ethan Mascoop, the Director of Public Health at the Framingham Department of Public Health and Professor Wendy Heiger-Bernays at BUSPH, I worked on a project to assess the potential impact of an electric generating station's stored fuels on the local community.

Methods: In order to determine the potential impact of the stored fuels at electric generating station, visits to the site were conducted, and research was performed on the physical and chemical properties of 15,000 gallons of stored liquid fuel. Meetings with environmental consultants, engineers, as well as with the local fire department were attended to aid in the determination of the risk the plant poses to the local community. Initially the fire department was concerned that the fuel being stored was JP-8, but with further research it was determined that it was Fuel Oil#2. JP-8 is highly flammable; Fuel Oil #2 is not. A report was submitted to the Framingham Board of Health, which included the findings of the research and meetings, as well as suggestions regarding the additional oversight needed at the site.

Conclusion: Recommendations for the renewal of the site assignment and additional needed oversight were submitted to MassDEP. The Framingham BOH has yet to receive a response, and none of the additional oversight that was recommended has been implemented.

Name: Andrea Crete

Practicum Site: The Highlands Long Term Care Center, Infection Control

Location: Fitchburg, MA

Title: Infection Control and Staff Development Coordinator

Introduction: Residents of LTC facilities are at risk for acquiring facility-associated infections and consequent mortality which can be prevented by compliance with infection control guidelines on glove use and hand washing practices. Staff-observed glove use and handwashing practices at the Highlands LTC Center were evaluated to determine factors associated with compliance with infection control policies and WHO guidelines, and were observed on all five floors.

Methods: Staff-resident interactions were selected systematically and were observed if they involved oral feeding, bathing, transferring, excretory care, respiratory care, dispensation of oral medication, wound care, and soiled linen change. A pre-designed checklist for clincial audits was used for observations. Data collected was on Handwashing and Glove use practiced (yes or no); month and year of observations; occupation of staff (RN or CNA); and the type of floor (LTC, Sub-Acute, or Alzhiemers). All data was entered into an excel spreadsheet for data analysis.

Conclusion: Based on the findings of the analysis, the long term care floors had significantly less compliance with infection control guidelines than all other floors. CNA's having the most physical contact with residents had the highest non-compliance with glove use and handwashing practices than RN's. Data from observations were gathered into a report for the infection control nurse. Measures to improve infection-control practices in this facility were recommended. Recommendations focused on the need to better educate and motivate staff members to adhere to infection-control policies.

Name: Bemnet Gessesse

Practicum Site: Thornton & Naumes, LLP

Location: Boston, MA

Title: Evidence for Male Mediated Birth Defects

Introduction: Thornton & Naumes is an injury law firm located in Boston, Massachusetts representing clients in a wide variety of plaintiff-side work. The attorneys who specialize in birth defects help those who have been harmed as a result of occupational exposures to pesticides, solvents as well as chemicals used in the semi-conductor manufacturing industry. My task was to assess and document the biological plausibility of the mechanisms of pre-conception male-mediated birth defects/developmental toxicity as a result of occupational exposures to various toxicants.

Methods: A literature search was conducted to consider weight of evidence data from animal and human studies regarding genetic damage to germ cells resulting from toxic insults and subsequent trans-generational adverse effects observed in offspring. Paternal occupational exposures to ionizing radiation and ethylene glycol were also investigated. Because human sperm with spontaneous genetic defects are capable of fertilization, it remains possible that heritable male germ cell mutations due to chemical and physical agents can be passed on to offspring. Therefore, transmission of epigenetic modifications as a mode of action alternative to germ-line mutagenesis was additionally researched.

Conclusion: Overall, animal studies show stronger evidence for male mediated developmental toxicity than epidemiological studies. With regard to mode of action, gonadal exposure to high doses of ionizing radiation can cause heritable genetic changes. The evidence also suggests that the radiation exposure signal could be inherited through sperm in an epigenetic fashion. Epidemiological studies have found an association between childhood brain tumors and leukemia as well as stunted growth and behavioral effects with preconception paternal ionizing radiation.

ENVIRONMENTAL HEALTH

Name: Baram Kim

Practicum Site: Boston Public Health Commission, Research Office

Location: Boston, MA
Title: Graduate Student Intern

Introduction: IPMIIS is a community-based participatory research study currently being conducted by BPHC, in partnership with Boston Housing Authority (BHA), Committee for Boston Public Housing, Harvard University School of Public Health, BMC and BUSPH. The purpose of IPMIIS is to evaluate the health impacts of employing Integrated Pest Management (IPM) across BHA housing developments. We will have collected data from 480 randomly selected units for individual-, household-, and development-, level analysis by IPMIIS researchers.

Methods: The practicum initially involved month-long training on topics of asthma, mental health, and IPM; on protocol-driven fieldwork involving human subjects; and on environmental sampling. Upon training completion, I started fieldwork at various BHA housing locations, enrolling consenting residents of pre-assigned units in either control or case groups. During study visits, I conducted study interviews, obtained pesticide and allergen samples, recorded pest-related observations, and made referrals to appropriate services as necessary. As outreach, I attended community meetings at each BHA development where I would be working. Weekly meetings with other study teams and supervisors have aided in communication of on-site experiences and uncertainties, and resolution of issues pertaining to fieldwork.

Conclusion: Implementation of IPM may present higher upfront costs than those associated with traditional pest management. IPMIIS seeks to demonstrate that IPM affords comprehensive economic, health, and environmental upstream benefits justifying investment for development-level IPM. Consequently, the results of IPMIIS could shape US Department of Housing and Urban Development policy and funding for IPM in public housing.

Name: Christine Powers Practicum Site: Preserve Location: Waltham, MA

Title: Safe Plastics Project with Transparency Communications Campaign for Preserve

Introduction: Preserve makes stylish, high performance, eco-friendly products for people's homes from 100% recycled polypropylene. Preserve performs testing on their products but wanted to expand their testing protocol and process to exceed regulatory guidelines and share this information with customers. I developed a screening and testing protocol to provide transparency to customers about the safety of Preserve's products and to guide the processing and monitoring of Preserve's recycled polypropylene feedstock.

Methods: I conducted a rigorous scientific literature review of the chemical, physical and toxicological properties of virgin polypropylene; determined additional chemicals not captured in initial review pre-2000; amassed information about testing methods and additives

determined additional chemicals not captured in initial review pre-2000; amassed information about testing methods and additives through discussions with U Mass Lowell Plastics Engineering Department; captured information from the manufacturer about additives in the final products process. Using these sources, a database of chemicals that are either precursors of PP or those potentially identified from the scientific literature was created. The list was compared against the toxicological website ToxCast and organized according to the level of hazard to human health. Prioritization was given to chemicals that showed the highest presence on all toxicological lists which constituted the "red" list. Chemicals which presented on some toxicological websites but not all lists constituted the "orange" list.

Conclusion: The lists serve as a starting point for future testing by Preserve to evaluate the presence of toxic chemicals. I provided an excel spreadsheet with the chemicals of concern and suggested future enhanced migration testing of decontaminated feedstock.

Name: Kathryn Rodgers

Practicum Site: Chelsea Collaborative

Location: Chelsea, MA

Title: New Methods for Analysis of Cumulative Risk in Urban Populations

Introduction: The BUSPH and the Chelsea Collaborative have a research partnership to study cumulative health risk in the city of Chelsea, MA. This study collects data through structured interviews to examine the combinations of environmental exposures and people's responses to stressful life events as a means of assessing cumulative health risk. It is a novel concept for environmental health studies to incorporate stress and pollutant variables in health risk analyses. This mixed methods study will examine associations between multiple variables using structural analyses.

Methods: As a member of the research team, we developed our recruitment protocol and fine-tuned the interview guide. Responsibilities included recruiting in Chelsea via door-knocking, consenting participants, and conducting 1.5 hour interviews in the participants' homes (in teams of two). We recruited within five census tracts in Chelsea, and data from the 2010 US Census guided the target number of participants from each census block. We used geocoded data collected by Massachusetts General Hospital on food availability in the 49 food stores in Chelsea to create spatial representations healthy food availability through a series of maps using ArcGIS.

Conclusion: The results from this study will be used for community improvements and research purposes. The associations found from the data analysis may inform future studies regarding effects of chemical and non-chemical exposures. The maps representing healthy food access can be a comparison tool in analyzing people's food stresses and habits, as learned through the interviews.

ENVIRONMENTAL HEALTH

Name: Tiffany Skogstrom

Practicum Site: Toxics Use Reduction Institute

Location: Lowell, MA

Title: Toxics and the State of Garment Care in Massachusetts

Introduction: Established by the Massachusetts Toxics Use Reduction Act (TURA) of 1989, the Toxics Use Reduction Institute (TURI) at the University of Massachusetts Lowell collaborates with businesses, such as dry cleaners, to reduce the use of toxic chemicals. Currently, dry cleaners voluntarily report their use of perchloroethylene, a toxic solvent, to the state through the Department of Environmental Protection's Environmental Results Program (ERP). The purpose of my practicum is to determine whether the existing data collection system accurately captures the processes and chemicals currently used.

Methods: My practicum involved identifying dry cleaning processes used in Massachusetts. Activities included analyzing present day ERP dry cleaning data through 2008, and conducting an online survey and in person interviews with dry cleaners, garment care trade associations, and detergent vendors.

Conclusion: My goal is to create a 'State of Garment Care' Report for TURI which will reveal the reality of chemical use, identify further opportunities for toxics use reduction, and improve data collection. Thus far, interviews and survey results suggest that many perchloroethylene users are simultaneously using and moving toward wet cleaning processes. Although this is an environmentally preferable method of garment care, it is not yet reflected or collected in ERP's current data collection system. In the meantime, some perchloroethylene users completely fall off the regulatory radar. This 'State of Garment Care' report will give recommendations for improved environmental tracking in the dry cleaning industry while giving positive recognition to 'wet cleaners' by connecting them to and listing them on TURI's website.

Name: Gauri Apte

Practicum Site: Boston Medical Center, Department of Obstetrics and Gynecology

Location: Boston, MA

Title: Statistical analysis of HPV vaccine acceptance in parents of males

Introduction: Although the HPV vaccine has been available for males since 2009, its uptake remains very low. This study was aimed at assessing the determinants of HPV boys aged 9-17 years, through assessment of intent to vaccinate among parents of sons and uptake of vaccine in their sons.

Methods: This was a mixed-method interview study performed at an academic hospital and a community health center between 2011 to 2012. My work involved analysis of the quantitative portion of collected questionnaire data. I utilized SAS to compare demographic characteristics and knowledge about HPV and vaccine among the parents of sons by race; and compared the attitudes towards vaccination by intent to vaccinate and by vaccine uptake. Using relevant variables from this univariate analysis, I created a multivariate logistic regression model, to derive the odds of intention to vaccinate and odds of vaccination for each of the chosen variables.

Conclusion: A total of 120 parents participated: 68 Black, 24 White, and 28 Latino. White parents knew significantly more about HPV and HPV vaccination than Black and Latino parents. Most parents intended to vaccinate their sons if offered vaccine by their physicians, but only 30% sons received vaccination. In multivariate analyses, parental age >50 and preferring to receive vaccine information from the internet were associated with intention to decline vaccination. Factors associated with vaccine receipt were receiving care at the community clinic rather than the academic medical center, Latino race, older age of son (>15 vs. <14), and intention to receive the vaccine.

Name: Amy Bettano

Practicum Site: Boston Medical Center, Department of Quality Improvement

Location: Boston, MA

Title: Assistant Researcher and Main Data Analyst for the BMC's Quality Improvement Project for Transmission Precautions

Introduction: With almost 100,000 deaths each year, hospital-acquired infections remain an important source of concern for the health care industry. As such, it is important to follow transmission precautions to prevent the spread of infections between patients and the providers who work at the hospital. The practicum involved helping to design and execute a quality improvement project aimed at increasing compliance with transmission precautions at the BMC.

Methods: I met with the medical fellows at the BMC interested in completing this quality improvement study and helped them to refine their original plan into an executable study. Then I observed hand-washing compliance of hospital staff to determine the transmission precaution observance baseline. The next step was to present our findings to the individuals in charge of each of the staff groups we observed. After that, we began a rapid cycle method (initiating changes and continually observing results) of quality improvement to generate improvements as quickly as possible. Finally, we observed compliance again to see if our quality improvement program had had any effect.

Conclusion: Overall compliance with transmission precautions in the first round was approximately 35% for all hospital staff. This information was passed along to the medical staff. The next week, after an educational piece on the proper transmission precautions, precautions were observed again and it was found that the compliance level had not changed in a statistically significant way. The next step is going to be designing a more comprehensive educational piece.

Name: James Buszkiewicz

Practicum Site: Massachusetts Department of Public Health, Asthma Prevention and Control Program

Location: Boston, MA

Title: READY Study Contracted Student Intern

Introduction: Racial and ethnic disparities have been observed among Massachusetts children with respect to the burden, frequency, and severity of their asthma symptoms. The Reducing Ethnic/Racial Asthma Disparities in Youth 1 (READY1) study, funded by the American Recovery and Reinvestment Act, and the READY2 study, funded by the U.S. Department of Housing and Urban Development, are two asthma intervention programs based at the Massachusetts Department of Public Health, in conjunction with Boston Medical Center and Baystate Medical Center, to reduce disparities and improve asthma control and management. The interventions take place through a series of six home visits focusing on the removal of potential asthma triggers within the child's home and education.

Methods: Using the six existing study questionnaires to assess the home environment, medication use, and the frequency and severity of asthma symptoms, I created the first READY1 and READY2 study databases using Access 2003. Data was then entered into the newly created databases from preliminary forms obtained from the two study sites. Initial descriptive statistics, including demographic characteristics and home environmental and asthma assessments, were then generated using SAS version 9.3.

Conclusion: Initial results for READY2 will be generated for the purposes of grant review in April 2012. The ultimate goal is to show that improvements in the home environment, through the reduction of asthma triggers, and in medication use will result in a reduction in the frequency and severity of asthma symptoms and, overall, improve asthma control in study participants.

Name: Ignacio De La Cruz

Practicum Site: Center for Research to Evaluate and Eliminate Dental Disparities (CREEDD)

Location: Boston, MA

Title: Analysis of Dental Caries Risk Factors

Introduction: The mission of CREEDD is to improve oral, dental, and craniofacial health through research, research training, and the dissemination of health information, with a focus on oral health disparities in children. I explored a dataset created to examine the relationship between dietary factors and the risk of early childhood caries. The dataset contained dietary information (Block Kids 2-7 FFQ) and clinical exam findings on children aged 2 to 6-years recruited from pediatric dental clinics at children's hospitals in Washington D.C. and Columbus and Cincinnati, OH.

Methods: I conducted a secondary data analysis of nutritional and clinical data collected on 322 children, ages 2 to 6 years, and who were followed for 6 months. I used the T-test and χ^2 test to compare the diets, along with several socio-demographic characteristics, of children who developed caries to those who did not develop caries over the 6 month follow-up period. Multivariate logistic regression was used to control for confounding.

Conclusion: The children with incident dental caries over 6 months did not significantly differ from the children who remained cariesfree in regards to various socio-demographic characteristics and nutritional factors. I was able to apply several skills I learned in my public health classes, such as critically reviewing journal articles and applying strategies to control for confounders in a study.

Name: Daniella DiNizo

Practicum Site: Boston University Medical Center, Alzheimer's Disease Center

Location: Boston, MA

Title: Study Coordinator for the Home-Based Assessment Study at the BU Alzheimer's Disease Center

Introduction: The multi-center Home-Based Assessment (HBA) study overseen by the Alzheimer Disease Cooperative Study evaluates the accuracy of various home-based methods at preventing and diagnosing Alzheimer's disease (AD) among the elderly. Through the BU Alzheimer's Disease Center (ADC), participants were screened, enrolled, and randomized into three at-home study arms—using computer, automated telephone, or traditional telephone assessments. These at-home assessments will be compared to results from costly, in-person visits to determine if they yield similar results. The study gains access to individuals who may be restricted to their homes and were previously neglected in research.

Methods: As BU site coordinator, I am responsible for retaining subject participation through the final study visit, establishing data required to compare the "gold standard" and the experimental, at-home assessments.

Conclusion: At BU, 44 individuals were contacted and 27 participants were screened. Only one participant discontinued between screening and baseline; since then, three participants have been lost to follow-up. For the nationwide study, 640 were randomized and 59 (9.2%) were lost between screening and baseline. The number currently lost to follow-up is unavailable; however, it was larger than expected which initiated a Retention Satisfaction Survey. As coordinator, some difficulties with follow-up related to misinforming subjects throughout the study and differential administration between sites. HBA data are currently being collected and results are not yet available. Attempting to minimize loss to follow-up and uphold research quality was difficult but enlightening. Important lessons include importance of maintaining honesty with participants and emphasis on proper investigator training.

Name: Eric Etchill

Practicum Site: Boston University School of Medicine, Department of Biomedical Genetics

Location: Boston, MA
Title: Research Assistant

Introduction: Medical researchers and public health professionals have focused much effort on furthering our understanding of Alzheimers disease (AD) etiology and identifying risk factors that contribute toward AD's onset, progression, and severity. Our research examined heritability of pre-clinical traits associated with the onset and progression of AD, advancing the goals of early detection discovery, mechanism elucidation, treatment, and prevention.

Methods: Data from the Framingham Heart Study was analyzed to determine heritability of MRI and cognitive endophenotypes with AD development, and co-heritability of endophenotype combinations. A bivariate, Genome-Wide Association Study (GWAS) was then conducted on the most co-heritable MRI-cognitive endophenotype pair to identify single nucleotide polymorphisms (SNP) markers most associated with the trait combination. The results of the GWAS directed further study, including gene-based association studies and assessment of protein interaction pathways, resulting in the selection of potential candidate genes responsible for expression of the endophenotype pair.

Conclusion: Twenty-four MRI and cognitive traits were found to be heritable with future AD. The most co-heritable MRI-cognitive trait combination among the AD-heritable traits was temporal horn brain volume (THBV) and trail-making test B scores. This pair drove our subsequent GWAS seeking a genetic basis for the pre-clinical endophenotypes co-heritable with future AD. The results indicate that several SNPs are associated with the co-heritability of THBV and TrB scores. Subsequent regional analyses implicate several genes that may contribute to this co-heritability. Based on a combination of evidence, the genes selected for candidate gene analysis are SPON1, DICER1, GPR177, ADCY9, VAMP3, and FOXF2.

Name: Mariya Fishbeyn

Practicum Site: Nurses' Health Study

Location: Boston, MA

Title: Biospecimen Collection Pilot Study, Nurses' Health Study III (NHS3)

Introduction: The Nurses' Health Study III is currently being launched to examine how hormone preparations, dietary patterns, and nursing occupational exposures impact women's health. This third cohort will include younger and more ethnically diverse women answering entirely web-based questionnaires. In order to assess multiple aspects of women's health beyond the questionnaires, NHS3 is also piloting a biospecimen collection study to evaluate three different collection methods to determine the best approach for conducting future large-scale collections. Future samples will be used for research on how biochemical markers are associated with various diseases important in women's health and how differences in genes influence disease risk. My role is to conduct participant recruitment activities for the third cohort and to prepare study protocols for the biospecimen collection.

Methods: This practicum involved drafting research study documents for the pilot study, such as the consent forms, study protocol, email and letter invitations, and collection instructions. I also conducted literature reviews to create a lay friendly PowerPoint presentation of past major NHS findings. SAS was utilized to determine current nurses eligible to be NHS3 "ambassadors" who will present the PowerPoint at nursing events across the country as a recruitment tactic.

Conclusion: The completed research documents will be used to move forward with the launch of the biospecimen collection pilot study in the summer of 2012. The recruitment efforts will boost enrollment in the third cohort to ultimately reach the goal of 100,000 women.

Name: Jennifer Jorgensen

Practicum Site: Boston Medical Center, Department of Women's Health

Location: Boston, MA

Title: Building Interdisciplinary Research in Women's Health (BIRCWH) Scholars Program

Introduction: Objective: To examine attitudes, practice patterns and barriers related to HPV vaccination and cervical cancer screening among U.S. obstetricians and gynecologists.

Methods: A national sample of ACOG fellows responded to a fifteen-item questionnaire assessing demographic and practice characteristics, as well as clinical practices and the perceived barriers surrounding HPV vaccination and cervical cancer screening. Multivariable logistics regression analysis was used to identify provider and practice characteristics associated with guideline adherence.

Conclusion: In total, 305 obstetricians and gynecologists completed the survey. Ninety–two percent of respondents reported offering HPV vaccination, but only 74% offered vaccination to 11 year old patients. Female physicians were more likely to recommend HPV vaccination to younger females than male physicians. Parental and patient refusals were the most commonly cited barriers to HPV vaccination. Approximately half (57%) of respondents reported beginning cervical cancer screening with Pap smears at 21 years old, the recommended age, while 46% reported utilizing Pap smear and HPV co-testing in patients over 30 years old. Despite recommendations for screening at extended intervals, a majority of physicians reported continuing annual Pap smear screening (73% for 21-29 year olds and 53% for ages 30 and above). Male physicians and physicians in solo practices were less likely to follow cervical cancer screening guidelines. Many Obstetrician-Gynecologists are slow to adopt guidelines around HPV vaccination and cervical cancer screening; targeted education campaigns may be needed to facilitate adoption of new guidelines.

Name: Erin Morehouse

Practicum Site: Education Development Center, Health and Human Development

Location: Waltham, MA

Title: Intern

Introduction: Since 2005 EDC has been contracted by the US Department of Health and Human Services to support innovative and locally developed substance abuse prevention and mental health programs by strengthening the evaluation efforts of these organizations. This is done through training events and customized technical assistance over the course of one year. This initiative is called "Service to Science", and it aims to increase the pool of evidence-based interventions available to states and community organizations.

Methods: This practicum involved the design and implementation of a collective case study, which is a case study that consists of several different cases. We were specifically interested in the impact of the Service to Science initiative on the coalitions that participated. Coalitions are groups of people or organizations working together on a program/project. Interview questions were written, and submitted for IRB review. Phone interviews were conducted with two representatives from each of 3 coalitions as well as with the technical assistance provider for each coalition. The interviews were transcribed, coded, and thematically analyzed.

Conclusion: The analysis of these interviews is ongoing. The outcomes of this evaluation will impact the Service to Science program, especially when they are working with future coalitions to build evaluation capacity. The challenges that coalitions and technical assistance providers bring out in their interviews, as well as their suggestions for improving the program could be incorporated into the curriculum for the next group of coalitions participating in Service to Science. I was able to utilize my evaluation, epidemiology, and analysis skills, from BUSPH, in carrying out this practicum.

Name: Barbara Skarica

Practicum Site: Sutter Health, California Pacific Medical Center, Sutter Health Institute for Research and Education

their treating physicians, nurses, and interpreters at CPMC; and a system for reproducing and storing study forms.

Location: San Francisco, CA

Title: Assessing the Quality of Care Transitions

Introduction: Assessing the Quality of Care Transitions (TOC) is a research study that aims to improve the understanding of the underlying causes of hospital readmissions in order to reduce readmissions. It is a multi-center study with participating hospitals from the Hospital Medicine Reengineering Network. One of the participating study sites, California Pacific Medical Center (CPMC), is a private not-for-profit medical center currently rolling out several quality improvement initiatives. The purpose of my practicum is to help the Principal Investigators of TOC at CPMC operationalize data collection.

Methods: I am working with the Principal Investigators of TOC at CPMC to 1) test the use of CPMC information systems to identify readmitted patients and abstract patient charts; 2) test Research Electronic Data Capture (REDCap) interview and survey forms as well as online enrollment tracking tools for data collection and submission of deidentified data to UCSF, the study coordinating center; 3) communicate with CPMC nurses, doctors, and interpreters about their planned participation in TOC at CPMC; 4) organize study materials for reproduction and storage, following instructions from the study coordinating center at UCSF and the local IRB. **Conclusion:** To date, we have developed a workflow for identifying readmitted patients using information systems at CPMC; a workflow for abstracting charts using information systems at CPMC; an enrollment tracking system at CPMC; a system for approaching patients.

Name: Andrew Solomon

Practicum Site: Boston Medical Center, Center for Infectious Disease

Location: Boston, MA

Title: HIV and STD Testing at Boston Medical Center

Introduction: The Public Health Clinic in the Center for Infectious Disease at Boston Medical Center (BMC) screens patients for HIV and STDs. The clinic provides treatment for patients testing positive for Chlamydia, Gonorrhea, and Syphilis who are unable to use health insurance for any reason. I was responsible for collecting and recording STD test results from the Massachusetts Department of Public Health electronic reporting system in the BMC Microsoft Access HIV/STD database, reporting positive test results to the state surveillance system and BMC nurses, and analyzing data on HIV positive patients to predict how to improve utilization of BMC treatment services.

Methods: STD test results were retrieved online through the electronic reporting system and manually entered into the BMC HIV and STD database. Nurses were notified of positive test results through messages on BMC's electronic medical record (EMR) system and surveillance cards were filled out and mailed to the state. Demographic data, HIV viral loads, CD4 counts, insurance information, and visits to BMC were collected on HIV patients diagnosed between July 1, 2009 and June 30, 2011 using BMC's EMR. Descriptive statistics, T-tests, correlation, chi-square, and logistic regression were performed using SAS comparing patients who sought HIV treatment at BMC and those who did not.

Conclusion: There was no statistically significant evidence of a difference in any variables predicting if a patient sought HIV treatment after diagnosis or not. Further research is required to identify variables that predict why some patients do not seek HIV treatment at BMC.

Name: Andrew Well

Practicum Site: Tufts New England Medical Center

Location: Boston, MA

Title: Clinical Research Coordinator

Introduction: The prevalence of chronic kidney disease (CKD) in the population continues to grow, especially in the elderly population where approximately 40% of individuals have CKD. Exercise has been shown to be beneficial in many facets of health in healthy individuals. However, there has been very little systematic evaluation of exercise intervention in a CKD population. AWARD is a two-center randomized control trial comparing the effects on multiple health outcomes of one year of directed exercise training to health education in a CKD population 60-85 years of age.

Methods: During the practicum my roles included: 1) developing a standardized protocol for sleep actigraphy assessment; 2) development of the health education curriculum and materials; 3) creation of a StudyTRAX database for data entry and collection; and 4) creation of recruitment advertising materials.

Conclusion: The sleep protocol was completed and added to the study's standard operating procedures. Recruitment materials have been completed, received IRB approval and have begun to be distributed to local nephrologists. The StudyTRAX database was completed, tested, and is live. Syntax errors, logic errors and corrections continue to be dealt with as they are found. Health education materials continue to be developed and created. This will be an ongoing process over the next year. Recruitment for the study has just begun and we anticipate randomizing 120 participants.

Name: Alicia Wong

Practicum Site: Massachusetts General Hospital, Ambulatory Practice of the Future

Location: Boston, MA
Title: APF Intern

Introduction: I completed my practicum at Massachusetts General Hospital's Ambulatory Practice of the Future (APF). The APF is an experimental, innovative primary care practice that opened last summer. The practice focuses on providing proactive, team-based care that is patient-centered. A core component of the APF's care model is health and wellness coaching, which is available to every patient. My practicum focused primarily on developing a way to track patient health goals and the progress of those goals over the long-term. My practicum work also sought to find ways to evaluate the coaching program for effectiveness and quality improvement (QI).

Methods: The APF maintained a database of the patients who received health coaching services during its first year. I looked at this database, and worked with the Health and Wellness Coach to identify the most useful metrics to evaluate the effect of the coaching program on patient health. Metrics were developed for weight loss, exercise, stress management, smoking, hypertension, hyperlipidemia, and diabetes. For the evaluation aspect of my practicum, I discussed with the Health and Wellness Coach what type of feedback he wanted from patients. I looked at CAHPS surveys currently used by the APF to evaluate its quality of care, and discussed ways to adapt the instrument items to coaching specifically.

Conclusion: My practicum will provide the APF with a database that can track the progress of coaching patients. My work will also lead to the development of a patient feedback system that will help evaluate the coaching program for QI.

HEALTH LAW, BIOETHICS & HUMAN RIGHTS

Name: Joel Dankwa

Practicum Site: Mental Health Legal Advisors Committee

Location: Boston, MA **Title:** Legal Intern

Introduction: Mental Health Legal Advisors Committee is an agency within the Supreme Judicial Court that provides advice and direct legal representation on a wide range of legal issues. For my practicum, I serve as a legal intern, assisting attorneys that represent clients in health care disputes, as well as advise agencies regarding policy that promotes health for Massachusetts residents.

Methods: As a legal intern, I have performed two specific roles. I assist individuals with their appeals for extensions for much needed long-term care and insurance coverage for mental health conditions and physical disabilities. Aside from legal work, I assist in devising recommendations to the Massachusetts legislature regarding both mental health and disabilities policy.

Conclusion: We are currently working on a paper on forthcoming affordable care organizations. The paper will provide suggestions to the legislature requesting specific measures that will maintain, and further improve the current level of care received by individuals who are disabled, mentally ill, or both.

Name: Evelyn Liberman

Practicum Site: Boston Medical Center, Office of Patient Advocacy

Location: Boston, MA
Title: Patient Advocacy Intern

Introduction: My practicum helped me better understand the interface between patients and health care providers. Moreover, the internship allowed me to interact with staff and patients who are actively developing their relationships to improve the care and experience that Boston Medical Center provides.

Methods: I assisted the Bereavement Committee in providing more services by helping plan a "Compassionate Companions" program and by consulting local hospitals to learn more about their bereavement services. I also researched information about death and dying practices of the most highly represented cultures in Boston Medical Center's patient population; this information can help better educate staff members to help them be most sensitive to the wishes of their patients/families of patients. Furthermore, I helped develop the Ethics Committee and Patient Advocacy websites. For the Ethics Committee, I edited biographies of Ethics Committee members and ethics consultations to upload to the website for staff to consult. For the Patient Advocacy website, I edited some its features and researched resources for hospital employees to consult regarding cultural competency. Additionally, I attended patient meetings with other advocates.

Conclusion: For the Bereavement Committee, I made a PowerPoint about the program to present to hospital staff, compiled the death and dying practices informational sheet, and informed the committee of standards of care for bereavement services at other hospitals. For the websites, I edited all biographies and ethics consultations that I received, plan to upload them to the website, and began a list of cultural resources on the Patient Advocacy website.

Name: Francine Maloney

Practicum Site: Boston Medical Center, Department of Pediatrics

Location: Boston, MA **Title:** Patient Care Intern

Introduction: Pediatric patients require frequent care visits, including well-child and urgent care appointments. Problems can arise during several parts of the patients visit that decrease efficiency, making it difficult to effectively care for high volumes of patients. The purpose of the study was to pilot test a method to improve patient visit efficiency.

Methods: We used Patient Flow Analysis to identify inefficiencies in the patient visit and suggest areas for improvement.

Conclusion: The mean visit time for 20 pediatric primary care clinic patients was 45 minutes and the mean visit time for 13 pediatric specialty clinic patients was 58 minutes. Of the time the patient spent in the primary care clinic, 30% was spent waiting for care; while patients in the specialty clinic spent approximately 36% of their time waiting for care. Patient Flow Analysis is an effective means to identify inefficiencies in the patient visit. While patients' expect to wait during an office visit, the majority of their time spent waiting was not for the physician but for other clinical staff to become aware of their need for assistance. Further work will continue in gathering data and testing areas clinical interventions to improve visit and staff efficiency.

HEALTH LAW, BIOETHICS & HUMAN RIGHTS

Name: Karen Marcus

Practicum Site: Food & Drug Administration (FDA), Office of the Chief Counsel

Location: Silver Spring, MD

Title: Summer Intern in the FDA Office of Chief Counsel

Introduction: The Office of the Chief Counsel (OCC), which is the Food and Drug Division of the HHS Office of the General Counsel, is composed of litigators, counselors, and support staff. Litigators handle both civil and criminal enforcement cases, and defend challenges to provisions of the Federal Food, Drug, and Cosmetic Act (FDCA), the implementing regulations, and FDA policies, initiatives, and decisions. The counselors provide legal services to FDA and HHS officials on matters involving FDA-regulated products, such as drugs, biologics, food, medical devices, cosmetics, veterinary products, radiation-emitting products, and tobacco products.

Methods: Attorneys within OCC assigned me legal analysis projects involving their public health area(s) of focus. I also took part in an in-depth training program: leaders of the major departments within the agency gave lectures approximately 2x/week on the work of the

FDA.

Conclusion: I worked with FDA attorneys on both counseling and litigation projects to promote the mandate of the agency to promote and protect the public health. Specifically, I worked on projects involving the historical mandate of the agency to regulate drugs, the impact of administrative law on the scientists within the agency, emergency response issues, and enforcement of the Food, Drug, and Cosmetic Act.

Name: Holly Moore

Practicum Site: Boston Public Health Commission, Environmental Health Office

Location: Boston, MA

Title: Environmental Health Intern- Safe Nail Salon Project

Introduction: Under the Food, Drug and Cosmetics Act of 1938, the US government does not require any pre-market safety assessment for cosmetic ingredients, and it is legal for cosmetic manufacturers to produce cosmetics for salon and professional use that contain ingredients that are significantly hazardous to health. As a result, many nail salon workers suffer severe adverse health affects from constant exposure to toxic chemicals such as dibutyl phthalate (DBP), toluene, formaldehyde, methacrylate and ethyl-acrylate. The Safe Nail Salon Project (SNSP) at the Boston Public Health Commission hopes to introduce the Green and Clean Project, which focuses on using safer, healthier and "greener" alternatives to the current cosmetics and cleaning products used in salons.

Methods: My practicum focused on drafting components of the Green and Clean Project: (1) researching and creating a safer alternatives list that would provide salon owners, employees and clients with cosmetics and clean products that had no toxic ingredients or posed health risks. (2) Creating a guestionnaire for selected contacts in the nail industry to perform a needs-based assessment. (3)

Conclusion: My work for the Green and Clean Project will contribute a significant piece of the initial draft project. This work will also be presented in grant proposals for future funding for the project and the SNSP. The safer alternatives list will be used by the SNSP in nail salon and worker trainings to recommend non-toxic and alternative cosmetics.

Name: Nadia Oussayef

Practicum Site: Boston University School of Public Health, Department of Health Law, Bioethics and Human Rights

Creating and adapting a Green and Clean checklist for salons based upon the LEED Green building certification.

Location: Boston, MA

Title: Teaching Fellow/Apprentice

Introduction: As a teaching fellow, I helped redesign and teach LW740, Health and Human Rights. This is a course offered by the department of Health Law, Bioethics and Human Rights at the Boston University School of Public Health. Taking this course in Health and Human Rights allows students to explore the relationship between human rights and health by examining relevant international declarations in historical context, exploring the meaning of "human rights" and "health," and analyzing specific case studies that illuminate the problems, prospects, and potential methods of promoting health by promoting human rights on the national and international levels.

Methods: In collaboration with the professor, I designed an assessment tool and evaluation rubric for a unit within the course on women's rights. I graded exams and assignments and met with individual students to discuss to their questions regarding class material and expectations. Finally, I selected readings, designed course objectives and led class discussion on the right to water. **Conclusion:** Human Rights is a constantly evolving field with new problems and solutions constantly in the news. In order to ensure

that the course provides students with a strong background in both the history and current issues of Human Rights, the topics in the class must be evaluated and updated each year to take into account new developments. My work will help maintain the relevance of the content of the course for future years while aiding current students to better understand the implications and importance of human rights to health.

HEALTH LAW, BIOETHICS & HUMAN RIGHTS

Name: Angela Park

Practicum Site: Boston Medical Center, Department of Surgery

Location: Boston, MA

Title: Older Adult Driving Study Intern

Introduction: Driving has become an indispensable part of our normal daily living. For the older adult population, the ability to drive plays a critical role to the maintenance of quality of life, independence, mental well-being, and physical health. However, the safety of older adult driving is of public concern because as people age, their neurocognitive and motor skills required for driving can become compromised. I assisted in a study that evaluates the impact of motivational interviewing on encouraging mentally competent older adults to assess their driving skills. Better understanding the decision making processes that influence their decisions to start planning for alternative transportation or driving cessation will help prepare the aging population to maintain their autonomy and quality of living. The purpose of this practicum was to evaluate if motivational interviewing encourages older adult drivers to assess and modify their driving behaviors.

Methods: I screened and enrolled older adult patients admitted to Boston Medical Center. The study consisted of four phases: (1) informed consent, (2) enrollment and assessment; (3) intervention, (4) follow-up. I used SAS software for data analysis. **Conclusion:** To date, I have screened over 630 patients, enrolled 63 patients, and conducted follow-ups on 29 patients. I analyzed the demographic, age, language, and gender differences between driving and non-driving older adults. I conducted background research on what factors contribute to an older adult's decision making process when planning for driving cessation. I researched future older adult relicensing policies and a physician's role when treating older adult patients that drive.

Name: Kari-Claudia Allen

Practicum Site: Boston Medical Center, Department of Obstetrics and Gynecology

Location: Boston, MA

Title: Lean Approach: Improving Group Medical Care

Introduction: CenteringPregnancy is a model for group prenatal care delivery that is designed to reduce health care disparities and provide equity in care to people of all socioeconomic backgrounds. This practicum analyzed, diagnosed, and piloted remedies for issues that arose when implementing the group prenatal care model into the traditional prenatal care model.

Methods: Used tools from a quality improvement method, lean management, to map current process, reduce waste, and identify inefficiencies in process flow. Mapped and stratified team dynamic and process problems with Ishikawa and Pareto, then recongifured the process flow according to a five-point internal sweep. Implemented pilot testing of new flow design.

Conclusion: Ongoing pilot testing shows that Lean management increased patient enrollment from 81% to 92%, a critical breakthrough for a safety net hospital in changing health care delivery. Immediately after change implementation, group enrollment went to 139% of expected capacity, and the model was expanded to accommodate a steadily increasing number of patients.

Name: Erik Andrews

Practicum Site: Harvard Medical School, Department of Microbiology and Immunology, Benjamin Lab

Location: Boston, MA

Title: Running an Academic Lab: The Grant-writing process

Introduction: Dr. Benjamin's lab at HMS studies a cancer-causing mouse virus whose mechanisms of activity provide valuable insights into virology and oncogenesis. As a research assistant in the lab for the past two years, I have gained facility with experimental methods but little understanding of the management side of academic lab operations. This practicum extended my role in the lab and introduced me to some of the core competencies of primary investigators: grant-writing, submission, revision, and budget setting.

Methods: Dr. Sung, an Instructor in the Benjamin lab, has sought federal R03 funding for a novel two-year project that hopes to identify a set of early cancer biomarkers among a class of regulatory molecules called miRNAs. I worked beside Dr. Sung in the activities of experimental design, laboratory budgeting and planning, initial writing, editing, polishing, iterating, and submission, and follow-up data collection for his grant covering this project. Parallel to this work, I generated a process map and document to provide an overview to grant writing for future use in the lab.

Conclusion: This project was successful in submitting a grant to the NIH on schedule and creating a lab-specific blueprint to assist grant writers going forward. Overall, the practicum provided an in-depth, collaborative experience in which I assisted in a novel research endeavor and learned academic lab management skills in the process.

Name: Zachary Beck-Goss

Practicum Site: Brookline Community Mental Health Center

Location: Brookline, MA **Title:** Lecture Series Coordinator

Introduction: The Brookline Community Mental Health Center services the clinical mental health needs of the Brookline population. In addition to its clinical services, the center provides educational opportunities for health care providers to enhance their knowledge around issues related to mental health. Continuing education is required for mental health clinicians. It is important that mental health clinicians participate in continuing education in order to enhance their clinical skills and learn new methods of treatment.

Methods: My role as the Lecture Series Coordinator is to organize all areas of the training series including: research and identification of speakers to present relevant topics; marketing of the community lecture series to the Brookline community; administrative preparation and follow up with lecture series presenters and attendees including communication, registration, attendance, continuing education submission, and payment; and attendance and facilitation of all lectures.

Conclusion: Five lectures are scheduled to take place during the spring semester offering a variety of topics that are relevant to mental health clinicians. Attendees rate their satisfaction of each lecture by completing an evaluation. Attendees who attend four out of five lectures will receive continuing education units administered upon completion of the series. Attendees will complete the lecture series with new and/or enhanced understanding about a variety of topics that they can apply to their clinical work.

Name: Patrick Coleman

Practicum Site: Boston Medical Center, Cardiothoracic Surgery Department

Location: Boston, MA
Title: Administrative Intern

Introduction: BMC's Department of Cardiothoracic (CT) Surgery is composed of two specific surgery service line practices, cardiac surgery and thoracic surgery. The department provides some of the most medically advanced procedures and minimally invasive surgical treatments for the variety of patient needs. Aligned with the mission and values of BMC, the CT Department provides its exceptional care to all patients through a coordinated system, which allows for communication between the patients, the patients' primary care physician, and the medical team at BMC.

Methods: As a project management intern I was tasked with diverse departmental initiatives. My main projects included: 1) Coordinating a coding analysis of 60 surgical procedures, 2) Collecting information on clinical operations regarding patient flow, 3) Implementing a customer service survey tool, and 4) Updating the departmental website.

Conclusion: The coding analysis provided an evaluation of the billing and coding processes of the department, which provided novel data for interpretation. Furthermore, by presenting the findings on clinical operations, and incorporating a customer service survey into the patients' visits, this data is being used to improve and evaluate departmental efficiency, patient access, and the overall patient experience.

Name: Parth Desai

Practicum Site: Boston Medical Center, Department of Geriatrics

Location: Boston, MA

Title: Quality Improvement at BMC Geriatric Clinic using Lean Methodology

Introduction: The Boston Medical Center (BMC) Geriatric Ambulatory Care Clinic is soon going to be redesigning the layout of their clinic. The clinic had been experiencing an increase in the length of daily patient throughput, and due to a lack of literature on the topic, the staff did not know how to effectively address the problem. The issues stem from inefficiencies in the layout of the entire clinic, although the problem has been exacerbated by a variety of other contributing factors that impede efficient patient flow.

Methods: Lean Methodology is a quality improvement process that is used for reducing wastes and inefficiencies. Concepts from this methodology were used to approach the project. Through work with physicians and nurses, processes in the daily patient flow that were taking longer than necessary, were identified. By timing each patients' interactions through the course of their visit, as well as shadowing physicians to see how they were allocating their time, a foundation of inefficiencies to analyze was gathered. Value-stream mapping was used to evaluate the tasks performed by physicians and nurses and a current process flow map was then developed from this information. Root cause analysis was used to extract and highlight wastes from the current patient flow.

Conclusion: The purpose of the practicum is to identify wastes and present a future map that offers the clinic a better layout. The ultimate aim is to help the Geriatric Clinic Staff implement a more effective clinic layout/procedure that will foster efficient patient flow.

Name: Varun Ektare Practicum Site: Pharmerit Location: Bethesda, MD

Title: Healthcare Consulting Intern

Introduction: I did my internship with Pharmerit, a healthcare consulting company based in Bethesda. I worked mainly on a project for a small start-up pharmaceutical company which is planning to launch an antibiotic into the market in early 2013. The project tasks were focused on ensuring market access and reimbursement for the antibiotic.

Methods: Building and communicating the value story of the product involved preparing the cost-effectiveness model and synthesizing a white paper. The cost-effectiveness model was built in MS Excel and compared the costs and benefits of using the new antibiotic with other products in the same disease category. Various cost inputs such as drug prices, administration costs, cost of adverse events and cost of hospital length of stay were collected for all the drugs in the model. The benefits of the drugs were estimated by calculating the quality of life gains with the help of quality adjusted life years parameter. The white paper spoke about the impact of changing reimbursement system and focus on quality improvement initiatives on the launch of the product. It helped the client to communicate the benefits of the product such as reduced length of stay and reduced resource utilization to a wide audience of stakeholders of payers, patients and physicians.

Conclusion: The cost-effectiveness model showed that the new drug saves cost of treatment and improves the overall patient satisfaction through features such as simplified dosage regimen and reduced hospital length of stay. The white paper builds on the results of the model and communicates the health economic advantages of the product to stakeholders.

Name: Stephanie Gottsch

Practicum Site: Dana Farber Cancer Institute, Medical Oncology

Location: Boston, MA

Title: Grants Management Assistant

Introduction: As part of the grants management team at Dana Farber, a Boston-based organization dedicated to providing expert, compassionate care to children and adults with cancer while advancing the understanding, diagnosis, treatment, cure, and prevention of cancer and related diseases, I assist in the day to day operations of grants managing and procuring. The goal of my practicum is to provide administrative support to Department Grants Management Specialists and faculty in preparing grant applications (Sponsored Research) and manage finances of the faculty portfolio after the award (Finance).

Methods: I work directly with Grants Management Specialists to review expenditures to ensure adherence to federal guidelines; track invoices, pay vendors, generate purchase orders and process donations. Also, I assist in providing advanced communications support, screening calls and determining appropriate action in response to all inquiries. I help ensure grant applications and progress reports are prepared in a timely manner and assists in the creation, while updating and maintaining of division files with attention to specific federal administrative filing guidelines.

Conclusion: Overall, my practicum results in my providing continued support to each of the Grants Management Specialists (8 total) and assistance to help prepare grants for completion. These grants range from simple training grants to comprehensive clinical grants, (i.e. SPORE). Not only have I learned the intricacies of the different grants, however, I have provided assistance that has helped in the completion of several grants.

Name: Ela Halilai

Practicum Site: Boston Medical Center, Department of Quality Improvement

Location: Boston, MA

Title: Quality Assurance - Safety Coordinator Intern

Introduction: Continuous Quality Improvement (CQI) and Quality Assurance (QA) has been the main focus of the BMC Department of Laboratory Medicine for a long time. In January 2011, an annual summation and evaluation was compiled which focused on three main problems: Compliance of Critical Alert Values (CAVs), Mislabeled Specimens, and Employee Incident Reports.

Methods: A thorough review of the CAV notebooks and LIS system was used to evaluate that Result Read Back, Timeliness, and Completeness was done according to the standards established by the department. Mislabeled error logs and LIS system were reviewed to ensure the reduction and ultimately the elimination of mislabeled specimens. Employee Incident Reports were reviewed using the BMC intranet portal. A complete follow up was established as the desired outcome.

Conclusion: The CAV and Mislabeled measurements fell below the established threshold while the Employee Incident Reports showed complete follow up by the Managers and Safety Officer. Improvement plans were developed for the CAV measure. Their main goal is to identify issues, trends, and instances of non-compliance. Future recommendations for the Mislabeled specimens included upgrade of the labeling system, customization of the label format, and additional departmental training. Even though the Employee Incident Reports were resolved on a timely and adequate manner, a quarterly follow up was suggested to make sure the steps taken are the correct ones. Follow up will be established as it is seen necessary. Future CQI and QA projects should build upon the 2010 measures and improve from these findings.

Name: Stephen Iacono

Practicum Site: Partners in Health and Housing Prevention Research

Location: Boston, MA
Title: Research Assistant

Introduction: The purpose of health Partners in Health Housing and Prevention was to research the effectiveness of using Resident Navigators in Boston public housing communities to promote community health and decrease the risks of disease amongst residents in several communities in the Boston area including South Boston, East Boston, Dorchester and Roxbury. In some communities Resident Navigators were available to organize community wide health promotion events and other activities. We assessed overall health of residents by free health screenings and enrolling residents who qualified. After three months we followed up with these residents to assess any changes in any risk factors in their health status.

Methods: In order to assess the health status of the residents we began with free health screenings which were conducted in the community center of the various communities. The health screening events were organized cooperation between Health Housing and Prevention and the community groups, and were advertised with flyers and posters. At the screenings we gathered demographic information and assessed health status by using intake forms. Health status was determined by assessing residents' BMI, smoking status, blood pressure, cholesterol status, and verbal diabetes screening. Residents who screened positive for one of these risk factors were allowed to enroll in the research.

Conclusion: Initial findings have suggested that the intervention communities with patient navigators have reported a decrease in BMI and increase in primary care. The data is still being analyzed and we are continuing to enroll residents in the study.

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Name: Kavon Kaboli

Practicum Site: Boston University School of Medicine, The Pulmonary Center

Location: Boston, MA

Title: Saliva Biomarkers of Disease Activity and Control in Asthma - Research Assistant

Introduction: Asthma, a chronic inflammatory disease of the lower airways, affects 8% of the US population and significantly increases morbidity and healthcare costs. Due to substantial phenotypic variability, there are limited non-invasive biomarkers for characterizing asthma and measuring disease control. To address this need, we explored the utility of saliva as a source of disease biomarkers in asthmatics obtaining care in the Emergency Department and specialized clinic of a large urban tertiary care medical center. This non-invasive technique possesses significant potential to provide more appropriate and cost-effective care to under-privileged individuals and ethnic minorities.

Methods: A convenience sample of 260 asthmatics with varying degrees of disease control were recruited into the study. Asthma severity and control were assessed by questionnaires incorporating validated measures, environmental assessment, and clinician impression. Oral health was assessed by oral examination and questionnaire. Subjects provided a sample of masticatory saliva and nasal lavage fluid; an 11-plex suite of inflammatory analytes were measured on these samples using the Luminex platform. Correlations amongst log-transformed analytes within a sample and between samples and clinical measures were characterized with parametric or non-parametric statistics, as applicable.

Conclusion: Several inter-analyte correlations were detected in saliva samples. However, no correlations were detected between analytes and asthma severity. Despite the physical connection between the oral and nasal cavities, no correlation between nasal lavage or saliva supernatant analytes was detected. Other significant phenotypic descriptors between clinician impressions and analyte levels were identified. Possible links between environmental exposures and analyte profiles are still being investigated.

Name: Madina Khamzina

Practicum Site: Children's Hospital, HealthMap

Location: Boston, MA

Title: Hospital Wide Development of a Quality Assurance and Performance Improvement Program

Introduction: HealthMap is an established global leader in utilizing online informal sources for disease outbreak monitoring. The purpose of this practicum was to evaluate the effectiveness of communicating infectious disease outbreaks to the population of Russian speaking countries, in order to address health policy issues in early detection of potential global disease pandemics.

Methods: I worked with HealthMap team members: a) to update reports from Russian sources on disease outbreaks; b) to improve Russian web-dictionary on infectious diseases; c) to contribute to HealthMap's news section, The Disease Daily; d) to monitor data from three online disease detection sources on disease outbreaks including HealthMap, Biocaster, and Ministries of Health (MoH) websites for six weeks; e) to compare and evaluate effectiveness of communicating disease outbreaks to the Russian speaking population of the three given sources; f) to identify public policy issues revealed in the comparative analysis.

Conclusion: The regular monitoring of the disease detection sources revealed: among the three sources MoH websites of the Russian speaking countries are the poorest sources for retrieving the most recent information on disease outbreaks and public health control and preparedness plans. Thus, policies regarding the changes to the MoH website's content and their contribution to the monitoring and timely detection of emerging infectious diseases and public health outbreaks should be reconsidered.

Name: Donna Li

Practicum Site: Children's Hospital Boston, Program for Patient Safety and Quality

Location: Boston, MA

Title: Hospital Wide Development of a Quality Assurance and Performance Improvement Program

Introduction: This purpose of this practicum is to assess and implement improvements to the Quality Assurance Performance Improvement (QAPI) programs for both the hospital and the Pediatric Transplant Center at Children's Hospital Boston to meet the expectations of Center of Medicare and Medicaid Services (CMS). Additionally, this project also entails data analysis for the performance improvement project: Monitoring for Epstein Barr Virus (EBV) infection after liver transplantation.

Methods: To identify gaps within the hospital-wide and Pediatric Transplant Center QAPI programs, the programs were assessed using the CMS QAPI survey tool. Once gaps were presented to the respective departments, improvements were made to the QAPI programs. To increase awareness of the hospital-wide QAPI program, online education material was created. To optimize assessment of the EBV infection after liver transplantation project, research and collaboration with the performance improvement team were conducted to identify appropriate quantitative measurements and goals for the project.

Conclusion: Improvements to the QAPI programs include (1) the development of current state flow charts to provide a high-level perspective on the hospital and the Pediatric Transplant Center quality improvement initiatives; (2) the identification of a performance improvement methodology (Plan-Do-Study-Act) to provide infrastructure to the quality projects at the Pediatric Transplant Center; and (3) the distribution of online education material to departments across the hospital. For the EBV infection after Liver Transplantation project, lab test results, blood transfusion history, and other clinical markers are currently assessed to identify significant trends in the patient population that can serve as detectors of EBV infection.

Name: Christopher Libby

Practicum Site: Federal Emergency Management Agency - Region 1, National Preparedness Division

Location: Boston, MA

Title: Intern in National Preparedness

Introduction: The Federal Emergency Management Agency's (FEMA) National Preparedness Division is responsible for enhancing the Region I's preparedness to prevent, protect from, respond to, and recover from disasters, both natural and manmade. FEMA collaborates with other Federal, State, and local agencies to enhance the planning, organizing, equipping, training, exercising activities that prepare the whole community. As part of this effort, FEMA is responsible for producing a regional Threat and Hazard Identification and Risk Analysis (THIRA) to assist in risk based decision making.

Methods: I worked with the Radiological Emergency Preparedness (REP) program and the Department of Health and Human Services on developing tools for trainings and exercises in order to increase hospital preparedness. To develop the THIRA, guidelines for performing the assessment were developed in collaboration with headquarters and other FEMA regions. I researched distinctive socioeconomic, geographic, and economic features of Region I. This was used to develop assessment tools in collaboration with MITRE and to identify appropriate subject matter experts (SMEs).

Conclusion: I created a systematic process for managing the THIRA project in Region I and conceived of the THIRA summit that will take place this summer. The summit will bring together SMEs from all areas of government and academia to fully assess the risks to Region I. I also developed assessment tools designed to quantify and prioritize risks. To increase collaboration with local partners, I

Name: Maxine Lodato

Practicum Site: Stackpole & Associates

Location: Brookline, MA **Title:** Market Research Intern

Introduction: Due to the significant increases in telemedicine, the expansion of US hospitals, and the high costs associated with healthcare, many countries and their hospitals seek to increase their opportunities by offering high quality healthcare at competitive costs. This growth of medical tourism is especially advantageous to developing health markets when educational standards are high and labor costs are low. Currently, medical tourism is a niche market. To promote the development and use of medical tourism, marketing may be an effective method to increase awareness for select populations. The purpose of this proprietary market research is to identify excess capacity and other opportunities for public and private health care providers and pharmaceuticals to maximize health services delivered to regional and international patients and customers seeking those services.

Methods: This market research utilized macro and micro health indicators as well as an inventory of health care services as the preliminary phase in constructing the foundation for potential marketing strategies. These variables were plotted with ArcGIS mapping software which were utilized to generate maps depicting relevant information.

Conclusion: Results/outcomes are confidential.

Name: Catherine Ma

Practicum Site: Boston Medical Center, Department of Geriatrics

Location: Boston, MA

Title: Using Lean Methodology to Understand the Role of Geriatric Nurses in an Ambulatory Center

Introduction: The Geriatrics nurses in the Ambulatory Center at Boston Medical Center observed that they were spending less patient time over the years while spending more time on administrative duties. The goal of this project is to evaluate their workflow in the clinic and to identify ways to increase their patient care time. As the clinic relocates within a year, the data and recommendations found in this project will benefit the practice through efficiency and quality improvements.

Methods: Lean management, a quality improvement methodology, was used to understand the current roles and processes of nurses and to identify the inefficiencies and non-value adding tasks. One of the main tools used was process mapping. To create the original process map, nurses were shadowed and data involving their tasks and the length of time to complete those tasks were collected. With the collaboration of the nurses and other stakeholders, inefficiencies and non-value adding processes that substantially affected the interaction between nurses and patients were pointed out, and a fishbone diagram was used to analyze its possible causes. Lastly, we brainstormed and proposed possible solutions in order to create a new process map that could improve the nurse workflow.

Conclusion: The original process map revealed that the Geriatrics nurses spent 93% of their time doing administrative work and only 7% with patients. To increase patient care time, we redesigned the process map so that inefficiencies are minimized. The next step is to implement it in the Geriatrics Practice.

Name: Nora Ramirez
Practicum Site: Boston EMS
Location: Boston, MA

Title: High Utilizers of Emergency Services

Introduction: Boston Emergency Medical Services (EMS) is responsible for a large majority of prehospital care in Boston. It has been recognized that a distinct subpopulation who use EMS frequently exist and consume most of the limited resources compared to infrequent chance users. However, the classification of high users and their impact has been ambiguously defined. The practicum was designed to examine the high utilizer population of emergency services in detail via comprehensive literature research. The organization will be able to use the literature review when seeking future available grants intended for implementing evidence based interventions to manage the frequent users' health care needs while reducing the strain on Boston EMS resources.

Methods: The practicum involved researching recent studies to understand what is known and how frequent users are defined in other cities. Other urban EMS models were explored, focusing on applicability to the Boston population. A written review with the findings and suggestions pertinent to Boston EMS and their patient population was generated.

Conclusion: Chronic conditions, psychological and social factors predicted frequent use. Conversely, insurance status and gender were not strong predictors of use. However, these characteristics are not the cause of constant use, rather symptoms of improperly managed individual care. Interventions aimed at facilitating how an individual managed care had promising impact. Based on this research, Boston EMS will be able to propose methods to relieve the already burdened physical and financial resources while improving care.

Name: Sergey Rekhtman

Practicum Site: Boston University School of Public Health, Department of Epidemiology

Location: Boston, MA

Title: The Epidemiology and Immunology of Latent Tuberculosis Infection in Nursing Home Residents

Introduction: More than 12,000 cases of Mycobacterium tuberculosis (TB) disease occur annually in the United States; most cases result from reactivation of latent infection. Epidemiologic data from latently infected individuals is lacking particularly among nursing home residents who have higher rates of TB disease than other segments of the population. This practicum project consists of an evaluation of persons in nursing homes to understand better which persons are infected and to evaluate current diagnostic methods based on epidemiology and infectious immunology.

Methods: We are conducting a prospective cohort study in nursing home residents in the Boston area comparing individuals infected with TB to those who are not infected with TB. As the study coordinator, my responsibilities included administrative duties (budget management, inventory upkeep, managing phlebotomists, and ensuring proper study documentation), clinical research duties (database creation and management, consenting potential participants, and administering questionnaires), and basic science research duties (processing blood samples, performing flow cytometry, and analyzing flow cytometry data).

Conclusion: To date, we have enrolled 27 participants (13 unexposed and 14 exposed). While research is ongoing, preliminary immunology results show that T-cells of individuals infected with TB are activating when stimulated with tuberculosis proteins to a greater extent as compared to T-cells of individuals who are not infected with TB. Epidemiologic profiles have not been evaluated at this point in the study.

Name: Jacqlyn Smith

Practicum Site: Boston Medical Center, Department of Geriatrics

Location: Boston, MA

Title: Understanding Role of Nurses in Geriatric Ambulatory Clinic

Introduction: The objective of this project was to evaluate the daily nurse workflow to identify ways to increase nurse efficiency and patient satisfaction in the Geriatric clinic. It was imperative to understand the daily nurse workflow, including the duration and order of tasks. Although the clinic is expanding its patient panel, minimal work has focused on the nurse role.

Methods: To understand workflow, quality improvement methodology tools were used. The quality improvement evaluator 1) observed and documented the time one nurse spent on each task 2) compiled observation data, electronic medical record data, and administrative data into a process map and graphs 3) presented observation findings, facilitated identification of: waste in the current process map, root causes of the waste, and possible solutions 4) created and presented the recommended process map and 5) prepared stakeholders for recommended process pilot.

Conclusion: The nurses and stakeholders identified lack of patient time (7% of observed time) and time spent on administrative tasks including managing faxes and the phone (59% of observed time) as the top opportunities for improvement. The recommended process map included changes to these areas in the workflow. The current process map findings confirmed perceptions of the nurse workflow, but identifying root causes of the waste tasks as well as developing solutions proved to be challenging for all stakeholders involved. It is projected that if they recommended process map is piloted, the role of the nurses within the clinic will be able to approach better efficiency and an improved patient experience.

Name: Corey Tabit

Practicum Site: Children's Hospital Boston, Department of Laboratory Medicine

Location: Boston, MA

Title: Blood Sample Hemolysis Reduction at a Pediatric Quaternary Care Center

Introduction: Blood sample hemolysis is an expensive problem in healthcare resulting in rework costs and care delays. Observational studies suggest that a number of factors affect hemolysis rates. No interventional study has evaluated factors contributing to hemolysis at a pediatric medical center.

Methods: Hemolysis Indices (HI) for metabolic studies drawn at Children's Hospital Boston (CHB) in CY2010-2011 were queried. Descriptive statistics were developed in SAS. The impact of patient volume on HI was investigated and departments with high HI were identified. Statistical Process Control charts were developed to follow variation in HI over time. To objectively quantify hemolytic risk factors, a Hemolytic Risk Assessment Tool (HRAT) was developed. A prospective study was designed to validate the HRAT and investigate contributing factors.

Conclusion: Hemolysis Indices for 274,312 blood samples were analyzed. Data were heavily rightward skewed. Median HI at CHB was 10. Departmental median HI was not associated with patient volume. However, HI in the Emergency Department (ED) was 2.2 fold higher than the hospital average (p<0.01). Statistical Process Control analysis demonstrated expected variability of the Log Mean HI in the ED, while Log Range HI was statistically out of control suggesting identifiable external causes of variation. HRAT reliability and validity testing is ongoing. Hemolysis occurs more frequently in the Emergency Department than in other departments. This association is not due to high patient volume but may be due to increased acuity and diagnosis variability. Prospective data is needed to identify hemolytic risk factors and causes of variation.

Name: Garland Tang

Practicum Site: Massachusetts Joint Committee on Public Health

Location: Boston, MA **Title:** Legislative Intern

Introduction: The Joint Committee on Public Health investigates and reports on a large volume of petitions that impact individual and committee health. Under the direction of the research team, I examined the current prescription drug shortages. Prescription drug shortages have more than tripled in the past six years, increasing from 61 to 178 from 2005 to 2010. These shortages threaten the lives of many critically-ill patients, as the majority of drugs affected are oncology drugs, anesthetics, antibiotics, and cardiovascular therapies. In addition, the estimated cost of shortages for U.S. hospitals could be greater than \$415 million annually, including \$216 million for added labor costs.

Methods: With the supervision of the research team, I performed a literature review on the issue. I summarized political and stakeholder testimony, researched industry practices, and studied current and prospective legislation aimed at mitigating the drug shortages. **Conclusion:** The reported reasons for the shortages are numerous including problems with manufacturing facilities, quality issues, ingredient shortages, insufficient financial incentives, and inadequate state and federal regulatory mechanisms. I co-authored an Issue Brief summarizing these issues, and helped draft questions for the Oversight Hearing. I will also co-authored a Committee Report with an in-depth analysis of the underlying reasons and possible remedies to the drug shortages including 1) an early detection mechanism through FDA and manufacturer coordination 2) stricter enforcement of requirements for drug pedigrees and licensure to prevent price gouging 3) expedited FDA approval processes for facilities, processes, and ingredients. The report will be presented to Rep. Sanchez and available to other legislators.

Name: Lauren VanDixhorn

Practicum Site: Brookline Department of Public Health, Brookline High School (BHS) Peer Leadership Program

Location: Brookline, MA

Title: Prescription Drug and Tobacco Intern

Introduction: The BHS Peer Leadership Program, a subsidiary of the Brookline Coalition Against Substance Abuse, revolves around the belief that adolescents prefer to seek advice from their peers. Peer leaders are selected through an application process, agree to abstain from using drugs and alcohol, complete facilitation skills training, and encourage their fellow students to make healthy decisions using presentations and community events.

Methods: I worked with the Peer Leadership Program Director to: 1). launch a prescription drug awareness campaign; 2). secure a grant from an anti-smoking group called The 84 Movement; 3). plan and execute the BHS Kick Butts Day; and 4). compose, advocate for, and pass a warrant article to raise the minimum age to purchase tobacco products in Brookline to nineteen.

Conclusion: The results were: 1). the successful launch of the prescription drug awareness campaign through two community forums, two guest lectures, and a prescription drug take-back day; 2) the procurement of a \$1,600 grant to fund an advocacy campaign that led to a ban on the sale of tobacco products in pharmacies and educational institutions in Brookline; 3). a well-attended Kick Butts Day event that increased students' knowledge of tobacco products; and 4). the submission and defense of a warrant article to raise the minimum age to purchase tobacco products in Brookline –A final vote will occur at town meeting on May 22nd.

Name: Kristen Apa

Practicum Site: Boston Medical Center, Department of Pediatrics

Location: Boston, MA

Title: Project Assistant with the bWell Center

Introduction: The bWell Center, a health and wellness center in the Department of Pediatrics, opened in November 2011. The mission of the bWell Center is to improve the health and wellness of pediatric patients and their families. The bWell Center uses books, internet resources, and tip sheets from the American Academy of Pediatrics to engage patients in wellness topics. Student volunteers facilitate activities in the bWell Center, which include exercise, nutrition, and creative learning lessons for children. This practicum involves recruiting volunteers, developing, and facilitating a training manual for student volunteers and a companion training manual for trainers. **Methods:** In order to develop training materials, I initially conducted a series of meetings with staff members in the Department of Pediatrics. After a thorough review of the goals and objectives of the center, I developed a draft of the training materials. In order to emphasize patient navigation and customer service, revisions to the materials were made throughout the practicum. The first set of trainings revealed areas for improvement within the training materials and adjustments were made accordingly.

Conclusion: Over the course of the practicum, nine volunteers attended the bWell volunteer training. Additional recruitment activities and subsequent trainings are planned for the next two months.

Name: Maureen Brophy

Practicum Site: Boston University Center For International Health & Development

Location: Mazabuka, Zambia

Title: ZCAHRD Intern

Introduction: Through Boston University's Center for Global Health and Development, ZCAHRD collaborates with partners in the Southern Province, including Ministry of Health, CDC, and PEPFAR as a means of scaling up and integrating Prevention of Mother to Child Transmission services in health facilities in the region. The BU PMTCT Integration Project (BUPIP) provides service delivery and health education as part of the program's primary objectives to reduce maternal and infant mortality. The key focus of this internship was to participate in monitoring and evaluation and community involvement responsibilities involved in an HIV prevention service provision program.

Methods: Monitoring and evaluation of key indicators are performed routinely using data collected from participating health facilities. Data were analyzed using SAS and Microsoft Excel. The results of the analyses were utilized for routine report distribution and performance assessment presentations with community leaders, key stakeholders, and health facilities.

Conclusion: In Quarter 4 of 2011, the actual provincial percentage of infants aged 1 year or younger tested was 5.7% (1642/1741) less than expected, due to country-wide stock outs of testing supplies. The percentage of infants aged 1 year or younger tested positive was 6.5% (106/1642). Actual first ANC attendance was 33.7% (14792/22319) lower than expected. 52% (7695/14792) of partners for first ANC attendance were tested for HIV, and 6.4% (493/7695) of partners tested for HIV tested positive. The low rates of first ANC attendance and partner testing may be due to a need for health education and sensitization on the community level.

Name: Danielle Dresner

Practicum Site: Boston Medical Center, Department of Family Medicine

Location: Boston, MA

Title: Yoga Dosing Study Intern

Introduction: The Yoga Dosing Study is the first part of a 4-year NIH/NCCAM funded comparative effectiveness randomized controlled trial of yoga vs. physical therapy vs. education for chronic low back pain (CLBP) in underserved populations. Previous research highlights socio-demographic factors like race, ethnicity, and income as factors that may influence engagement in research studies. Furthermore, minority patients are more likely to experience barriers to participation in research. We sought to recruit a diverse population by reducing barriers to recruitment through partnerships with community health centers (CHCs).

Methods: I worked on a team to develop and implement a recruitment strategy that targeted known barriers to participant recruitment and focused on relationships with CHC physicians and staff. I helped design and distribute flyers, brochures, emails, targeted patient letters, and staff/ provider presentations. Additionally, I conducted interviews with study participants to better understand participants' feelings about the recruitment process.

Conclusion: In four months we responded to 631 inquiries about the study and screened 459 individuals for eligibility. We were able to enroll our target of 96 participants. In assessing the effectiveness of our recruitment tools, we found that targeted letters mailed to patients were the most effective recruitment tool, attracting 48% of participants to the study. Twenty-eight percent of patients were recruited by flyers/ brochures and thirteen percent were recruited by their physician. We found that a multi-dimensional recruitment strategy based on community center buy-in and support was successful. Developing connections with community health center physicians and staff was essential for recruitment.

Name: Ashley Dunkle

Practicum Site: Boston University Center For International Health & Development

Location: Lusaka, Zambia Title: PERCH Intern ZCAHRD

Introduction: Pneumonia is the leading cause of mortality among children under 5 globally, with the greatest burden in developing countries. A large proportion of childhood pneumonia etiology remains unknown and thus remains without adequate prevention or treatment. In an effort to develop evidence-based prevention and treatment methods, Johns Hopkins University is performing a seven-site, multinational case-control study titled PERCH, or Pneumonia Etiology Research for Child Health. At the Zambia site, 800 cases presenting at the University Teaching Hospital in Lusaka and over 900 community controls will be enrolled.

Methods: My short-term role in this ongoing study involves a number of activities, including the following: 1) monthly community control randomization, matching on age category and HIV status, 2) quality control analyses and monthly statistical reports for efficient and quality data collection and clinical performance, and 3) data entry of tuberculosis, HIV, and full blood count results into the electronic data capture system.

Conclusion: At this time, approximately 150 cases under five years old, with severe or very severe pneumonia, are enrolled in PERCH. The HIV prevalence is 16%. The most frequently observed microbes from induced sputum and blood cultures include S. pneumonia, H. influenza, M. catarrhalis, K. pneumonia, and S. aureus. The case fatality rate is consistent with the global rate of 20%. Analysis of the internationally compiled data will allow for development of new methods for the prevention and treatment of childhood pneumonia worldwide.

Name: Bretta Hixson

Practicum Site: Konbit Sante, Cap-Haitien Health Partnership

Location: Falmouth, ME

Title: Intern

Introduction: I spent my practicum working as an intern for Konbit Sante (KS), an organization which works in partnership with the Haitian Ministry of Health to provide capacity-building and logistical support for government health facilities. My goal was to gain a familiarity with the workings of a small, international non-profit, and to discover where my own strengths lie. The scope of the experience was broad, encompassing grant research, data management, and supply chain management.

Methods: Among many smaller tasks, I performed the following activities (a) entering, cleaning, and analyzing data from the radiology department of the Justinian Hospital for use in the evaluation of its financial strategy (b) profiling grant-makers from whom KS might seek funding (c) creating an essential medicines list (EML), customized for the needs of KS' partners, and (d) introducing the use of mhealth technology for data collection.

Conclusion: Although these projects were small, I believe that they will yield important benefits for KS and for the people it serves. My analysis of radiology data has already been presented to the director of the Justinian Hospital and, hopefully, will be used to shape departmental policy. My grantmaker profiles will be a useful resource for development. My EML will be used to inform the solicitation and selection of in-kind donations for KS' partners. Finally, the electronic forms that I created represent KS' first foray into the mhealth field, which will yield the double reward of ease and quality of data capture and the chance to tap into mhealth-related funding.

Name: Lauren Kleimol

Practicum Site: Massachusetts General Hospital for Children, Division of Global Health

Location: Nagpur, India Title: Research Assistant

Introduction: The MGH Division of Global Health and Lata Medical Research Foundation (LMRF), located in Nagpur, India, collaborate on research studies focusing on child health in low- and middle-income countries (LMICs). I led a research project that aimed to clarify the association between cooking with solid fuels and neonatal mortality. The purpose of the practicum was to gain a more global perspective on the impact of cooking with solid fuels on neonatal mortality by expanding prior research done at LMRF, which investigated the association among Indian populations, to include populations in other LMICs.

Methods: I worked with other researchers while in Nagpur to conduct a secondary analysis of DHS data. We obtained IRB approval; conducted literature searches to develop study hypothesis and design; submitted a report to access DHS data; and analyzed data using STATA software. For the analysis, we used forward stepwise poisson regression models to assess the association between cooking fuel and neonatal mortality after adjusting for clustering effects and individual and household characteristics. I reported study findings in an abstract submitted to the Pediatric Academic Society (PAS) Conference.

Conclusion: The summary effect measures, while not statistically significant, show variability in the impact of cooking with solid fuels on neonatal mortality both within and between global regions. The current study adds to the available information on the effects of cooking with solid fuels on neonatal mortality and can inform future research. I will present the research findings at the PAS Conference as a poster presentation.

Name: Sonia Kwon

Practicum Site: Nutrition and Education International, Soy Nutrition

Location: Pasadena, CA and Kabul, Afghanistan

Title: Project Coordinator

Introduction: Nutrition and Education International is an international California-based non-governmental organization dedicated to reducing malnutrition in Afghanistan through the production and consumption of soybeans as a new and alternative crop. I helped develop and increase the monitoring and evalution (M&E) capacity of NEI and their soymilk feeding program at an elementary school in Kabul. I also gained insight and experience in public health program development in resource-limited areas by an organization with limited funding and staff untrained in M&E.

Methods: I worked with NEI staff in California and Kabul to: 1) develop M&E protocol specifically for NEI's soymilk feeding program, 2) train staff on M&E protocol, 3) troubleshoot problems with data collection and entry, 4) review M&E best methods with my Field Supervisor. The M&E protocol was developed based on my research of current best practices used by similar international aid organization

Conclusion: The M&E protocol will be implemented in an extended conflict situation to assess health outcomes by untrained staff. The M&E system creates a background of reporting and recording data that will help improve the sustainability of their program and provide them with information that can be useful in reaching organizational objectives.

Name: Anne Lewallen Practicum Site: Asha India Location: Delhi, India Title: Grant Writer

Introduction: Operating in over 55 slums and reaching more than 400,000 people, Asha Community Health and Development Society is dedicated to improving the lives of slum dwellers by providing them with the tools to achieve better health, financial independence, higher learning, and to advocate for environmental change. My practicum project involved writing grant proposals to prospective donors and creating innovative funding opportunities for Asha.

Methods: I searched online databases to locate potential donors with guidelines that matched Asha's goals and overall mission. In collaboration with Asha staff, I crafted concept notes and grant proposals requesting funds in excess of \$20,000. I also filmed a short documentary about Asha that has the potential to garner more financial support for the organization.

Conclusion: Since the global financial crisis, Asha is in need of funding to sustain their current health and welfare programs for slum dwellers in Delhi. While the Asha staff is awaits responses from the concept notes and grant proposals I submitted, I will continue to assist Asha in developing their offices in the U.S.

Name: Katherine Louer

Practicum Site: La Isla Foundation

Location: Leon, Nicaragua Title: Public Health Intern

Introduction: La Isla Foundation was founded in 2008 in response to the chronic kidney epidemic occurring in the region of Chichigalpa, Nicaragua. With a still unknown cause, the study entitled Healthy Households and Risk factors associated with Chronic Kidney Disease in Guanacastal Sur, Chichigalpa, Nicaragua, serves to both identify and eliminate potential risk factors for the disease, as well as examine general health patterns in the community. As a public health intern I assist with survey development and implementation of the study.

Methods: Working along with La Isla's Volunteer Coordinator, two additional public health interns, and the CISTA at Universidad Nacional Autonoma de Nicaragua – León (UNAN-León), I was involved in the following stages of the study: (1) development of survey tool; (2) completion of a Epi-Info class; (3) building of survey database in Epi-Info; (4) implementation of survey and data collection in the field.

Conclusion: At the current stage of the study 20 surveys have been administered in the village of Santa Ana. Additional surveys are ready to be administered in the village of Paises Bajos. Development of the Epi-Info database is nearing completion and will be used for data entry and analysis. By the end of the practicum all data collected in the next month will be entered and analyzed to determine possible risk factors for chronic kidney disease.

Name: Manka Nkimbeng

Practicum Site: Boston University Center for Global Health and Development

Location: Choma, Zambia

Title: Zambia Chlorhexidine Application Trial (ZamCAT) Technical Assistance Intern

Introduction: The Zambia Chlorhexidine Application Trial is currently taking place in Zambia. The primary goal of the study is to determine if the application of 4% Chlorhexidine is effective in preventing umbilical cord infections. Also, the team is conducting surveys of the health facilities and health care workers to determine their capacity in managing Emergency obstetrical and neonatal care (EmONC).

Methods: Several surveys and data are being collected. During the six months with the project, I worked primarily on the health facility and worker surveys. These include: a) Reviewing and finalizing surveys. b) Orienting district medical offices and health facility management on study questionnaires and c) led the team that was collecting this piece of data.

Conclusion: During my stay, we collected surveys in 82 out of 106 facilities, and a total of 217 health workers were interviewed. Data from one project district, served as baseline data for a new study in that district that is aimed at decreasing maternal mortality. The surveys and interviews, once analyzed, will highlight the capacity to manage EmONC, and assist the Ministry of health and stake holders in allocating resources for upgrades and training to improve the quality of health services.

Name: Danielle Payne

Practicum Site: Boston University Center for Global Health and Development

Location: Mazabuka, Zambia

Title: Zambia Southern Province Technical Internship

Introduction: In Zambia, Mother-to-Child transmission of HIV is the leading cause of HIV infection in children under 15. The Boston University Center for Global Health and Development (CGHD) through the Zambia Center for Applied Health Research and Development (ZCAHRD), is implementing a program to integrate prevention of vertical transmission into routine health services. The purpose of my practicum was to provide technical support to the program, which supports 190 health facilities by assessing technical and logistical capacity and providing training and/or supplies to improve PMTCT services. The program also includes widespread community outreach to promote understanding and utilization of PMTCT services.

Methods: As my main responsibility, I assisted the Monitoring and Evaluation Coordinator in reviewing data collected from the supported health facilities. We noticed low antenatal care attendance at certain facilities and I assisted in investigating this issue. Low coverage rates for antenatal care is concerning because PMTCT services begin during antenatal visits. In collaboration with the program staff I: 1) analyzed antenatal coverage rates over a 1 year period at all supported health facilities in Mazabuka district, 2) developed a focus group discussion tool about antenatal care and 3) conducted 5 focus group discussions, transcribed the discussions and reported on the results.

Conclusion: The focus group discussions revealed that that knowledge on the importance of antenatal care, HIV testing and PMTCT is pervasive. However, participants disclosed that fear of HIV testing and refusal of male partners to accompany women to antenatal appointments at health facilities are the major obstacles, causing decreased attendance.

Name: Arian Rustemi Practicum Site: Asha India Location: New Delhi, India Title: Grant Writing Practicum

Introduction: Asha, a non-governmental organization working in slums across Delhi, provides essential health and social services to slum dwellers who face barriers in accessing these services outside the slums. One of their primary strategies to combating poor outcomes in maternal and child health (MCH) is to train community health volunteers (CHVs) from within the slums to provide primary care and prenatal services to the MCH population. In addition to holding weekly well-baby and prenatal clinics in the community clinic, CHVs visit women and children in their homes.

Methods: As a grant writing intern, I was responsible for developing concept notes and mini-proposals to be sent to international donor organizations requesting grants to expand and improve Asha's MCH program. After touring the slums to obtain firsthand knowledge about how Asha runs their health programs, I researched various international donor organizations to determine those whose mission and values aligned with those of Asha. Using the information I gathered from CHVs and slum dwellers during my slum visits, I composed concept notes and mini-proposals outlining Asha's background, objectives, and strategies.

Conclusion: I developed several concept notes and mini-proposals that were sent to donor organizations. As there are several steps in the grant process, Asha is now waiting for responses from the organizations we reached out to. After review, some organizations will request full proposals before deciding whether to provide a grant. Asha will use grants received to expand the reach of their MCH programs and improve upon current MCH initiatives.

Name: Heather Sauls

Practicum Site: Healthy Adventures Foundation

Location: San Diego, CA

Title: Principal Investigator: Wellness Program Evaluation

Introduction: The California Schools Voluntary Employees Benefits Association (VEBA) has been providing health services to San Diego school districts for over ten years. Healthy Adventures Foundation (HAF) hold the main contract to run the employee wellness program. VEBA-wide participation in HAF programs is 24%, well shy of the 50% participation goal.

Methods: To reach the participation goal, I designed and carried out an investigation to identify barriers that prevent employees from participating in VEBA/HAF wellness programs. Additionally, utilizing this information, I will create a pilot program to increase participation in low-participation districts for the following school year. Barriers to participation were identified in school districts with participation less than 15% and had over three years of membership in VEBA. After I conducted a thorough literature review, I created a survey for non-participating employees; I also contacted positive deviants within the districts and scheduled interviews to understand factors that encouraged participation.

Conclusion: Initial results indicate time constraints, distance to wellness program events and lack of awareness of programs as major barriers to participation. The full report will be completed in late May, 2012.

Name: Jeral Self

Practicum Site: Boston Medical Center, Department of Family Medicine

Location: Boston, MA

Title: Women In Control Health Study/ Qualitative Assessment Research Assistant

Introduction: In response to the global diabetes epidemic, research is expanding on the best method to disseminate information about diabetes management and how to empower patients to take the necessary measures to improve health. The Women In Control Health Study compares the feasibility of two different education structures: face-to-face group interactions between peers versus a virtual reality (VR) environment know as Second Life.

Methods: Using an IRB approved tool developed by Schulz et al. to assess the group dynamics of community based participatory projects, I assess the group dynamic themes of trust, conflict resolution, facilitation, sense of ownership, and sustainability of the peer support model in an eligible cohort of eleven women by telephone. Eligibility was based on several factors including completion of the study protocol as well as participation in a post intervention focus group. As the survey tool was qualitative, responses were coded using the above themes in NVivo and then equated to a number on a 10-point scale.

Conclusion: Averaging the results of the eleven subjects surveyed, the scores for each theme were as follows: trust (48 points), conflict resolution (39 points), facilitation (47 points), sense of ownership (48 points), and sustainability of the peer support mode (36 points). Based on these results, the program needs to make adjustments within the themes of conflict resolution and sustainability of the education interventions included.

Name: Elizabeth Umphrey
Practicum Site: Ikamva Labantu
Location: Cape Town, South Africa

Title: Intern for the Child Health wellness project run by Ikamva Labantu's Wellness Center located in Khayelitsha

Introduction: Ikamva Labantu is a NGO in Cape Town, South Africa. Their staff provides beneficiaries health education and promotion, and encourages disease prevention and the vital role of nutrition through their food parcel distribution projects. It has built a Wellness Center in Khayelitsha, a high density informal settlement on the periphery of Cape Town. The burden of disease in Khayelitsha is the highest in the province. Ikamva Labantu is lacking health data on children (majority aged ≤ 5) they serve; therefore I was responsible for starting a child health project from January – March 2012.

Methods: My methods included site visits to ECD centers and OVC homes, development and use of assessment tools to gather information and evaluate health of children, face-to-face interviews with caregivers, and health education (most notably ORT). Conclusion: Of the 254 child records surveyed 42.2% of children had birth certificates, 38.7% had a clinic card, and 23% had an up to date clinic card. 10.24% of children measured had a BMI ≥ 20, and no children had a weight below the 10th percentile. The results raise concerns that children in Khayelitsha may not be receiving preventative health services such as immunizations, and that Ikamva Labantu's food parcels are not being distributed to those most in need. My recommendations to Ikamva Labantu included training of community workers to assist caregivers with keeping child health files, standardizing child health data collection, electronic record keeping, and continually reevaluating target populations to identify the most marginalized members in the community.

Name: Adeola Adetola Akinlonu

Practicum Site: Boston Medical Center, Department of Pediatric Hematology

Location: Boston, MA **Title:** Research Assistant

Introduction: The division of pediatric hematology at Boston Medical Center takes care of individuals with Sickle Cell Disease (SCD). As a way of ensuring a successful transfer of adolescents with SCD into adult care, a transition program was developed for patients within 18-22years. This program consists of a monthly collaborative transition clinic staffed by both adult and pediatric sickle cell providers, a quarterly after-school educational session, and a transition guidebook that provides useful resources/information for youth as they become independent.

Methods: I assisted in improving the show rate for the transition clinic by making reminder calls to patients and identifying the reasons from those who couldn't make their appointments. I helped in analyzing the transition readiness data collected from patients. The result was useful in identifying which patients were ready to be transferred to adult care. It also helps to identify gaps in transition readiness with the aim of reducing such gaps. I have also assisted in compiling information for the transition guidebook.

Conclusion: Most patients believed that the transition program would help reduce anxiety and better prepare them for the adult care setting. The results of the transition assessment completed by 23 patients showed that 80% had a good knowledge of their medical condition, 60% understand what type of health insurance they have as well as carrying their own insurance cards. Many have social supports and are comfortable living independently (80%-90%). Those who showed less self-efficacy about independent living will remain in pediatric care.

Name: Adeola Adetola Akinlonu

Practicum Site: Boston Medical Center, Department of Pediatrics

Location: Boston, MA

Title: Data Management Intern

Introduction: The Teen and Tot Program (TTP) at Boston Medical Center (BMC) provides care, support and education for pregnant and parenting adolescents (up to 21years) and their children (up to 3years). The goal of this program is to reduce repeat pregnancies among parenting adolescents by ensuring they keep regular clinic appointments and are compliant with contraceptive methods. It also aims at ensuring their kids are up to date with routine well child visits and immunizations.

Methods: My role as a data management intern was to compile the list of all the pregnant and parenting teenagers enrolled in TTP from 2006 till date. I checked the medical records for their demographic information and birth outcomes. I also kept an updated list of all babies delivered by these teenagers.

Conclusion: Presently, the database contains a total of 686 adolescents enrolled in TTP. Among these, 305 had their prenatal care at BMC, 367 had prenatal care at different community health centers in Boston, and 14 did not receive any form of prenatal care before delivery. There are 681 children in the TTP with 5 still births. This database will allow for further analysis on the TTP data, and appropriate clinical care measures.

Name: Christine Breuer

Practicum Site: Boston University School of Public Health/Boston Medical Center, Department of Pediatrics-Project Solve

Location: Boston, MA

Title: Program Evaluator for Healthy Start in Housing

Introduction: Healthy Start in Housing (HSiH) is a novel joint initiative between the Boston Housing Authority (BHA) and the Boston Public Health Commission (BPHC) to lessen the burden of housing instability on pregnant women who are at high risk for adverse birth outcomes. In this pilot initiative, 75 women will receive BHA housing while simultaneously being provided with intensive case management services through BPHC's Healthy Baby Healthy Child. As part of my practicum, I worked with a team within Boston University School of Public Health to evaluate HSiH.

Methods: My responsibilities included attending meetings, conducting baseline assessments with HSiH participants, and constructing a database to analyze demographic and risk characteristics of applicants. Parallel to this work, I conducted a literature review about the impact of housing instability on maternal and child health. Altogether, my experience allowed me to appreciate the challenges of implementing and evaluating a pilot program that is the first of its kind.

Conclusion: Given that HSiH is still in its developmental phase, BPHC and the program evaluators are working together to refine the program's design and delivery. The conducted baseline assessments are a crucial step to understand how the program can better serve at-risk mothers. Likewise, the development of a comprehensive database that houses demographic and risk characteristics guarantees that the program can continuously be evaluated to ensure that program goals are met. Lastly, the literature review detailing the impact of housing stability on health outcomes will help support ongoing validation of HSiH.

Name: Rebecca Cantor

Practicum Site: Boston University School of Public Health/Boston Medical Center, Department of Pediatrics-Project Solve

Location: Boston, MA

Title: Care Manager at Project SOLVE

Introduction: The ADHD Care Management Project at Boston Medical Center is a randomized study to compare the effectiveness of two care models on ADHD (attention deficit/hyperactivity disorder) outcomes. The study aims to address the discrepancy in ADHD treatment in low-income and minority children, who are less likely to be correctly diagnosed and treated than among more affluent or white populations. The goal of this practicum was to assess how Haitian patients and their families respond to the intervention, and how to modify the intervention to better serve the Haitian patients.

Methods: As Care Manager, I 1) conducted a literature review of Haitian perceptions of illness and treatment, parental roles in ADHD care, and barriers to care for low-income and minority patients with ADHD, 2) completed key informant interviews with pediatricians and researchers knowledgeable about the target population, and 3) analyzed study data for trends.

Conclusion: The final product was a set of recommendations for revising patient screening and diagnosis protocol to offer Haitian families options that reflect their own understanding of behavioral disorders and their own perceptions of their roles as family members. The set of recommendations will help provide more culturally competent care to Haitian families at Boston Medical Center. Ideally, this approach to care will yield better outcomes than standard ADHD care.

Name: Mirian Emeruem

Practicum Site: Somali Development Center

Location: Boston, MA **Title:** Prenatal Care Intern

Introduction: Following the war, thousands of Somali women have migrated to the Boston area. Several studies have indicated that the birth outcomes of Somali women post migration are worse than women in receiving nations. Some of these outcomes such as increase in stillbirths and lung infections may be secondary to inappropriate and culturally incompetent care during the prenatal care. As part of a quality assessment measure, a project was created at the SDC to ascertain from Somali women if access or type of prenatal care received at hospitals is culturally competent, appropriate, meets their requirements or is in fact a detriment to them and newborns.

Methods: Assisted in teaching adult literacy classes to help women understand English and to communicate with their providers.

Conducted 2 focus group sessions comprised of semi-structured interviews. Focus groups will be recorded and transcribed and results will be analyzed for emerging themes.

Conclusion: Upon completion of analysis of the information obtained from the focus group sessions, the results will provide an insight to the needs of Somali refugee/immigrant women during prenatal care in the USA. Information on how to provide prenatal care that is culturally competent, practical and appropriate can be deduced. Finally, results can be used as a base to develop and test prenatal care models that would be suitable for Somali refugee/immigrant women and potentially improve prenatal care and perinatal outcomes for women in this population.

Name: Gina Foianini

Practicum Site: Massachusetts Department of Public Health, Division of Perinatal, Early Childhood and Special Health Needs

Location: Boston, MA

Title: Operations Manual Intern

Introduction: FRESH Start in Western Massachusetts works with pregnant women and new parents affected by substance use disorders and their children. Their home-visiting program helps clients to achieve and maintain recovery, and to improve their capacities to safely parent their children. FRESH Start utilizes peer mentors to provide intensive case management, recovery coaching, systems' advocacy and parenting support. FRESH Start intervenes at the immediate post-partum period and provides gender-specific, family-centered and trauma-informed services for pregnant women and their families. As a demonstration project, FRESH Start is need of an operations manual in order to maintain fidelity to their program model and to move towards becoming evidence-based. I worked with FRESH Start to develop an operations manual to be used as a best practice guide and a reference point for other peer-led recovery programs.

Methods: I worked with the program director to identify the goals of the program manual and its target audience. I traveled to Holyoke to observe home visits and interview FRESH Start staff members in order to learn about the program and collect data for the operations manual. Finally, I analyzed and summarized findings and synthesized data to produce a final product.

Conclusion: The development of an operations manual is necessary for FRESH Start to move towards becoming and evidence-based program. This manual will also act as a reference point for FRESH Start staff and help facilitate the expansion and potential replication of the intervention in other settings.

Name: Laura Hajar

Practicum Site: Boston University School of Public Health/Boston Medical Center, Department of Pediatrics-Project Solve

Location: Boston, MA

Title: ADHD Care Management Project/Care Manager and Research Assistant

Introduction: The ADHD Care Management Project, located in the pediatrics department of Boston Medical Center, is a comparative effectiveness trial for ADHD care in the primary care setting. The study aims to discover how families respond to the way their children are treated for ADHD or ADHD symptoms.

Methods: I work as both a Care Manager and a Research Assistant. As Care Manager, I interview parents of patients who are exhibiting ADHD symptoms to survey the child's behavior and social skills. I collect information from the patients' teachers about academic performance and behavior in school. Finally, I review medical records to compile a Decision Support Memo which I then present to a panel of doctors. Based on the information provided, the panel makes a recommendation to diagnose or rule out ADHD and other co-morbidities. As Research Assistant, I obtain consent from parents who have expressed interest in our research project and conduct baseline interviews and a health literacy quiz. I conduct follow-up interviews with parents at 6 and 12 months. I enter the data into the project database.

Conclusion: The collaborative care model employed by the ADHD Care Management Project aims to overcome systems-based barriers to ADHD care in the primary care setting, particularly for an under-served population. By expanding the primary care team to include Care Managers and specialists for decision support, the project will improve accuracy of diagnosis, facilitate treatment monitoring and adjustments, and aid parents in behavior management.

Name: Crysta Jarczynski

Practicum Site: Children's Hospital, Informatics Program

Location: Boston, MA

Practicum Title: Research Assistant

Introduction: Mental health consumers increasingly use online social networking sites (SNS) and forums to exchange information and support for depression, but the clinical quality and safety of these sites is unknown. We undertook an evaluation of depression-focused SNS and forums of: (a) alignment of content with DSM-IV diagnostic criteria and clinical standards; (b) safety practices governing content and transparency; (c) post response time and content; (d) presence and transparency of pharmaceutical, alternative treatment and clinical advertising; and (e) privacy policies and data protection standards.

Methods: Trained research assistants reviewed 17 forums and SNS using standardized worksheets to assess 48 quality indicators across these five domains. We used common principles from the Professional Ethical Standards for mental health providers (psychiatrists, psychologists and social workers) and clinical consensus from experts on our team to formulate our structured assessment

Results/Outcomes: Cross-site strengths include presence of core diagnostic criteria (76%), forum moderation (76%), guidelines for appropriate posting behavior (94%), link to emergency number/ suicide hotline (82%), disclaimer indicating that site activities are not a substitute for appropriate clinical services (88%) and privacy policy (76%). Cross-site weaknesses include evidence of outside audit of site content (29%), link to depression association (6%), access to community posted data restricted to members (35%), and link to screening tool (35%). 71% of sites hosted advertisements, with 24% advertising pharmaceutical products. Our results suggest information gaps, poor safety practices, low transparency of advertising content and poor privacy. We recommend the use of "peer-review" to boost clinical alignment and transparency.

Name: Fllen Kreida

Practicum Site: Catholic Charities Boston, Malden High School Teen Parenting Program/Early Education and Learning Program

Location: Malden, MA

Title: Malden High Teen Parent Program Intern

Introduction: Communities need comprehensive and effective sex education. The Malden High Teen Parenting Program helps students who are teenage parents continue their education, learn effective parenting skills, and become self-sufficient. Youth empowerment approaches to community-based initiatives effectively engage at-risk populations in prevention-oriented activities. This abstract describes a peer-led initiative utilizing a youth-empowerment approach to provide sex education to high school students. Young parents seek to advocate for themselves and their children and do so by sharing their stories about becoming teen parents.

Methods: I worked with the teen parents to develop an agenda for a school-wide assembly about teen pregnancy with the goal of providing education, peer support, and insight about the difficulties of being a teen parent. I worked with school administrators, community health liaisons, and teen parents to coordinate logistics of the school assembly, discuss ideas about what message to send to students about teen pregnancy, create an agenda for the assembly, and develop a survey to be distributed to students before and after the assembly occurs.

Conclusion: The agenda developed in conjunction with the teen parents will be used to present their message to the freshman class at a one-time event, and used as a model for future events at the high school. The survey will be used as an evaluation tool to measure the effectiveness of the assembly in reaching its overall goals to reduce teen pregnancy rates, improve communication about safe sex by focusing on awareness of choices, and increase graduation rates for teen parents.

Name: Lindsay Kirsch

Practicum Site: Boston Medical Center, The SPARK (Supporting Parents and Resilient Kids) Center

Location: Boston, MA

Title: Early Childhood Program Intern

Introduction: The SPARK center is a modern daycare facility that integrates medical and psychological care for high-risk children. This practicum's purpose was to determine the percentage of students who leave SPARK at age three after aging out of Early Intervention (EI), where EI therapists travel to the child to provide services. To continue receiving services through the state after EI, children must qualify for an Individualized Education Plan (IEP), and attend or travel to a school. SPARK plans to seek funding to provide services at their facility for 3-5 year old students.

Methods: I began by reviewing SPARK's electronic database, charts, and files for student information. I compiled a spreadsheet of 108 students, and met with the special education and nursing coordinators to fill in missing information. I then interviewed parents/guardians of SPARK students to determine their reasons for staying at or leaving SPARK, and their opinions about the transition from EI to an IEP. **Conclusion:** I was able to contact 16 of 108 parents; the rest were not reachable, had no listed and/or working telephone numbers, or did not wish to participate in the interview. Data collection determined 18% of interviewees withdrew their children from SPARK for an IEP. Of the same sample, 45% of parent's interviewed indicated that they would have remained at SPARK if IEP services were available at the facility. For SPARK to provide evidence that extended services would be utilized, their methods of collecting and organizing student data and follow-up information must be improved.

Name: Kelly Macnee

Practicum Site: Boston University School of Public Health, Department of Epidemiology

Location: Boston, MA

Title: Kick It For Good Research Intern

Introduction: Residents with incomes below the poverty level have much lower tobacco cessation rates compared with those with incomes at or above the poverty level (30% vs. 53%). Tobacco cessation treatments such as medication and counseling are also vastly underutilized in this population. The Kick it for Good study is a group randomized control trial that is testing the efficacy of community health workers (TTA=Tobacco Treatment Advocate) in increasing quit rates among smokers in public housing.

Methods: This practicum involved many aspects of a randomized control trial such as 1) literature reviews of smoking cessation measures and procedures 2) recruitment of public housing residents into the study 3) analysis of TTA control tapes for adherence to protocol 5) conducting baseline and 3-month follow up questionnaires 5) database coding of TTA and CHR (Community Health Researcher) visits.

Conclusion: The study is in its 3rd year and hopes to find substantial evidence that the TTA model is effective at increasing quit rates among public housing residents. The study hypothesis is that low-income smokers need additional motivation, and support in navigating barriers to quitting smoking and evidence from this study will help housing authorities to receive more funding to do so in the future. Lower smoking rates among this at-risk population will mean they share less of the burden of disease in the long run.

Name: Hannah Oakley

Practicum Site: Massachusetts Alliance on Teen Pregnancy, Public Policy Department

Location: Boston, MA Title: Policy Intern

Introduction: The Massachusetts Alliance on Teen Pregnancy is an advocacy organization that works to prevent teenage pregnancy and ensure support services for expectant and parenting teens. At The Alliance, I worked as a member of the policy team where our main advocacy priorities were centered around 8 line items in the Massachusetts budget and two bills amending legislative language.

Methods: My main activities at The Alliance included collecting data and literature on the needs of teens and teen parents to inform evidence-based policies, analyzing existing legislation (including FY12 and FY13 budget proposals) and requesting amendments, and drafting communications via advocacy alerts, press releases, fact sheets, letters to policymakers and testimony. I also participated in meetings with legislators, state agency administrators, and other providers in the community to build consensus around the organization's policy priorities.

Conclusion: I successfully organized and executed one of the largest lobby days in the State House. I managed, recruited and led advocacy trainings for youth. I contributed a substantial report of the needs of teen fathers to inform future policy priorities of the organization. Through this practicum I have learned how to effectively use public policy to mitigate the effects of social injustice as a health determinant. I have also learned successful communications strategies for advocating, namely how to frame issues to make them more salient to audiences who are not typically concerned with issues of adolescents.

Name: Sarah Puklin

Practicum Site: Brookline Department of Public Health, Division of Community Health

Location: Brookline, MA **Title:** Community Health Intern

Introduction: The Brookline MA Department of Public Health is comprised of many different divisions including, environmental health, public health nursing, emergency preparedness, school health and community health. This practicum was in community health, the division responsible for promoting health and well-being throughout Brookline. The division plans health-related events and discussions, which are promoted through press releases, social media, flyers, and town forums.

Methods: A large event this spring was the "Brookline Passport to Health and Fitness," a program developed to recognize the importance of physical activity and fitness as pubic health issues. Designed similarly to "Groupon" deals, the program intended to expose people to new forms of exercise, at a low cost, with the goal of increasing physical activity in the community via utilization of local resources. The Health and Recreation Departments of Brookline worked together to create the program, which allowed participants to take one free class at 10 different locations for only \$10. The program ran from January 1- March 31 2012, and far exceeded initial expectations. Thirteen different partner locations participated offering activities ranging from spinning to Tai Chi to yoga. Over 250 Brookline residents purchased Passports.

Conclusion: Currently a survey is being developed to evaluate the program. Areas being assessed include the scope of participants reached, and whether the program impacted people's exercise and physical activity behaviors. The results of the survey will allow the department to discuss and address potential barriers to physical activity in the community. Fiscal and operational implications for partners will also be evaluated.

Name: Aurelia Rus

Practicum Site: Boston Public Health Commission, Boston Healthy Start Initiative

Location: Boston, MA

Title: Boston Healthy Start Initiative PEDIM-ALC Intern

Introduction: The Boston Healthy Start Initiative (BHSI) is a federally funded program whose goal is to eliminate disparities in perinatal outcomes among pregnant Black women. I worked primarily with the PEDIM-ALC, which is a BHSI sponsored group that uses the life course paradigm to address racism and its effect on perinatal outcomes. I also worked with the Healthy Birth Boston Work Group (HBBWG), which is a BHSI sponsored group that focuses on improving birth outcomes among Black women in Boston.

Methods: I researched the role of racism in birth outcomes, helped form a PEDIM-ALC team composed of community partners, conducted a comprehensive literature review around preconception health in high-risk women, and gave a presentation at Northeastern University on BHSI. I worked to develop, disseminate, and analyze a survey given to BHSI clinical partners (community health centers and hospitals) regarding BHSI's switch to Centering Pregnancy, a group model of prenatal care. The survey assesses issues and concerns clinical partners have about the switch to Centering Pregnancy, problems partners have encountered during the switch, and potential solutions for each site.

Conclusion: The PEDIM-ALC team will conduct focus groups with BHSI clients. Focus group results will lead to development of a community-centered initiative addressing the effects of racism on pregnant and parenting women. The literature review for the HBBWG will direct development of a preconception health policy for BHSI clients. Survey results will be presented to BHSI clinical partners at a summit this spring to resolve issues and concerns about the switch to Centering Pregnancy.

Name: Jhill Shah

Practicum Site: Enhanced Medical Care

Location: Waban, MA

Title: Electronic Medical Records: Progress Note Module Improvement

Introduction: Electronic medical records (EMRs) have revolutionized the way physicians practice medicine. However, in spite of having several advantages, electronic medical records have not been implemented in the majority of physician practices. The lack of EMR implementation may be attributed to several factors, including not being user friendly and taking more time to use compared to completing tasks by hand. At Enhanced Medical Care, a concierge practice in Waban, MA, the electronic medical record system in place, CareTracker, has proven to be superior to many others. However, it still takes Dr. Mark Costa, the sole physician at the practice, an excessive amount of time to write progress notes because of the format of the EMR system. The purpose of my practicum project is to help identify obstacles and make suggestions for improvement to the progress note module in CareTracker, in efforts to have the software company make the suggested changes.

Methods: In order to accomplish the goal, I began by researching EMR systems to verse myself in the topic. Soon afterwards, I observed Dr. Costa write multiple progress notes to see what aspects of the process were inefficient. Interviews were then conducted with staff about CareTracker. The remainder of this semester will be spent working with the software company to make updates to CareTracker.

Conclusion: At completion of my project, Dr. Costa will have more time to spend with patients and provide them with the best care without being stressed out by the challenges of writing progress notes on CareTracker.

Name: Caitlin Sulivan

Practicum Site: Massachusetts State House, Office of Representative Ellen Story for the PostPartum Act

Location: Boston, MA **Title:** Health Policy Intern

Introduction: In 2010, under the leadership of Representative Ellen Story, the Massachusetts legislature passed An Act Relative to Postpartum Depression, which created a special legislative Commission on Postpartum Depression. Tasked with developing recommendations on improving postpartum depression (PPD) screening and care in Massachusetts, the Commission is comprised of providers, survivors of PPD, legislators and other stakeholders. The legislation also intends to develop a culture of awareness and destigmatization of postpartum depression among the public and providers.

Methods: I served as an aide to the Commission, as well as to two subcommittees focused on screening tools and the referrals system. In this role, I coordinated meetings, drafted subcommittee reports, researched and provided resources to Commissioners and worked with subcommittee chairs to identify best practices on PPD screening and referrals. Further, I drafted a recommendation for the Statewide Quality Advisory Committee on the inclusion of PPD screening as a quality measure in forthcoming cost reform legislation. I am also helping to coordinate a statewide public awareness campaign this May.

Conclusion: The reports from subcommittee and larger Commission meetings will be used to develop a final report to the legislature this summer. In this report, the Commission will issue policy recommendations on how to improve PPD screening and care in Massachusetts. Ultimately, this work will strengthen a culture of awareness, in which providers have access to evidence-based resources and families receive compassionate care for postpartum depression.

Name: Meredith Weiner

Practicum Site: Partners in Health and Housing Prevention Research

Location: Boston, MA
Title: Research Assistant

Introduction: Research shows that residents of public housing have worse health outcomes than those individuals who do not live in public housing. This project aims to promote "heart health" among residents living in four public housing developments. This is accomplished through screening sessions in which PRC staff measure blood pressure, smoking status, diabetes risk, weight and height, and previous diagnosis of high cholesterol or diabetes, with the ultimate goal of linking those residents who screen positive into primary care. This community-based participatory research study is testing a Resident Health Navigator (RHN) approach in public housing in order to help residents overcome barriers to care and utilize the healthcare system.

Methods: Our research team carries out health screenings for hypertension, history of high cholesterol, diabetes risk, smoking, and obesity. Resident Health Advocates (RHA) and RHNs use flyers and personal and community contacts to recruit residents to health screenings at all four sites. At the two intervention sites, residents with a positive screen are connected with an RHN, who determines their healthcare needs and assists them with referrals to primary care or community programs, and schedules times for follow-up. Residents that screen positive at the two control sites can receive on-site information about resources from an RHA and additional informational pamphlets. Enrolled residents from the intervention sites are considered "completed" when they attend a community program or go to a scheduled appointment.

Conclusion: Projected results show that the utilization of an RHN model has a significant impact on increasing the number of public housing residents who get into primary care services or community-based health programs.

SOCIAL & BEHAVIORAL SCIENCES

Name: Shelley Amberg

Practicum Site: Veterans' Affairs Boston Health Care System

Location: Boston, MA **Title:** Junior Data Analyst

Introduction: "Personality and Well-Being Trajectories in Adulthood" is a research study investigating the association between daily stress, personality factors, and physical health. Micro-longitudinal data, including saliva for biomarker testing, diaries about daily stress and emotions, and surveys about health and social behaviors, has been collected by mail from approximately 250 subjects. The data will be used to model daily within-person and between-persons variation in affect and cortisol levels as a function of daily stressors and global personality.

Methods: My work included using source documents to validate and clean previously entered data. Using SAS, I match-merged several Excel files to create a dataset that includes salivary assays, daily diary variables, and time-interval information. I manipulated these data to create a multi-level data structure that can accommodate longitudinal analyses. I created 'flag' variables in order to alert future analysts using the dataset of potential problem points. I created an accompanying codebook that documented my procedures. Additionally, I presented my recommendations for data collection methods in future waves of this study. Before the end of the practicum, I will present preliminary descriptive statistical analyses to the study team.

Conclusion: My work provided the study team with a cleaned dataset and codebook, usable for multi-level modeling and longitudinal analyses. Additionally, my recommendations for future data collection may allow for the collection of more precise, complete data from the next wave of study participants. Future work includes conducting preliminary analyses that may be useful for characterization of the study population and hypothesis generation.

Name: Patricia Determan

Practicum Site: Massachusetts Alliance on Teen Pregnancy

Location: Boston, MA **Title:** Prevention Intern

Introduction: I performed the duties of Prevention Intern at The Massachusetts Alliance on Teen Pregnancy, an organization whose mission is to advocate statewide and mobilize communities to prevent teen pregnancy, to increase opportunities for youth and young parents, and to empower young people to make healthy decisions about relationships, sex, parenting, and life.

Methods: MATP uses public policy, best practices, and youth empowerment to achieve these goals. As the Prevention Intern, I worked closely with the CDC funded Youth First Initiative. This initiative uses a community-wide approach to increase access to evidence based sexual education programs and clinical services as well as to increase awareness of teen pregnancy in targeted communities.

Conclusion: Assistance with this initiative included producing up-to-date teen pregnancy fact sheets, preparing materials for and attending evidence based curriculum trainings and clinical trainings, and helping to create and adapt training materials. Additional activities included assisting at Teen Parent Lobby Day and writing an article for the monthly Alliance newsletter.

Name: Eileen Evans

Practicum Site: Boston University School of Public Health, Project Ready - BMC Pediatric Department

Location: Boston, MA

Title: Development of an Interventionist Manual for Brief Motivational Interviewing of Teen Perpetrators of Teen Dating Violence

Introduction: Project READY is a NIAAA-funded research study based at the Boston University School of Public Health that takes place in the Pediatric Emergency Department at Boston Medical Center. Project READY aims to reduce alcohol use and dating abuse among youth. This study hopes to expand the literature regarding alcohol consumption and teen dating violence perpetration. As part of Project READY, I worked to develop a interventionist manual for use in a small scale test of the feasibility and preliminary efficacy of a brief motivational interview-style intervention. Motivational interviewing (MI) is a client-centered approach that aims to reduce ambivalence to behavior change. This intervention applies the components of MI in an emergency department setting to reduce unhealthy behaviors associated with alcohol and dating violence in adolescents and young adults.

Methods: In preparation for developing the interventionist manual, I 1) became familiar with brief motivational interviewing, 2) researched its use in an urban population as well as an emergency department setting, and 3) reviewed literature regarding teen dative violence. Once a draft of the manual was complete, practice of the intervention was completed in front of colleagues and Boston teens for feedback. Using a Delphi approach, the manual was then revised to incorporate feedback.

Conclusion: The interventionist manual was completed and will be implemented in small-scale randomized control trial beginning in May.

SOCIAL & BEHAVIORAL SCIENCES

Name: Lana Kwong

Practicum Site: Boston Medical Center, Department of Family Medicine

Location: Boston, MA

Title: Yoga Dosing Study for Chronic Low Back Pain Practicum

Introduction: Chronic low back pain (CLBP) is the most common type of pain experienced by adults in the U.S. While recent studies suggest yoga may be an effective treatment for CLBP, little is known about the optimal dose for treatment, taking into account both cost and effectiveness. The Yoga Dosing Study recruited participants from Boston Medical Center and five affiliated Community Health Centers serving racially diverse low-income neighborhoods in Boston, Massachusetts. The purpose of this two-armed randomized controlled trial, consisting of a 12-week Hatha yoga protocol comparing once per week to twice per week 75-minute classes, was to assess the impact of yoga dose in adults with CLBP and to identify barriers and benefits to offering complementary therapies in the community health center environment.

Methods: As a member of the research staff, my work focused on: (1) creating recruitment materials, (2) screening and consenting participants, (3) providing weekly data reports on recruitment and attendance rates, and (4) assisting with the implementation of the intervention protocol, including administering surveys and entering and cleaning data.

Conclusion: Utilizing a multi-faceted recruitment strategy, 542 participants were screened for eligibility. Of those, 33% (n=181) met the inclusion criteria for the study. Of those who met the criteria 52% (n=95) were enrolled in the research study. After 12 weeks, the mean attendance rates for the 1x/week and 2x/week groups were 73% and 62%, respectively (p=0.11). The optimal dose of yoga for adults of low-socioeconomic status with CLBP is still being determined.

Name: Casey Mulligan

Practicum Site: Brookline Department of Public Health

Location: Brookline, MA

Title: Teen Dating Violence Prevention/Intervention Intern

Introduction: The mission of the Brookline Coalition Against Substance Abuse (B-CASA), initiated in 2003, is to address several youth risk behaviors including substance use, tobacco use and interpersonal violence. B-CASA staff work with the Brookline High School peer leadership program to promote awareness regarding health related issues that youth face on a daily basis.

Methods: Practicum activities included: 1) collaborate with peer leaders to develop and teach the 7th and 8th grade teen dating violence curriculum; 2) assist in the development of a new cyber-bullying curriculum; 3) help to organize anti-smoking days and cyber-bullying awareness programs at the high; and coordinate a Valentine 'candy gram' initiative to raise both awareness and funds to support domestic violence prevention; and 4) prepare informational materials that were distributed to Brookline parents. These materials included a parent tip sheet on "How to Talk to Your Teen about Dating Violence" and also a letter to parents letting them know what their teens were discussing in class regarding dating violence.

Conclusion: All of these activities will contribute to health promoting behaviors and reduce the prevalence of preventable adverse health outcomes related to violence among youth.

Name: Emily Petro

Practicum Site: Boston University School of Public Health, Department of Epidemiology

Location: Boston, MA
Title: Kick It For Good Intern

Introduction: Kick it for Good is a community-based, group-randomized smoking-cessation intervention being delivered in 20 Boston Public Housing (BPH) sites. Community Health Advocates trained as Tobacco Treatment Advocates (TTA's) who are also residents of Boston public housing will assess residents' level of motivation to quit and encourage residents who are ready to quit to access existing treatment that best fits the resident's needs, including a quitline, clinic-based programs, and/or nicotine replacement therapy.

Methods: I will assist the project team in recruitment efforts and administration of study questionnaires at BPH sites. I will also review tapes of TTA sessions with participants and compare them with TTA referral notes to identify any intervention fidelity issues and request treatment information from primary care providers, clinic-based cessation programs, and the Massachusetts Smokers' Quitline. This information will be used to create a Comprehensive Treatment Report documenting referrals made by TTAs, services utilized by

behaviors.

Conclusion: The Comprehensive Treatment Report will help inform the intervention team whether or not the intervention goals are being met and which cessation services are most appealing to public housing residents. These results can also be shared with treatment programs to help them better accommodate the needs of this traditionally underserved population.

participants, any barriers to utilization expressed by the participants, and results of program components on participant's smoking

SOCIAL & BEHAVIORAL SCIENCES

Name: Katherine Reid

Practicum Site: Boston University School of Public Health, Department of Community Health Sciences

Location: Boston, MA

Title: Development of a Clinical Trial to Test Effects of Electronic Cigarettes on Smoking Behavior

Introduction: Electronic cigarettes, known as "e-cigs", hold a potential benefit for smoking cessation by preserving the social acts of smoking without the negative tobacco side effects. Since little research has been conducted to explore this hypothesis, this practicum focused on the design of a clinical trial to test the affect of e-cigs on smoking behavior.

Methods: A literature review on smoking behavior, electronic cigarettes, and previously successful smoking cessation study was conducted. This research informed a draft protocol that outlined the specifics of a study design, objectives, recruitment methods, inclusion criteria, safety analysis, data collection and study implementation plan. An IRB application including study specific informed consents and study advertisements required for IRB approval was completed. A study budget was outlined and potential funding options were explored.

Conclusion: If funded and completed, the proposed clinical trial will provide data that reveal if electronic cigarettes influence smoking behavior among current smokers who express desire to quit. Findings will inform if e-cigs, as a replacement to tobacco cigarettes, contribute to smoking cessation.

Name: Chetan Virmani

Practicum Site: Boston University School of Public Health, Department of Epidemiology

Location: Boston, MA

Title: "Kick it For Good" anti-smoking intervention

Introduction: The Boston University School of Public Health Department of Epidemiology is conducting a process and outcome evaluation of the "Kick it For Good" anti-smoking intervention. The outcome evaluation question is whether the use of trained neighborhood anti-smoking advocates (Tobacco Treatment Advocates), on a personal counseling level, can reduce smoking rates in Boston Public Housing by promoting the utilization of already available smoking cessation services. Process evaluation questions include whether the intervention was implemented according to plan and participant opinions about the program.

Methods: As a member of the research team, practicum activities included: 1) compile, organize, and interpret data from public housing resident surveys; 2) recruit residents into the program; 3) conduct follow-up meetings with study participants; and 4) compile a manual of procedures

Conclusion: The preparation, analysis and interpretation of data from Boston public housing resident surveys will provide information about participants' current attitudes and motivations towards quitting smoking, as well as insight into the performance of different Tobacco Treatment Advocates, intervention fidelity, and participant satisfaction with the intervention. Successful recruitment will contribute to the study's validity. Follow-up meetings with study participants will provide information about intervention outcomes. The procedure manual will detail implementation processes, promote consistency and adherence to the study protocol.

Name: Heather Wise

Practicum Site: Boston University School of Public Health, Department of Community Health Sciences

Location: Boston, MA
Title: Research Assistant

Introduction: This project aims to examine the role of corporate sponsorship of health organizations in helping companies to market their products and improve their public image. To do this, we investigated PepsiCo and Coca-Cola sponsorships of health organizations during the period of 2009-2011.

Methods: We conducted a two-part search to identify public health programs, research, and organizations sponsored by the Coca-Cola Company or PepsiCo during the period 2009-2011. First, we examined the annual and sustainability reports of the Coca-Cola Company and PepsiCo for disclosure of sponsorship, funding of, or partnership with public health and medical organizations during the study period. Second, we systematically searched the internet for Coca-Cola Company and PepsiCo sponsorships of public health or medical organizations during the period 2009-2011.

Conclusion: Non-profit organizations (NPO) were identified as having the most sponsorships. Our study found PepsiCo having a greater number of relationships with research or academic institutions (13) than the Coca-Cola Company (5). In analysis of these sponsorships we identified five key roles of corporate sponsorship of health organizations: neutralizing of policy opposition, positive brand associations, building up corporate goodness by associations, controlling research agenda, and diverting of attention away from the corporate role in health outcomes.

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