



**RUTGERS**

Edward J. Bloustein School  
of Planning and Public Policy

# Fall 2016 Abstract Book



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## Internship Abstract

**Name:** Ramy Abukwaik

**Preceptors:** Direct Supervisor: Samir Tammous, RPh Owner of Pharmacy

**Agency:** iCARE Pharmacy

**Title:** iCARE Pharmacy Project Aims To Boost Vaccination Rates

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**Purpose:** To inform patients about vaccinations/immunizations to decrease the risks of many diseases which include but are not limited to Influenza, Pneumonia, and Shingles.

**Significance:** According to the Centers for Disease Control and Prevention, U.S. health officials now recommend at least a half dozen vaccines for adults, to prevent pneumococcus virus, hepatitis, shingles and other ailments. Not enough adults are appropriately immunized with vaccinations. The adult population in the U.S. has a particularly strong need for regular assessments of their immunization status based on their immunization records in state registries.

**Method/Approach:** In order to identify pharmacy patients with immunization gaps for diseases such as influenza, pneumonia, and shingle vaccines, the data from the state immunization registries were analyzed. Patients that came into the pharmacy were informed about their immunization statuses on a regular basis. Patients were strongly recommended to take missing vaccinations while informing them about the positive benefits of taking them such as protecting them and their loved ones against diseases. Those that gave consent were administered the vaccines they needed. Patients that needed vaccines we did not have in stock were referred to providers in the area that can offer them this vaccine. Lastly, vaccinations that were administered to any patient were documented and acknowledged in the immunization registry.

**Outcomes/ Results:** More than three-fourth (n=561, 78%) of all patients, (47% women) (53% men) from the sample size cohort (n=720) received Influenza vaccinations at the pharmacy. Of the remaining sample size (22%), did not receive Influenza vaccines. For the sample size of patients over the age of 65 (n=278), less than half (47%) of patients were administered Shingles vaccines. For the sample size of patients for the age of 65 (n=278), less than half (43%) of patients were administered Pneumonia vaccines.

**Evaluation/ Conclusion:** According to the WHO, vaccination is one of the most cost-effective health interventions available, saving millions of people from illness, disability and death each year. Staying up to date with patients and informing them about the positive benefits of vaccinations will protect them and their loved ones from diseases.

## Internship Abstract

**Title:** Assessment of Electronic Medical Record System effects on Health Care setting

**Name:** Ratheesh Asokan

**Preceptors:** Joseph Beacher M.D.

**Agency:** Beacher Medical Clinic

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**Purpose:** To analyze the effects and results of Electronic Medical Record (EMR) systems implementation within a medical clinic setting and identify best practices for future implementations.

**Significance:** Electronic medical record (EMR) systems implemented correctly within a healthcare clinic/institution setting can result in effective and effortless availability of patient medical record information, continuation of care, and quality of care. The significance of this study is to produce quantifiable results that illustrate the benefits and drawbacks of future EMR systems implementations.

**Method/Approach:** A prospective survey was conducted on the implementation of PracticeFusion electronic medical record system within Beacher Medical Clinic over a one month period. The pre EMR implementation survey was completed by 32 new/returning patients, who were scheduled for a follow up appointment within the one month period. The survey asks patients to rate their satisfaction regarding quality of medical care, accessibility of patient medical information, quality of medical clinic visit, time spent during patient visit, and billing .

**Outcome:** The complete sample size cohort (n=32) new patients. Seven patients (~23%) reported a 5 (very satisfied) rating, 18 patients (56%) reported a 4 (satisfied) rating, 5 patients (15%) reported a 3 (neutral) rating, 2 patients (6%) reported a 2 (dissatisfied) rating. One of the questions of interest during the survey was to rate satisfaction of time spent during clinic visit. The results indicated 16 patients (50%) reporting a 5 (very satisfied rating, 14 patients (~44%) reported a 4 (satisfied rating), 2 patients (6%) indicated a 3(neutral) rating.

**Evaluation/Conclusion:** It is evident that after a Electronic Medical record system was implemented, the clinic became more efficient in terms of patient care-time management. There was about a 27% increase from the 23% of patients during the preimplantation survey, reporting to have had a very satisfied with the amount of time they spent during their appointment. Along with that, there was a 9% decrease in the post EMR imputations surveys from the 15% of patients in the pre EMR implementation survey reporting a neutral experience relating to their time spent during their appointment. These results are significant because it portray that Electronic Medical records systems do produce benefits in terms of medical clinic/institution time and patient care management efficiency and patient satisfaction.

## Internship Abstract

**Title:** Assessing Barriers To HIV Testing In Middlesex County

**Name:** Bevin Benton

**Preceptors:** Margaret Drozd, MSN, RN, APRN-BC, Director, Community Mobile Health Services; Zachary Taylor, Med, CHES, Coordinator, Community Health Consortium of Central Jersey

**Agency:** Community Mobile Health Services, Saint Peter's University Hospital

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**Purpose:** To increase HIV testing in Middlesex County by identifying barriers and developing population-specific education and outreach strategies based on survey results.

**Significance:** New Jersey ranks fourth in the nation for HIV cases among adolescents and adults, with a total number of over 37,000 people living with HIV or AIDS. Progress towards a Healthy New Jersey 2020 objective to increase HIV testing has decreased from 13.1% in 2011 to 11.8% in 2013. According to the 2016 Community Health Needs Assessment, 67.8% of Middlesex and Somerset County residents were never tested for HIV compared to 61.6% of all New Jersey residents. Evidence-based educational outreach strategies will address these gaps to improve HIV testing in Middlesex County.

**Method/Approach:** A survey was devised and distributed to residents of Middlesex County aged 18 years and older. The survey assessed awareness of HIV/AIDS and whether or not individuals have been tested. Data was exported to a spreadsheet and organized based on response. Data for those who have not been tested was further compiled into 8 reasons why they have not been tested: 1) not likely to have HIV 2) do not like needles or blood drawing 3) not sure how to tell my partner 4) privacy concerns 5) afraid to find out that I am infected 6) do not know where to be tested 7) cost of testing 8) other.

**Outcomes/Results:** Of the sample cohort (n=102), 61 respondents (60%) have never been tested for HIV. Of these, 46 respondents (75%) reported that they have not been tested because they are not likely to have the HIV infection. Five respondents (8%) because they do not know where to be tested, 3 (5%) due to privacy concerns, 2 (3%) because they do not like needles or blood drawing, 2 (3%) because they are afraid to find out that they are infected, 1 (2%) because he or she does not know how to tell his or her spouse, and 1 (2%) due to the cost of testing. One respondent (2%) cited "other" as a reason for not being tested for the HIV infection.

**Evaluation/Conclusion:** Over half of respondents (n=61, 60%) have never been tested for HIV. From this sample cohort, three major barriers to HIV testing were identified: 1) not likely to have the HIV infection 2) do not know where to be tested and 3) privacy concerns. In order to increase the rate of HIV testing in Middlesex County, educational outreach strategies will be developed to target the specific barriers based on the findings above. Outreach strategies will aim to raise awareness of the importance of HIV testing, provide information about testing locations, and educate about privacy and confidentiality of health information. Surveillance of HIV testing rates will be conducted to ensure continued progress.



## Internship Abstract

**Title:** Research and Development Package: Effective Social Media Strategies  
**Name:** Priyanka Bhandari  
**Preceptor:** Head of Communications, Access Campaign: Michelle French  
**Agency:** Medecins Sans Frontieres, Access Campaign

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**Purpose:** To evaluate social media effectiveness of the R & D Package (September 2016) and make recommendations to increase public participation in future posted content

**Significance:** Medecins Sans Frontieres provides health assistance to vulnerable populations, globally. Because the target audience is diverse and worldwide, social media is the most effective way to get information out to the audience. The more people receive the messages we send out, the more likely we are to accomplish our goals and engage in these issues. The ultimate significance of the project in increasing public participation is that not only are more people aware of the issues that MSF stands for, but that can also be active participants in making changes the health of people worldwide.

**Method/Approach:** First, the metrics were acquired to make the analysis of which posts on social media were more heavily received and responded to versus those that were not (i.e. likes, retweets, comments, etc.). Days, times, and length of content were analyzed to determine best to post or elicited the most response from an audience. Based on this analysis, recommendations were made on how future content should be posted for the Access Campaign. Analysis focused on a R & D package report compiled earlier in the term.

**Outcomes/Results:** The highest post reach in September and the longest, most sustained peak was for the Naked Truth video, reaching about 300,000 people, lasting from around Sept. 15th-20th. The second smaller peak for the Naked Truth video reached 175,000 people. Both were promoted and had more response, so it is recommended over organic. Of the 5 top tweets from the Access Campaign on Twitter, the top 2 were posted on days immediately prior to and immediately after the weekend, so it is recommended that posts be made on these days. The Monday tweet was the top Tweet for September. The most popular post of the month with the greatest impressions (33,900) and engagement in terms of post clicks (2,100) was a video posted on Sept. 14th at 2:55 PM. Generally, the mid-September had the greatest response activity, both organic and paid. Because mid-September also had an organic peak, it is recommended that promoted posts be done in the beginning or end of the month to balance response.

**Evaluation/Conclusion:** Taking nothing else into account, promoting posts seems to be the most effective way to garner the greatest number of audience per piece of content posted. However, due to budgetary constraints, this is not always possible. Therefore it is easier to make content more easily deliverable by posting at optimal times/days, as well as monitoring the actual content of the posts. According to this analysis, Monday and Friday seem to be the best days to post and the middle of the afternoon is the optimal time to post. The smaller the post, the greater the response.

## Internship Abstract

**Title:** Mixed-Methods Research Focused on Cultural Competency within Academic Medicine

**Name:** Ana Bonilla Martinez

**Preceptors:** Dr. Eve Higginbotham and Dr. Jaya Aysola

**Agency:** Perelman School of Medicine Office of Inclusion and Diversity

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**Purpose:** To better understand factors that drive employees' perceptions of cultural competency among health services workers and students in academic medicine..

**Significance:** A cross-sectional survey, of employees, faculty, and students within health sciences affiliated schools and hospitals (n=3500) at a private university in the northeast, found significant differences in perceptions of organizational cultural competency with minority groups, females, and individuals that identify as LGBTQ. The identified groups are significantly less likely to rate workplace cultural competency above the mean. This qualitative study aims to explore the reasons behind these results.

**Methods:** A campaign was launched in June 2016 with a broad call for personal narratives about inclusion. The survey consisted of two open-ended questions about experiences with inclusion or lack thereof, followed by a series of demographic questions. The survey was distributed among the same affiliated schools and hospitals used for the quantitative survey. All fully completed responses (n=315) were coded using NVIVO 11. Using the Cultural Competence Factor as a guide, the research team selected 211 responses to analyze. A grounded theory approach was used to identify eight emerging themes. After a brief description of themes was created, responses were assigned into themes and analyzed by individual, group, or system level of interaction between the narrator and the people they described in their narratives.

**Initial Findings:** Respondents of the campaign were 35% male, 61% female, 3% transgender. Respondents largely identified as heterosexual (83%). Racial makeup of respondents included 52% non-Hispanic White, 13% non-Hispanic Black, 15% Asian, 7% multiracial, and 13% identifying as other. Respondents were 50% Christian with the remainder belonging to a non-Christian religion or no religion. Of the 211 responses, less than a quarter reported only positive comments or stories relating to diversity and inclusion. Most respondents shared a negative experience they witnessed or experienced in health sciences affiliated schools and hospital. The predominant themes were discrimination, witness narratives, and issues with hierarchy. The discrimination theme captured all forms of discrimination submitted. The witness theme included narratives where narrator shared stories they witnessed. The hierarchy theme captured narratives where a difference in rank or status created tension and a sense of exclusion and feeling devalued.

**Discussion:** Reported negative experiences were rarely resolved by the narrator. Furthermore, when narrator was a witness they did not reported the incident. Consequently, interventions aimed at improving workers' and students' experience should focus on raising cultural competency at the department level. Efforts should also include safe reporting channels for victims and witnesses.

## Internship Abstract

**Title:** Racial Discrimination Coping Strategies and Mental Health in African Americans

**Name:** Breanna Brock

**Preceptors:** Dawne Mouzon, PhD

**Agency:** Institute for Health, Health Care Policy, and Aging Research

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**Purpose:** To explore the association between racism-related coping strategies and mental health among African Americans in the United States.

**Significance:** Eighteen percent of American adults are living with some form of mental illness. Mental illness is defined as all diagnosable mental disorders. In the US the most common form of mental illness is depression, which impacts 26% of US adults (CDC,2012). Mental health is a state of overall well-being, which influences an individual emotionally, socially and physically. Historically, Blacks have faced social inequalities that cause them to have worse outcomes in education rates, health, incarceration rates etc. Yet, Blacks have better mental health outcomes than their White counterparts (Keyes, 2009). Despite the notion of a post-racial American society, racial discrimination is still a major risk factor of chronic stress for Blacks in America. An emerging, but limited, area of research to explain the mental health paradox is investigating the role of both positive and negative coping among African Americans.

**Method/Approach:** The present analysis used nationally representative data from over 2,500 African Americans who participated in the National Survey of American Life. Preliminary factor analysis uncovered three distinct dimensions of coping among African Americans: objection (e.g., worked harder to prove them wrong), internal attribution (e.g., realized you brought it on yourself), and acquiescence (e.g., accepted it as a fact of life). A series of statistical analyses which explored the frequency of coping strategies and scores on mean depressive symptom scale, compared coping strategies, and depressive symptoms, and predicted severity of 30 day depressive symptom through multivariate ordinary least square regression were conducted.

**Outcomes/Results:** Findings show that African Americans tend to rely on a combination of coping strategies. Acquiescence is the most used coping strategy (85%), followed by objection (66%) and internal attribution (49%). African Americans that have higher educational attainment levels are more likely to try to do something about their experience of racial discrimination and talk to people about how the experience made them feel.

**Evaluation/Conclusion:** Future directions for literature are to examine possible gender differences between racism-related coping strategies and mental health among African Americans.

## Internship Abstract

**Title:** Meningitis B Vaccine Communications Evaluation

**Name:** Sheyenne Buchalski

**Preceptors:** Francesca Maresca, Ph.D., CHES, Director of HOPE

**Agency:** Health, Outreach, Promotion, Education (H.O.P.E.) of Rutgers Student Health

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**Purpose:** To create and pilot a Meningitis B vaccine survey and to analyze results to understand why students chose to get or not get vaccinated and which information influenced their decision to vaccinate to help improve communications with students in future vaccination campaigns.

**Significance:** A Meningitis B outbreak occurred in Spring 2016 at Rutgers University. It was found that the two students, who had absolutely no connection, contracted the genetically identical strain. It was this conclusion that led to the declaration of an outbreak by the Centers for Disease Control and Prevention (CDC). While many of the symptoms are flu-like and may seem common, the effects if not treated effectively and in a timely manner, can lead to lost limbs or even death. National Meningitis Association states, “While vaccines offer the best chance of protection against the infection, knowledge of symptoms can help ensure prompt medical treatment is sought if needed”. This survey was created and administered to better understand what students know regarding available vaccinations and how to alter communications to students in the event of future infectious disease outbreaks.

**Method/Approach:** The survey was drafted and approved by the CDC, New Jersey Department of Health (NJDOH), and Rutgers Institutional Review Board (IRB) for distribution to students at the University. The survey will be administered in two formats. First, a paper and pencil was administered from November to December. Second, an electronic version was also approved by the NJDOH IRB using Hippocrates (an online application to disseminate health information). For this, an advertisement was created to be market around the university. Data from the electronic version will be automatically compiled but the paper data will be compiled using Google Forms.

**Outcomes:** At the end of the project, results expected will be what influences students to vaccinate or not, what outlets were most effective regarding dissemination of Meningitis B information, and baseline of disease knowledge. At this current time (November 2016) 72.3% vaccinated did so as a result of the university telling students to and 23.4% did not receive at least 1 dose of the 3 series vaccination. This group cited not having time. Facts on Meningitis B were constantly distributed to students but the most common mode of transmission was email.

**Conclusion:** At this point in the ongoing collection period, my recommendations as a direct result of the compiled data are as follows: major influencers to students on health decisions are univeristy recommendations, knowledge of implications of disease, and parents. Therefore, students should be targeted with detailed emails should a health emergency occur as a best means for communication. Basic disease knowledge was fair thus emails should include information on potential risks if contracted, signs/symptoms, prevention, and clarifications in similar vaccination requirements.

## Internship Abstract

**Title:** Utilizing Continuing Education Models for Peer Education Skill-Building

**Name:** Christina Callandrillo

**Preceptors:** Supervisor: Mark Cruz, Health Education Specialist

**Agency:** Rutgers University Health Services: Health Outreach, Promotion and Education (HOPE)

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**Purpose:** To assess how models of continuing education designed for professionals can be applied to creating a foundation for Rutgers HOPE peer educator program improvement.

**Significance:** The Health Outreach, Promotion and Education, Student Health Services recruits students to work as health educators for their peers in each of the independent concentrations of nutrition, mental health, sexual health, education through the arts, alcohol and drugs. During the spring 2016, a needs assessment was conducted through an online survey and was completed by 46 of the 60 total educators. The survey showed that 62% reported participant disengagement as a barrier to education efforts. During continuous needs assessment activities, such as focus groups, peer educators were asked what other support systems they required for program enhancement. One of the central themes revealed by the survey results was a need for multi-dimensional comprehension of health, spanning the intersectionality of public health issues found on college campuses in order to effectively facilitate workshops. By enhancing the developmental skills of peer educators, HOPE intends to deliver and facilitate peer-led workshops in a more effective and concise way. Providing updated instruction methods and interdisciplinary training through workshops, present current and relevant information that maintains positive health behaviors.

**Method/Approach:** To initiate this project, research was needed on the general importance of continuing education to determine if it is applicable to college students. Focus groups were suggested after analysis identified gaps in survey data, in order to receive further feedback on HOPE services (i.e. initial peer educator training) as well as opinions on continuing education. This process required email outreach, scheduling for the largest amount of participation, research on proper focus group methods, careful question development, effective focus group facilitation, and post-focus group evaluation. To provide an accurate representation of the peer educator group as a whole, at least two educators from each education sector participated and provided feedback. Research showed the importance of team building in improving efficiency, resulting in the formulation of a workshop agenda.

**Outcomes/Results:** An evaluation methodology has been created that HOPE staff will follow to assess improvement of the program. Therefore, outcomes of an updated program are yet to be determined.

**Evaluation/Conclusion:** By reconstructing the training program, HOPE aims to refine interactive instructional skills and basic health knowledge of peer educators. This will not only improve future workshops, but more importantly, will enhance the public health atmosphere and the quality of health education for both peer educators and general Rutgers University students.

## Internship Abstract

**Title:** Effectiveness of the Live Well- Vivir Bien New Brunswick Mobile Application

**Name:** Shirley Camacho

**Preceptor:** Manuel Castañeda, Director of Community Health

**Agency:** New Brunswick Tomorrow

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**Purpose:** To assess the responsiveness of the New Brunswick community (residents and Rutgers University students) to the Live Well- Vivir Bien New Brunswick Mobile App,

**Significance:** Even though New Brunswick has a wide variety of health-related resources, the lack of awareness of health- related information available to the community represents a barrier to adequate access to health care. Berger and Neuhaus' define mediating structures as the factors that are able to connect the private life of an individual with health-related institutions. New Brunswick Tomorrow's Live Well –Vivir Bien campaign seeks to connect and engage individuals with health-related resources through the use of its mobile application and website. The main goal of this campaign is to increase awareness and accessibility of health-related resources available to the community.

**Method:** A survey tool was created in English and Spanish in order to provide feedback regarding the effectiveness of the Live Well-Vivir Bien mobile app in promoting information of health-related resources and events. The surveys were distributed at several New Brunswick public events and at different social service institutions that promote health and wellness. A convenience survey with 67 respondents was initiated, gathering responses from the following groups, 57% from New Brunswick residents, 36% from Rutgers University students and 7% from visitors. Before answering the survey, individuals that did not have the app were assisted in downloading it and spent a brief time navigating it.

**Outcomes/Results:** From the total sample size, 31% of respondents stated having the Live Well- Vivir Bien mobile app on their phones. Within this group, 48% stated to use it at least once a month, 24% to use it two to three times a month, 19% more than four times a month and less than 10% to never use it. The entire sample size stated that the app was both visually appealing and well-organized. 86% of respondents stated that the mobile app is easy to navigate while 80% responded that it is content rich.

**Evaluation/Conclusion:** Out of the total sample size (n=67), 94% of respondents stated that they would recommend the mobile app. Some of the limitations of this project include the small sample size and the lack of familiarity of individuals with the app. Individuals that did not have the mobile app on their phones downloaded it (65%) or presented great interest in doing so. Furthermore, 56% of respondents stated that social media was the best mechanism to effectively outreach the community regarding the use of the app, followed by 27% of respondents recommending presentations at public institutions and tabling events. Finally, 17% of respondents stated that partnerships with Rutgers.

## Internship Abstract

**Title:** Implementation of Patient Satisfaction Improvement Methods

**Name:** Stephanie Castellanos

**Preceptors:** Yaniris Garcia, Patient Advocate

**Agency:** Trinitas Regional Medical Center, Elizabeth, NJ

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**Purpose:** To improve patient satisfaction by educating staff to provide a quicker response to patient's needs and complaints by exercising better communication practices.

**Significance:** As identified by the Institute of Health Improvement, one of the main focuses of healthcare is to improve the patient's experience of care, including quality and satisfaction. This is particularly important for Trinitas Regional Medical Center (TRMC) being the only hospital in the town of Elizabeth. The hospital measures satisfaction by contracting with the National Research Corporation (NRC), who administers the Health Consumer Assessment of Healthcare Providers and Systems (HCAHPS) survey to patients. As part of the Customer Service Department, the Patient Advocate is tasked to monitor quality scores and find ways to keep improving them. Since most of the dimensions of the survey ask about the effectiveness of communication with the staff, an approach to improve customer service is to distribute material about excellent customer service practices for the education of the staff.

**Method/Approach:** Quality scores for three HCAHPS dimensions were monitored from September through November. At the end of September, communication with doctors scored 78.9, communication with nurses scored 74.0, and responsiveness of hospital staff scored 52.6. To improve these scores, three modes of distribution of educational resources were identified. The main one is monthly Customer Service Newsletters, including months of October, November, and December. Additionally, Customer Service material was published in the monthly TRMC Magazine for November and December. Finally, short blurbs are sent each Monday in the "Here and Now" monthly magazine. This material is distributed to the staff to emphasize the importance of improving communication with patients and family.

**Outcomes/Results:** The scores for communication with doctors at the end of September, October, and November were 78.9, 81.5, and 72.5 respectively. Scores for communication with nurses at the end of September, October, and November were 74.0, 73.6, and 71.8 respectively. Scores for responsive of hospital staff at the end of September, October, and November were 52.6, 53.9, and 61.5 respectively.

**Evaluation/Conclusion:** Overall, we have seen an increase in HCAHPS scores for responsiveness of hospital staff, but a decrease for communication with doctors and nurses. The limitations of these scores is that they are not finalized till the quarter closes at the end of December. However, it is important that the distribution of educational material remains consistent to make sure scores continue to improve. Additionally, the Customer Service Department has decided to have an "Annual Customer Service Education" Program to further reinforce the initiatives implemented this year.

## Internship Abstract

**Title:** Alternative Nitrate Treatment Technologies  
**Name:** Brando Chacon  
**Preceptors:** Heather Genievich, Team Leader & Robert Hall, Environmental Specialist  
**Agency:** New Jersey Department of Environmental Protection

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**Purpose:** To research, analyze and recommend alternative nitrate treatment technologies to alleviate the economic burden and environmental pollution risk for the disposal of waste streams which are produced by today's methods.

**Significance:** Nitrate is an acute threat to public health because it can contaminate groundwater, which many communities depend on as a sole source of potable water. Many towns face economic and technical constraints when treating nitrate because it is costly to dispose of the hazardous material at solid waste landfills. Nitrate contamination also poses an environmental issue as current nitrate treatment options such as Conventional Ion Exchange (IX), produce waste streams laden with arsenic and chromium which are hazardous for the environment. It is imperative to find alternatives that can reduce production of these waste streams and reduce the volume amount by reusing the reclaimed brine. Arsenic is one of the major toxins that affect the environment. Arsenic can cause harm to the respiratory system, blood, lymphatic system, nervous system and reproductive system.

**Method/Approach:** A literature review was done on the newest forms of nitrate treatment technologies. These new forms of treatment were compared to the most common and standard method. The cost, practicality and effectiveness were taken into consideration. Pilot studies were done across the country to showcase numerous alternative methods. Based off the results of these studies, future recommendations were made for the best path moving forward.

**Outcomes/Results:** After a pilot study was done in Avondale, Arizona, a couple of alternative nitrate treatment technologies showed very promising results. MB-N2 was proven to be the most cost-effective, overall sustainable and environmentally friendly. The current method is estimated at \$14.8 million while MB-N2 was priced at around \$9.2 million. It has also been used at full scale treatment facilities around the world. The other technology uses Electrochemical Denitrification in conjunction with the current method of conventional IX. ECD with IX and MB-N2 both did not create any spent brine streams because they focus on nitrate reduction rather than transferring to a waste stream.

**Evaluation/Conclusion:** Current research has shown that these technologies can be more cost effective, sustainable and environmentally friendly than the standard method. More data must be collected by agencies to continue the monitoring of the efficiency of these new technologies and to see if additional improvements are needed.



## Internship Abstract

**Title:** Performance Improvement Project - Nursing Plans of Treatment

**Name:** Alicja Chmiel

**Preceptors:** Suzanne Sesta R.Ph, Vice President

**Agency:** Qualitas Pharmacy Services

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**Purpose:** Increase signed Plan of Treatment documents and establish the most effective method of follow up.

**Significance:** The Joint Commission accreditation upholds health care organizations to highest standards of safety and quality of patient care. Every three years it conducts on-site survey, that is data-driven and patient-focused to evaluate actual care processes. The Joint Commission requires that health care organizations continually improve their performance. One of the indicators for performance improvement efforts is the nursing Plan of Treatment (POT). This document provides direction for individualized care of the patient. POT provides documentation of nursing care and are used for reimbursement purposes, especially from Medicare and Medicaid. The goal is to have all Plans of Treatment signed by the physician within 30 days of start of care.

**Method/Approach:** First step was to identify doctors who fail to return signed POTs within 30 days. All nursing Plans of Treatment created between September 12 and October 14 were documented and entered into Excel spreadsheet. Dates were recorded when the POTs were sent out for doctor's signature and when, or if, they were received back. Data in Excel worksheet was grouped by doctor's name to identify those with the lowest rate of returning signed POTs. Then, one of the following follow-up methods was implemented: 1) re-sending the POT with a cover letter explaining the importance of signing the POT, 2) a phone call to physician's office or, 3) a visit by sales representative. The results of each of the follow up method were compared.

**Outcomes/Results:** A total of 582 Plans of Treatment were sent out to 201 physicians. There were 21 doctors identified who did not return signed POTs at all during the length of this project. Another 7 physicians took more than 30 days to return signed POTs. Out of these 28 doctors nine were selected for follow up; three doctors for each method. A visit by sales representative to the physician's office proved to be the best method of follow up. A visit improved the rates of return of signed nursing POTs by 79%, a phone call to the physician's office improved the rates by 60%, and re-sending a POT with the cover letter by 30%.

**Evaluation/Conclusion:** During following months, after the completion of the remaining follow up visits with the providers, data will be collected and compared with previous results to conclude whether there was an improvement in overall rates of signed and returned nursing Plans of Treatment.

## Internship Abstract

**Title:** Physical Activity Promotion among New Brunswick Senior Citizens  
**Name:** Hayoung Cho  
**Preceptors:** Melanie M. Ford, Director of New Brunswick Senior Citizen Resource Center  
**Agency:** New Brunswick Senior Citizen Resource Center

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**Purpose:** To promote an active lifestyle among seniors with the use of an exercise class program to build muscle strength, flexibility, and balance for the improvement of overall well-being.

**Significance:** Strength, balance, and flexibility training is incredible for older adults. Ip, et al 2013 says that physical activity and exercise promote healthy aging and prevent mobility limitations and disability. According to a study done by Aartolahti et al. (2015), seniors >75 years of age who participated in a strength and balance training (SBT) program were more likely to engage in the program for long-term continuation, and see an increase in their strength and balance. The study also took the participants limitations comorbidities such as arthritis, osteoporosis, and diabetes and how it could affect the adherence of physical activity among seniors. Despite these limitations, the seniors who were >65 years of age adhered to (SBT) better and saw an increase in their flexibility, strength, and balance. This evidence shows a strong correlation between exercise and improvement in overall well-being.

**Method/Approach:** To encourage seniors to participate in an active lifestyle, a 13 week survey on a focus group on (65-75) years of age was performed on 15 senior members at the New Brunswick Senior Resource Center. A weekly sign-up sheet for the exercise class was enlisted, and those who signed-up were part of an exercise program that ran twice a week. Each session had a 15 minute warmup of stretching and breathing, 30 minutes of strength training and 30 minutes of flexibility and balance. Strength training was performed through the use of Therabands for each of the following exercises: chair squats, calf raises, knee extension, hip flexion, bicep curls, tricep extension, and chest presses. For flexibility and balance test, the following exercises were used: stand-up toe touches, leg raises for both legs, leg rows, and toe raises. To gauge the progress of the seniors, a written survey was done biweekly to measure how participants felt after class.

**Outcomes/Results:** Seniors that participated were able to demonstrate an increase in strength, flexibility, and balance as indicated as the results of the survey. The class was facilitated from week 1 through week 13, and split into three sections. On week (1-5) showcased 5 members who said they felt stronger and flexible, and 4 members able to balance. Week (6-10) showed 12 strength, 11 flexible, and 10 balance, and finally on week (7-13) showed 15 strength, 12 flexibility, and 13 balance.

**Evaluation/Conclusion:** The focus group was able to demonstrate increase in their strength, balance, and flexibility by the end of week 13. Presentations, verbal and written surveys advised in the pre and post test to the adherence of class participation, and to record a 100% increase in strength, 75% increase in flexibility, and 85% increase in balance among focus groups. A final satisfaction survey showed positive results in the improvement of well-being among participants.

## Internship Abstract

**Title:** Incorporating Sustainable New Jersey Guidelines into Asbury Park, New Jersey

**Name:** Ashleigh David,

**Preceptors:** Project Supervisor, Michele Alonso, Head Planner, Department of Planning and Redevelopment - Asbury Park

**Agency:** The Department of Planning and Redevelopment, Quality of Life Committee, Asbury Park, NJ

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**Purpose:** To establish, maintain and promote a Green Challenge Program that encourages community members to participate in conservation activities through freecycling rather than garbage disposal.

**Significance:** Local government facilities and operations account for 2-3% of all local greenhouse emission. A Green Challenge Program is a strategy to engage individual residents and businesses in a community effort towards sustainability. Challenges help individual people and households make a significant collective impact in achieving broader goals. Freecycling is an opportunity to donate and recycle household items as an alternative to throwing them in the garbage, which can have a 80%-98% reduction in waste of the city. The program will show people of Asbury that their participation contributes to a community-wide movement, which is the first step to recognizing one's role in a global movement

**Method/Approach:** The first step toward implementing a community Green Challenge Program is to designate a municipal committee that has the support of the governing body and knows how to conduct public outreach. The Quality of Life Committee was chosen as the representative group to collaborate with the Freecycling event. Together we chose a date for the event, which will be held at the municipal building on April 22nd. For outreach of the freecycling event, we have decided to create a flier to be posted around the city and online describing the event and notifying the public of where it will take place. We also have decided what items can and cannot be brought to recycle and who will take away any leftover materials after the event is over.

**Projected Outcomes/Results:** This event is the first time the City of Asbury Park will coordinate a Freecycling event. Although the results are not definite, it will be combined with the Spring Community Clean up and Paper Shredding Day that have seen widespread participation by the city in past years. Other Freecycling events in New Jersey have also seen success as they have had up to 15 tons of items exchanged throughout one day. To optimize community outreach, our media outlet will be students in the public school district to help design the official flier used for the event.

**Evaluation/Conclusion:** The project is meant to involve the community in a widespread recycling event. This event not only reduces the amount of trash thrown out by the city but it allows city members to connect with each other and utilize each other's resources. The event is meant to keep as much trash out of the landfill, while providing city residents to partake in recycling on Earth Day.

## Internship Abstract

**Title:** Credentialing Guidelines and Process Map by Cycles

**Name:** Merylys Del Valle

**Preceptors:** Direct Supervisor: Melissa Mann, Administrative Director of Graduate Medical Education and Internal Medicine Residency Program; Brenda Arrietta, Credentialing Director; Project Supervisor: Kattia Martinez, Credentialing Specialist

**Agency:** Trinitas Hospital (Regional Medical Center), Elizabeth, New Jersey

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**Purpose:** To utilize and optimize the existent ongoing credentialing processes of healthcare professionals to maintain outstanding compliance with regulatory and accreditation agencies.

**Significance:** The Joint Commission audits healthcare facilities every two years, June 2017 is the next anticipated audit for Trinitas Regional Medical Center. Hence, the credentialing department needs to update and find the system's pitfalls before the joint Commission arrives unannounced and potentially penalizes the facility. Trinitas Regional Medical Center is also part of the Hospital Quality Alliance, which sets the organization to higher standards to be assessed. Trinitas Regional Medical Center and other participating healthcare facilities need to have The Joint Commission accreditation in order to qualify and participate in Medicare and Medicaid according to the Joint Commission Facts sheet and policies.

**Method/Approach:** Process improvement programs, quality and performance assessment were strictly followed through systematic reviews and reports. One of the major ways to accomplish the reduction or elimination of error in order to optimize the existent ongoing credentialing processes was through Ongoing Professional practice evaluation (OPPE). The OPPE process in combination with additional bylaws requirements assists the facility in making decisions regarding practitioners' privileging and reappointment to the Medical Staff as well as monitoring physician competency and quality of patient care. As part of the efforts for on-going compliance requirements, the system organizes practitioners into groups of expiration dates by weekly reports on CDS, DEA and malpractice insurance deadlines.

**Outcomes/Results:** A total of 152 practitioners with credentialing issues were identified, which included expired state license, DEA, CDS, malpractice insurance and inconsistencies between their OPPE and privilege approvals. Forty-three practitioners were pending reappointments that were not active because of expired licensure or lack of received verification. As of November 29th, there are only three practitioners without verified malpractice insurance, while there are no practitioners with expired DEA, CDS and State license. On the other hand, there are still twenty-one practitioners under ongoing professional practice evaluation

**Evaluation:** The identification of these practitioners is the first, yet key step to start new evaluation processes and to seek for verification of such credentials. Although the list of practitioner was not eliminated completely, yet it was dramatically reduced. Credentialing is a department based on constant preparation because of the on-going challenges to meet regulatory and processing deadlines.

## Internship Abstract

**Title:** Scorecards: An Approach to Improve Quality of Care & Reduce Cost

**Name:** Sanika Dighe

**Preceptors:** Cortney Panzarino, Outcome Analyst Population Health & Epidemiologist;  
Dr. Jojoy Cheriyan, Physician and Clinical Informatics Specialist- MD, MPH and  
Leigh Romano

**Agency:** Hackensack Meridian Health, Edison, New Jersey

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**Purpose:** To improve quality of care through performance “scorecards” using the clinical and claims data sources in a large health care system in New Jersey.

**Significance:** The ecosystem of healthcare in the United States is changing from volume based care to value based care since the implementation of the Accountable Care Act (2009). By 2018, 90 percent of the Centers for Medicare and Medicaid (CMS) payment models will be aligned with the quality of care. Providers and practices that do not meet the quality of care will be penalized with negative payment. To help providers and their practices achieve the quality standards, most hospital systems and payers send out performance score cards on a periodical basis. A balanced scorecard measures the quality and performance of an organization and its practicing health professionals by assessing them through a set of quality metrics. These measurements help the physicians make improvements to enhance patient-centered care and reduce cost.

**Method:** Two scorecards were created: one for the physicians and the other for practicing clinics. Clinical and claims data for eligible patients were recorded from January 2016 - November 2016. Measures included breast cancer screening, colorectal cancer screening, eye exam, HbA1c <8%, HbA1c screening, medication management, and nephropathy monitoring. Percentage met was compared to benchmarks set by National Healthcare Effectiveness Data and Information Set (HEDIS) at 50<sup>th</sup>, 75<sup>th</sup>, and 90<sup>th</sup> percentiles and compared to other physicians under that commercial payer (peer performance). Each scorecard contained a chart with metrics and graph. These were sent out electronically and mailed to physicians and practicing clinics.

**Results:** There have been 65 scorecards sent to physicians and 57 scorecards sent to clinics. Averages were: Breast cancer screening-59%, Colorectal cancer screening-47%, Eye Exam-21%, HbA1c <8%-53%, HbA1c Screening-76%, Medication Management-38%, and Nephropathy Monitoring-60%. When comparing the results to the HEDIS benchmark, none of the metrics reached the 90th percentile.

**Discussion:** Scorecards will be sent out to all the other commercial payer physicians and clinics within the Hackensack Meridian health network on a monthly and/or quarterly basis until the target 90<sup>th</sup> percentile HEDIS benchmark is met or exceeded. A team of nurse coaches and care managers will visit the practices and physicians who have not met the benchmark. If quality is compromised then that physician and clinic will be penalized with negative payment and receives less shared savings for their facility.

## Internship Abstract

**Title:** Organizational Needs Assessment

**Name:** Jennifer Di Girolamo

**Preceptors:** Direct Supervisor: Yesenia Beutel, Assistant Executive Director of Core Services

**Agency:** YWCA - Union County

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**Purpose:** Analyze departmental caseload and resources to assess needs and identify gaps in external service in relation to the desired outcome of providing relief to all clients of domestic violence in Union County.

**Significance:** Domestic violence affects over 65,000 women in New Jersey annually and the YWCA wanted to ensure effective services were being offered to its community. An assessment will be used to evaluate programs and services that are currently being offered. Identifying challenges is essential to the organization due to its importance, sensitivity and necessity in the community. The need to provide community asset resources, counseling and emergency shelter services is a priority. The scope of the assessment is to determine the current state of assistance and outreach for domestic violence victims.

**Method:** Research was conducted by collecting demographic data from the United States Census Bureau for Union County NJ 2015, NJ Domestic Violence Reports 2013-2014, conducting face to face interviews with department staff and telephone interviews with local government agencies, online research of nonprofits in Union County and a List of Contacts for Services for Union County. A Logic Model was utilized for the assessment, obtaining inputs and outputs for outcomes and impact. Each department is asked a group of questions by the interviewer to measure caseload, client service utilization and referral services to provide inputs for the assessment. Identifying indicators for needs was the central focus of the interviews, such as the number of new clients needing services and type.

**Outcomes:** Union county is 68.1% white, 23.6% African American and 30.6% Hispanic. It has an 11.1% poverty rate, a median household income of \$69,396 and an unemployment rate of 6%. Domestic violence affected 1490 Union county residents in 2013 and had a slight reported decrease in 2014 to 1412. The YWCA has service relations with over 49 nonprofits in the county. The most frequently mentioned need was for personnel, legal and food pantry assistance, as well as affordable housing and child care in the community. The YWCA is 1 out of 42 organizations in the state that provides domestic violence services and the only organization of its kind in the county. The YWCA is closely aligned with government and community agencies and is the county establishment utilized for all issues concerning domestic violence, including emergency housing and education.

**Conclusion:** It appears, from preliminary review, that utilizing a volunteer component for administrative assistance would greatly benefit departments with staff shortages. Relations with local police department and social services could be stronger, including more education on domestic violence protocols. Overall, the YWCA appears to be meeting their service obligations, in keeping with their mission, and is a model for social action. The YWCA's impact on the community is continuously raising awareness for domestic violence.

## Internship Abstract

**Title:** Community Outreach Assessment

**Name:** Natosha Dobbins

**Preceptors:** Sophia Domeville: Community Schools Director

**Agency:** Kids Corporation II

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**Purpose:** To improve upon community outreach through communal events, by gaining feedback through surveys from community members, and by improving upon media/advertising procedures.

**Significance:** Louise A. Spencer is a South Ward community school in Newark, New Jersey -- a city that lacks resources addressing poverty, access to health care, food desserts, and crime. It is one of five schools in the district that work together to bring the students, their families, community leaders, and community residents together. Goals include providing children with the best education possible and developing events and programs to address the physical, mental, and health-related needs of the children. Community outreach efforts provide skills training (i.e. meditation, GED programs) and resources (i.e. clothing, food). Media and advertising increase exposure, bring awareness to the resources that are available for the community, and help to get more people involved.

**Method/Approach:** During community events, parents and community residents were asked to complete surveys that asked their opinions on the school environment as a whole, improvements they want to be made to the school, and the events specifically, and how they would rate the school and events, overall. These surveys are still in the process of being analyzed.

**Outcomes/Results:** When it comes to social media outreach (SMO), broader SMO, has not equated to a larger turnout by parents, for events. Seventy-five parents attended Back-to-School Night. The event occurred before the start of any social media presence. The only means of advertisement were fliers given to the students during the school day, to then take home, and give to their parents. For the following event (Back-to-School BBQ), there was still no social media influence. However, parents who attended Back-to-School night were called (from the attendance sheet taken that night) and told about the event. Automatic telephone messages were sent out to all of the parent's in the school's directory, the day before, and the day of the Back-to-School BBQ. Fliers are were also handed out to the children, during the school day, to later give to their parents. 51 parents/community residents attended The BBQ. For the last community event thus far (Parents Retreat), only a handful 7 parents/community residents were in attendance. This is surprising, due to the fact that a facebook account was created, prior to this event. Parents/community residents were called from the attendance sheet, taken at the BBQ cookout. An automatic telephone message, was sent out to all of the parents in the school's directory the day before the event. Fliers for the retreat, were also given out at the BBQ cookout. It is also important to note, that the weather was extremely cold, and raining on the day of the Parents Retreat.

**Evaluation/Conclusion:** A social media presence, along with calling parents/community residents, has not increased parent/overall community involvement/engagement to events.

## Internship Abstract

**Title:** Governor Chris Christie's Initiatives for Camden

**Name:** Alfonso Faura

**Preceptors:** Michael Sullivan, Regional Director of the Governor of New Jersey  
Ishan Shah Director of Constituencies and Departmental Relations at Office of Governor Chris Christie

**Agency:** New Jersey State House

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**Purpose:** To assess Governor Chris Christie's tax abatement initiatives for Camden Redevelopment.

**Significance:** Many urban cities like Camden, New Jersey were once thriving manufacturing and commercial cities. However as a result of redlining, the loss of manufacturing jobs, suburbanization, riots and the exodus of the middle class, Camden, and cities like it, suffered a great decline. Today Camden is one of the most crime ridden cities in the nation and 40% of its residents live below the poverty line. The unemployment rate is at 13.9%, almost twice the State average. Tax incentives however can revitalize cities like Camden. In one study in Kansas, tax incentives were vital to attracting businesses to dying commercial areas. Downtown Camden is still largely vacant. However with the tax incentive programs implemented by Governor Chris Christie, more investment into downtown Camden is possible.

**Method/Approach:** The methods that were used to attain this information included peer review articles, news sources, as well as interviews from employees of the office of constituency relations.

**Outcomes/Results:** As a result of the tax incentives that Governor Chris Christie has initiated, many businesses and organizations established themselves in Camden. For example, the 76ers now have a building where players can train for upcoming events. Subaru is relocating from suburban Cherry Hill, New Jersey to Camden. Subaru will even be training city high school students for auto repair jobs that produce incomes as high as \$80,000 a year or more. The Liberty Trust Fund will build a mixed use development called Knights Crossing, along the waterfront, that will include a hotel, restaurants, shops, and offices. Since this development will generate jobs, Camden residents might benefit from this. Camden is unique compared to other urban cities in New Jersey as the city is receiving generous tax incentives. However there might not be enough jobs for those who live in Camden. For instance, a 40 million dollar tax cut that Actega North America Inc will receive would relocate 79 existing jobs to Camden but only produce 21 new jobs.

**Evaluation/Conclusion:** There are reassuring signs that tax abatements will have a positive impact in Camden. However long term tracking of success is needed.

<https://docs.google.com/document/d/1ph4Jz1ZCJ5tTHzEpLgLit7KgFRjzuSwfiWD7gcq5SY/edit>



## Internship Abstract

**Title:** Hoarding Task Force  
**Name:** Sara Fisher  
**Preceptors:** Jaime Angelini, Director of Consumer Services  
**Agency:** Mental Health Association in Atlantic County

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**Purpose:** To educate individuals on the severity of hoarding disorder and organize a community/wide interagency group committed to working together to improve outcomes for people living with clutter and too much stuff.

**Significance:** Statistics show that hoarding disorder may be present in as many as 1 in 20 people. Hoarding disorder is considered a mental health disorder. Hoarding can be associated with mental illnesses such as, depression, anxiety, and OCD. Hoarding disorder should be treated like other mental health illnesses. Hoarding can be a public health concern for not only the individual living in the home but others as well. If the individual needed emergency services it could be a danger to them as well.

**Method/Approach:** September 18, 2016 was the first official Hoarding Task Force in Atlantic County meeting. Each month on the third Tuesday there will be Hoarding Task Force meetings held at the local library. Flyers have been handed out to local fire departments, police stations, municipal buildings, EMTs, and veterinarians in Atlantic County. The meetings also provide information about the buried in treasures twenty-week workshop has been proven to work. Dr. Randy Frost amongst others wrote the book Buried in Treasures. It includes a self-assessment to determine how severe the problem is. There are also behavioral experiments that can be used in order to reduce fear of discarding. MHA has a several clients who are enrolled in the Buried in Treasures workshop.

**Outcomes/Results:** In 2015 MHA held their first conference with hoarding experts Dr. Randy Frost, Lee Shuer, and Jesse Edsell-Vetter. This was the beginning of the development for the Hoarding Task Force in Atlantic County. As of right now MHA has five clients that are actively involved in the bin treasure workshop.

**Evaluation/Conclusion:** Hoarding disorder is a mental illness and should be treated as one. Most people think of hoarding as being dirty or uncleanly. However, that is not always the case. Often individuals suffer from other underlying mental illnesses as well.

## Internship Abstract

**Title:** City Nightly News Intern Training and Evaluation Program

**Name:** Yuxiao Fu

**Preceptors:** Xu Wang, Vice Director of News Department, Chief Correspondent for the television news program, City Nightly News

**Agency:** Chengdu Radio and Television, Chengdu, China

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**Purpose:** To manage interns efficiently and enhance their professional news reporting and video editing skills by designing and establishing an intern training and evaluation program.

**Significance:** Since Chengdu Radio and Television Station has its own independent news production system, including an exclusive nonlinear video editing software called the Sobey system, interns need to learn and practice new skills of news reporting and video editing. At this time, there is no specific intern training program inside the department of City Nightly News and it always takes a long time for interns to get used to this news production system and master related skills. To improve interns' efficiency, an intern training and evaluation program is required. An intern training and evaluation program could also increase the work efficiency of the whole City Nightly News department: well-trained interns could assist professional reporters with reporting and video editing tasks.

**Method/Approach:** In 2016, there were 11 summer interns in the City Nightly News Department. An experimental intern training and evaluation program was designed and implemented among these 11 interns. The program included the following steps:

- each intern was equipped with an internship tutor, a professional reporter from the department who took responsibility for supervising interns' behavior and teaching interns related skills during the working time.
- a specialized website for training interns was built with basic instructions of news reporting and video tutorials of using the Sobey nonlinear editing software. A 30-minute-meeting was held every day to summarize and answer interns' common questions. An evaluation form was completed by each internship tutor biweekly to assess interns' behavior and professional skills. This form could help to adjust tutors' training methods and to further enhance interns' work efficiency.
- an evaluation form for interns to evaluate their tutors' instruction methods and behavior was used.

**Outcomes/Results:** Questionnaires about interns' and tutors' satisfaction with the experiment training and evaluation were designed and given out. The survey results showed that nearly 90% interns and tutors were satisfied with the program.

**Evaluation/Conclusion:** Questionnaires and interviews about interns and tutors' advice for improving the intern training and evaluation program could be designed and distributed.

## Internship Abstract

**Title:** A Seat at the Table: Young People and Sex Ed

**Name:** Patricia Oskar Gantuah

**Preceptors:** Stephanie Franklin, Executive Director

**Agency:** The Masakhane Center

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**Purpose:** To evaluate the effectiveness and relevance of comprehensive sex and sexuality education to middle school students.

**Significance:** Young people are being left out of the sex conversation because there is an assumption that they are not—or rather should not be—having sex. However, young people are not exempt from matters pertaining to relationships, sexuality, and/or sexual behavior, and the decisions they make have the propensity to affect their health. Therefore, there is a societal responsibility to provide young people with comprehensive sexual health education that gives them the tools they need to make healthy choices. This study aims to challenge the notion that early sex education is the cause of early onset of sex and measure how helpful it is.

**Method/Approach:** A pre-post survey design was created to measure the degree of change occurring in 23 participants between the ages of 11-15 as a result of a sex education workshop series. The survey consisted of questions related to participants' gender identity and sexual orientation, where they got information about sex/sexuality, whether or not there was someone with whom they could have regular healthy conversations about sex/sexuality, sex readiness, knowledge about workshop topics (eg. consent, relationships, safer sex etc.) and the relevance of sex education in their lives.

**Outcomes/Results:** Post workshop series 78.3% expressed feeling confident in their ability to make their own decisions about sex. Going further, 65.2% decided that they were not ready for sex while 21.7% and 13% were unsure and ready respectively. There was also a shift in perspective of what constituted a healthy relationship with participants having little to no descriptors at all to expressing a desire for patience, compromise, faithfulness, understanding, and respect. Finally, when asked, on a scale of 1- 10, how relevant sex education was to them, participants expressed a need with varying intensities. 69.9% responded with a 10 identifying it as very important. 13%, 8.7%, and 8.7% gave a score of 9, 8, and 7 respectively.

**Evaluation/Conclusion:** Contrary to concerns, comprehensive sex education does not necessarily lead to early onset of sexual activity as seen by the large majority who used the series to ascertain that they were not ready for sex. Instead, these programs give agency to young people by providing them with tools to navigate ubiquitous subjects in a holistic way free from stigma and anxiety. With this in mind, Masakhane will reach out to McKinley elementary school to open a sex education site there for the 6th-8 grade classes.

## Internship Abstract

**Title:** Evaluation of Group Prenatal Care Model

**Name:** Ndeye Gueye

**Preceptors:** Direct Supervisor: Dr. Gloria Bachmann, Interim Chair of Department of Obstetrics, Gynecology and Reproductive Sciences Project Supervisor: Dr. Charlotta Ayers, Division Chief of General Division of Obstetrics Gynecology

**Agency:** Women's Health Institute, RWJ Medical School, New Brunswick, NJ

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**Purpose:** To explore the innovative model of group prenatal care for its improvement of patient satisfaction and perinatal outcomes for pregnant women.

**Significance:** With the current shift from the traditional fee-for-service health care model to the value-driven model, there is a rising importance of patient satisfaction in medical practices. Prenatal care has traditionally followed one-on-one visits with clinical providers throughout the pregnancy. A new model of group obstetric care, termed "Centering", allows for more efficient healthcare delivery through individualized attention, social support, and education. The goals are to improve patient satisfaction, perinatal outcomes, accessibility as well as reduce costs. The objective of the current project is to conduct a meta-analysis of the literature on this new model of centering pregnancy and assess its effectiveness.

**Method/Approach:** A review of several articles with clinically proven results on the effectiveness of group prenatal care models was conducted. Information was gathered from scholarly articles, medical journals and consultations with obstetric and gynecological experts. The following databases were used to conduct the meta-analysis: Pubmed, Medline, Biomed and The Cochrane Library. Popular search terms used to identify relevant materials were "centeringpregnancy", "prenatal", "group OB care", "patient satisfaction". The outcomes, results and conclusions from the literature were evaluated.

**Outcomes/Results:** A total of 10 relevant studies were analyzed in this review. The majority of the studies demonstrated a positive association between the Centering Pregnancy model with perinatal outcomes as well as patient behavior and satisfaction. Therefore, healthcare leaders such as the Rutgers Group OB Prenatal Program may benefit from promoting this model and anticipate positive results through this worthwhile health care delivery program for pregnant women.

**Evaluation/Conclusion:** Although there are many studies on the group prenatal care model, there are limitations with the literature. The differences in health behaviors and perinatal outcomes between patients who participated in group prenatal care versus traditional care do not differ as much as expected. Rutgers health is currently working with the International Review Board to provide evidence and quality value based prenatal care by introducing this model to Central New Jersey. Through the identification of clinical results and conclusions, the findings from this review will ultimately guide in the implementation of a published medical paper on the Rutgers OB Group Prenatal Program.

## Internship Abstract

**Title:** Open Enrollment 2017/ Wellness Incentives

**Name:** Ria Gulati

**Preceptors:** Supervisors: Neepa Sarker: HRIS Manager, Anne Buscavage: Benefits Manager

**Agency:** Saint Peter's HealthCare System HR Department

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**Purpose:** To maintain an organized, updated account of Employee Wellness forms and be able to provide a premium holiday in the month of December to those employees who have completed the necessary items on the checklist.

**Significance:** Open enrollment period can be the most hectic time period for the Benefits component of any HR department, and especially within a healthcare setting. The goal to ensure that all employees of St Peter's are aware of and abide by the deadlines to submit their paperwork and then process these changes into the system, can be a challenging task to achieve by the Benefits department in a short span of time. Without time efficient techniques, this task can become even more complex. However, by efficiently handling employee wellness forms, premium amounts, and the assembly and distribution of benefits packages, this year's enrollment process has been smoother for my supervisors.

**Method/Approach:** With a large sum of paperwork and eager hospital employees comes the need for detail-oriented and well structured methods to ensure proper placement and recording of information. Taking that into consideration, a thorough method of recording employee information and deduction amounts for every employee via Lawson portal, the HR department's main database, had been in place. This provided a clear cut portrayal of the number of employees who had submitted their wellness incentive forms. After recording this large amount of data, these changes were approved and inputted into the system. With this information, it was evident that pressure levels had lowered and the overall flow of work had increased.

**Outcomes/Results:** After thorough observation regarding time pressure during a normal open enrollment period without this wellness mechanism, it was evident that open enrollment this year was smoother and less hectic. Over 600 employees were able to submit their wellness information which was then processed punctually by the due date of November 28th. The benefits staff, though already highly efficient and phenomenal, had an increase in overall flow of responsibilities throughout the office. In addition, almost all employees were successfully made aware of the change in Health Care providers that Saint Peters underwent this year, and were able to adjust their benefits accordingly.

**Evaluation/Conclusion:** Open Enrollment period is a crucial time for employees to fully understand and alter their health insurance and benefits plans. Using an organized, clear cut method of employee wellness incentive placement, the HR department was able to save time and effort within this task. The overall efficiency increased and pressure levels decreased, which was indicated through observation and direct inquiry of the Benefits team. Over 600 employee forms were processed successfully and very punctually, which provided more time and energy for other important tasks.

## Internship Abstract

**Title:** Managing the Implementation of a New Executive MHA at Rutgers University

**Name:** Heather Horner

**Preceptors:** Vincent D. Joseph, FACHE, Professor of Practice

**Agency:** Edward J. Bloustein School of Planning and Public Policy, Rutgers, The State University of New Jersey

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**Purpose:** To plan and implement a new Executive Masters of Health Administration Program for health care managers with 5 years or more of experience.

**Significance:** Healthcare Administration is a rapidly growing field of study. The Bureau of Labor Statistics reported that the hospital sector has gained more than 100,000 jobs in 2015. Currently, the Bloustein School at Rutgers University offers an undergraduate Healthcare Administration degree that first began two years ago and has achieved major success. In order to continue to produce successful health care professionals, the Bloustein School has begun the process of designing a traditional Masters of Health Administration and Executive Masters of Health Administration. Designing the new degree has been facilitated using the five management functions to plan, organize, staff, direct and control the development of the Executive Masters of Health Administration.

**Method/Approach:** Developing a comprehensive, competitive program requires extensive content research and creative marketing approaches. The goal was to have a class of approximately 10-20 students by November 30th, 2016. In order for the program to be accredited, the first step in developing class materials was researching the CAHME accreditation requirements. Next, extensive research was conducted on current healthcare administration topics that aligned with the requirements as well as a review of the American College of Healthcare Executives top concerns for 2017. The planning phase of marketing consisted of identifying key healthcare facilities across central jersey to choose the target market of employees to recruit for the program. To most efficiently develop the Executive MHA, additional interns were recruited to brainstorm new ideas and address marketing concerns. To direct the implementation of the program, continuous contact with Bloustein faculty members to review content and approve ideas were critical.

**Outcomes/Results:** The results of total students will not be available until after December, 2016.

**Evaluation/Conclusion:** The evaluation of the program is contingent upon the number of applications received, and the beginning of the class in 2017. Once the class begins, continuous feedback will be sought out from the students in the class in regards to content and overall class experience. Every week students will evaluate the class using a likert scale rating. To improve marketing strategies, students will be assessed based on where they came from and how they heard about the program via data collected directly from the class. Additionally, an analysis will need to be conducted to understand markets that were not reached and marketing tools that were not successful in order to prepare for future classes and better the program overall.

## Internship Abstract

**Title:** Discharge Hospitality Suite Turnaround Time Performance Assessment

**Name:** Dabir Khan

**Preceptors:** Dr. Jessie L. Tucker III, PhD, FACHE - Sr. Vice President & Chief Operating Officer

**Agency:** Robert Wood Johnson University Hospital - New Brunswick

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**Purpose:** To conduct a process evaluation aimed at decreasing turnaround time for patients being admitted to the Discharge Hospitality Suite.

**Significance:** The Discharge Hospitality Suite is a median for patients to be transferred to after all of the critical testing and treatments are completed. After the attending physician submits a discharge order, the nurses on the floor submit a request to Transportation Services for the patient to be sent down to the Discharge Hospitality Suite. In this suite, the nurses are responsible for administering post-discharge education and any further instructions that the patient needs to know or have done. However, over the past several months, there has been an increased delay in patients being sent down to the Discharge Hospitality Suite causing beds on the “floors” to be unavailable for newly admitted patients. The DHS is not being optimized and this, in turn, increases the overall turnaround time for the patients. This is particularly important for Robert Wood Johnson University Hospital (RWJUH) since patient flow must be optimized in order to improve overall throughput and productivity.

**Method/Approach:** Every month, data from the Discharge Hospitality Suite (DHS) is distributed amongst the Executive Suite and opportunities for growth and excellence are discussed. In order to improve these data metrics, Lean practices have been employed in order to evaluate the data. By conducting a deep dive into the data through Microsoft Excel analytics and best practice research, various areas of opportunities for improvement have been identified. Furthermore, by using process improvement methodologies such as identifying forms of waste and utilizing the Change Acceleration Process, it further enables the team to understand areas of opportunity.

**Outcomes/Results:** By evaluating the data, it has been shown that, on average, two patients per hour are admitted to the DHS. By working in conjunction with the Lean Department and the Patient Flow Committee, we are able to propose a cohorted scheduling procedure between the DHS and the floors. We will be trialing this procedure in 30, 60, and 90 day periods in order to measure the efficacy of this pilot program. Furthermore, on the back end of patient flow, there is a recommendation in place to execute the Real Time Demand Capacity in order to continuously monitor supply/demand of patient needs and make adjustments to proactively optimize patient flow.

**Evaluation/Conclusion:** By utilizing a cohorted scheduling system and executing the Real Time Demand Capacity methodology, there will be a change from a reactive to proactive approach. This approach will enable staff on all levels to continuously monitor and improve TATs, patient satisfaction, and overall throughput of the hospital.

## Internship Abstract

**Title:** The Development of Stormwater Management Plan in Johnson Park, Piscataway

**Name:** Ho Jin Kim

**Preceptors:** Mirah Becker, Supervisor, Division of Comprehensive Planning and the Environment

**Agency:** Office of Planning - Middlesex County, New Jersey

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**Purpose:** To develop a Stormwater Management Plan using Green Infrastructure in Johnson Park, Piscataway as a way to revitalize the Raritan River and preserve the ecosystem diversity.

**Significance:** Johnson Park directly discharges untreated stormwater into the Raritan River which is harmful enough to destroy the Raritan River's ecosystem. Green infrastructure is a natural approach to water management that can enhance and revitalize the natural water cycle. A rain garden is a planted garden that has the capability to absorb stormwater in order to prevent runoff and restrain the discharge of wastewater into the Raritan River. Sidek, L, Noor, N, Basri, H, & Muha, N (2013) found that "Rain Gardens" have many positive benefits in improving water quality for higher pollutant removal efficiencies for nitrogen, phosphorus, and trace metals" (2). Considering this evidence, developing rain gardens in Johnson Park, Piscataway is a viable solution to prevent a greater threat to the environment in the Raritan River.

**Method/Approach:** First step is to conduct site investigation through fieldwork at Johnson Park. It is very helpful in understanding the full extent of the damage of discharged stormwater. Next step is to analyze two case studies "Thompson Park Rain Garden Demonstration Project" and "Regional Stormwater Management Plan for Robinson's Branch, Union and Middlesex Counties, New Jersey" in order to establish well-regulated guidelines for enhancing green infrastructure efficiency strategies and reducing negative externalities. Collected data belong to the New Jersey Water Supply Authority and Sustainable Raritan River Initiative - Rutgers University.

**Outcomes/Results:** The Thompson Park Rain Project proves that a rain garden system has a sizeable enhancing effect on filtering pollutants from parking lot locations, motor oil, and sediments. Furthermore, the installation of rain gardens has contributed to increasing infiltration rates up to 30% as compared to artificial lawns and promoting soil stabilization. In New Jersey, a rain garden has the capability to effectively control runoff up to the maximum of 1,000 square feet and dispose of 25,000 gallons of stormwater per year. The installation cost of a rain garden is \$10 to \$40 per square foot.

**Evaluation/Conclusion:** This project has attested to the fact that a rain garden is the most effective solution to resolve the problem of the discharge of stormwater into the Raritan River. The model of a rain garden is an environmental-friendly and cost-efficiency alternative that can successfully prevent a massive influx of chemicals from stormwater and improve sewer services. Therefore, implementing the rain garden system in Johnson Park will help to revitalize the Raritan River and develop the green network.



## Internship Abstract

**Title:** Assessment of the Oral Health Habits of Eric B. Chandler Health Center Patients

**Name:** David L. Kornmehl

**Preceptors:** Brenda V. Walker, DDS, Dental Director,  
Steven J. Levin, MD, Medical Director

**Agency:** Eric B. Chandler Health Center

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**Purpose:** To analyze the oral health habits and attitudes towards dental care among patients at the Chandler Health Center and propose modifications aimed at improving oral health delivery.

**Significance:** Oral health and hygiene is a key component of overall wellness. Less than two thirds of adults report having visited the dentist in the last twelve months according to a report by the U.S. Surgeon General (2000). Children face additional challenges which contribute to tooth decay, currently the most common chronic childhood disease. Disparities such as socioeconomic status contribute to the oral health issues that individuals of all ages may face. Understanding the oral health habits of individuals can assist in developing creative interventions to combat oral diseases and tooth decay. The Eric B. Chandler Health Center is a community health center that has a large and heterogeneous patient population of roughly 14,500 making it an ideal place to conduct a research project. The diverse group of patients come from many surrounding communities to receive affordable care from the health providers.

**Method/Approach:** Patients from Chandler serve as the study group for a clinical research project involving oral health habits. The survey questions were constructed to gather information on the oral health and hygiene practices of patients and their attitude towards dental health. Two different multiple-choice surveys were developed. The adult survey contained eight questions while the pediatric survey (filled out by parents of children younger than eighteen) contained ten questions. The survey was available in both English and Spanish to reach the majority of patients at Chandler. Patients were approached in the clinics at Chandler and the study purpose was explained to them. The data was collected over a five-week period and analyzed using Qualtrics. Surveys were confidentially discarded after data was recorded to protect patient privacy.

**Outcomes/Results:** The survey was completed over a five-week period. A total of 102 adult surveys and 82 pediatric surveys were collected from the study population. A summary of the results was analyzed using descriptive statistics to determine the distribution of responses. The completed surveys show a need for improvement. The data gained will assist clinicians and staff in establishing or adjusting dental education and oral health care instructions that patients receive.

**Evaluation/Conclusion:** After the data is analyzed it will be shared with the Executive Board at Chandler. Using the information, a more focused education initiative can be developed by the Board to improve knowledge about the importance of oral hygiene in both adults and children. One future outcome that can be monitored is the result of this educational initiative as it will potentially translate into more routine dental care appointments and improved dental hygiene among patients.

## Internship Abstract

**Title:** EMT Skills Improvement Assessment

**Name:** Betty Kui

**Preceptors:** George Antonelli, Captain of Madison Park First Aid Squad

**Agency:** Madison Park First Aid Squad

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**Purpose:** To analyze the confidence levels of new emergency medical technicians (EMTs) in conducting basic life support and responding to medical emergencies in order to propose methods of improving EMTs' skills competency in patient quality care.

**Significance:** Getting experience for EMTs can be problematic when first responders cannot selectively choose how many and the type of medical emergencies to respond to. Consequently, some EMTs may be incompetent in specific skill sets such as utilizing medical equipment, taking vitals, and basic life support (BLS). This study is intended to identify the types of skills new and prospective EMTs within the organization need improvement on. Any significant outcomes may serve as a basis to develop future training programs for new recruits to effectively respond to medical emergencies.

**Method/Approach:** A survey study conducted with fourteen members of Madison Park First Aid measured the comfort level of new EMTs (active EMTs with license of 5 years or less) and prospective EMTs (active volunteers without an EMT license). Comfort level was measured by subjects selecting EMT skills they can and cannot perform independently. I documented improvements in skills competency with EMTs and volunteers I regularly supervised on calls and interviewed a EMS medical director to gain insight on the development of future EMT training, research, and education.

**Outcomes:** Of the sample size cohort (n=14), the skills participants felt most comfortable performing on calls were handling medical equipment with eleven respondents (78.57%) followed by filling out PCRs with ten subjects (71.42%). Six subjects (42.85%) listed triaging as a skill they felt uncomfortable performing independently. Taking vitals, patient assessment, and delivery of oral report to nurses were equally followed as second highest in discomfort with five subjects (35.71%). Ten participants (71.42%) responded the reason for this discomfort was due to lack of experience. Six respondents (42.85%) claimed on average they did not go on call with an EMT with more than five years of experience and twelve respondents (85.71%) said yes to participating in future EMT refresher training sessions.

**Evaluations:** Nearly half of new and prospective EMTs (42.85%) did not run with an EMT with more than 5 years of experience opening to the possibility of restructuring crews to have at least one experienced EMT (5+ years of experience). This along with conducting EMT trainings will help to address the 71.42% of new members who state that their discomfort in certain skills was due to lack of experience. Training sessions can focus on skills such as triaging, taking vitals, patient assessment, and delivery of oral reports as these were the top skills new members listed to be least confident in. Honing these skills can improve EMTs competency and result in better outcomes for pre-hospital care.

## Internship Abstract

**Title:** Disaster Relief, Recovery, and Preparedness Program Assessment

**Name:** Joseph Lee

**Preceptors:** Michael Best, Disaster Caseworker Specialist  
Project Supervisor: Lyn Scott, Disaster Response Director & Program Developer

**Agency:** The American Red Cross of Central New Jersey

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**Purpose:** To evaluate the usage of fire alarms within the Disaster Relief programs and analyze alternative interventions that would improve the health status of disaster victims.

**Significance:** Everyday, an average of seven people die from home structure fires in the United States. From the reports of the NFPA, death rates from home fires without working fire alarms were twice as high as rates with homes that have working fire alarms and three of every five home fire deaths were due to having homes without proper fire alarms. The purpose of the Disaster Relief program is to provide safety equipment and information about the risk of home structure fires in the United States and deliver efficiently long-lasting fire alarms to every household.

**Method/Approach:** Intern volunteers and office staff listed clients of house fires to record their experiences within the past five years. Data was collected from 651 clients; 112 victims declined their answers to the public. The survey that provided the categories of answers were divided into four results: 1) Helpful, heard the alarm before seeing the fire, 2) Not helpful, heard the alarm after seeing the fire, 3) Not helpful, never heard the alarm during fire, 4) Helpful, did not hear the alarm but no fire.

**Outcomes/Results:** The sample size cohort (n=539) was projected from the method of telephone interviews to accurately represent the experiences in the past five years. 271 (50%) clients answered their survey question as helpful during a home fire that they heard their alarm and was satisfied with their experience. 159 (29%) clients responded negatively towards the usages of fire alarms and decided to use their own personal system instead of the red cross-issued smoke alarms. The negative responses were categorized into two groups of where 89 (16%) clients reported that their smoke alarms malfunctioned or notified them of the fire after seeing it. In addition, seventy (13%) clients surveyed their smoke alarm as not helpful when the alarm did not sound at all during the home fire. These scenarios are usually caused by dead batteries in the alarms or misplacing them after taking them offline. While only 539 client's answers were used in the survey, 380 (71%) cases responded positively when asked about their experiences with home structure fires that were equipped with state-regulated fire alarms.

**Evaluation/Conclusion:** At the end of the meeting with the home fire campaign team of Central New Jersey, the staff presented the statistical results of the survey project and determined intervention methods to increase the awareness and importance of fire alarms in the homes of Americans. More concrete data must be collected by the American Red Cross and other agencies to efficiently improve the knowledge and technology of fire alarms.

Citations: <https://docs.google.com/document/d/1JBjISfdbKvyUQDJ-GS-fn5Lck0LsZWrgAS0qA9AjcHs/edit>

## Internship Abstract

**Title:** Building Social Skills for Disabilities - Event Planning and Implementation

**Name:** Farid Mamoor

**Preceptors:** Internship Supervisor: Joanna Kirvin Project Supervisor: Ross Yellin

**Agency:** Disability Allies (East Brunswick, NJ)

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**Purpose:** Develop and implement a disability services event in partnership with Easter-Seals, a disability services organization, to help individuals with disabilities build social interaction skills.

**Significance:** Individuals with disabilities often suffer from stigmatization. Ahmedani (2011) states that, “Social stigma is structural in society and can create barriers for persons with a mental or behavioral disorder” (n.p.). This ideology ultimately creates inferiority between individuals with disabilities and those without in society. A study conducted by Connolly, et al. (as cited in Davey, 2013), found that 62% of adolescents with disabilities have experienced friendship loss and social rejection as a result of stigmatization. Thus, personal-development based initiatives are necessary in regards to helping individuals with disabilities build social skills; ultimately rejecting social stigmatization.

**Method/Approach:** An organizational event was held by Disability Allies in partnership with Easter-Seals every Tuesday throughout the month of November. Multiple activities were planned to encourage teamwork and communication. Volunteer mentors were scheduled each day of the event to help encourage communication from the consumers, who were the individuals with disabilities attending the event. Each day of the event consisted of a variety of team-building and social interaction activities. At the end of each event, two separate surveys were handed out to mentors and consumers to determine the effectiveness of the activities in regards to building social and communication skills.

**Outcomes/Results:** On the mentor surveys, when asked if the communication between the mentors and consumers was positive, 17/21 mentors marked “strongly agree” and 3/21 marked “agree”. When asked if the orientation and training for the event adequately prepared them to interact with the consumers in regards to encouraging social interaction, 19/21 mentors marked “strongly agree” or “agree”, and 2 marked “neutral”. On the consumer surveys, when asked if they enjoyed the social interaction activities at the event, 24/27 consumers marked “strongly agree” or “agree”, and 3/27 marked “disagree” or lower. When asked if the activities were generally easy to accomplish, 24/27 marked “strongly agree” or “agree”, and 3/27 marked “neutral” or lower. Finally, when asked if they would participate in another event, 25/27 consumers marked “strongly agree” or “agree”, and 2/27 marked “neutral” or lower.

**Evaluation/Conclusion:** In conclusion, the event was ultimately a success. A surveyed 24/27 (89%) consumers found joy and usefulness in the social interaction activities at the event. Moreover, the results suggest that both the mentors and consumers found the event to be effective in building social and communication skills. The Disability Allies and Easter-Seals organizations were pleased with the results. That being said, more work can be done for future events to ensure 100% consumer satisfaction.

## Internship Abstract

**Title:** 2016 Annual Salary Survey of Companies

**Name:** Xinyu Meng

**Preceptors:** Direct Supervisor: Yihong Wang, Director of Human Resource and Social Security Bureau. Project Supervisor: Hongxing Wang, Division Chief of Human Resource and Social Security Bureau

**Agency:** Tangshan National Hi-Tech Industrial Development Zone Government, China

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**Purpose:** To survey local companies on their financial status and employee salaries for a national salary survey.

**Significance:** This survey is a part of a nationwide annual salary survey of companies. The Ministry of Human Resources and Social Security (MOHRSS) of the People's Republic of China which is responsible for this nationwide salary survey, requires local governments to collect data and submit it to the national government. MOHRSS will analyse the data collected annually to decide whether adjustments to China's salary policy are needed. This survey has an effect on future salary policy.

**Method/Approach:** In this survey, 30 local companies were randomly selected. Five companies were defined as small companies (employees < or = 30). Three companies had more than 200 employees. First, companies were contacted to ensure that they were still viable. Next, representatives of the companies were trained to fill two online forms based on 2015 operations in a specific data system. One form was about company's financial status, consisting of revenue, cost, profit, tax and so on. The other form collected employees' salaries, including number, gender, position, education, years of working, honor and salaries. The last step was to check whether the data were complete after companies submitted forms.

**Outcomes/Results:** In this survey, 30 companies were selected, but only 28 companies submitted data. Seven companies had losses in 2015. All employees' salaries were more than ¥1480 which was the legal minimum salary in China. All the data submitted were without logical and numerical errors. The data were successfully submitted to the superior government, Tangshan Government.

**Evaluation/Conclusion:** Among the thirty companies, two companies didn't submit data eventually. In short run, it seems that the result of this survey has no effect on local companies. However, in long run, the data collected in this survey play an important role in China's salary policy that is related to every company and employee. Steps to encourage participation of local companies in this survey would help improve compliance and support for national policies on employee salaries.

## Internship Abstract

**Title:** The role of Kcentra® in patients with bleeding associated with factor Xa inhibitors

**Name:** Ljubica Minova

**Preceptors:** Direct Supervisor: Chinwe Ogedegbe, MD, Section Chief, ETD Research  
Project Supervisor: Gabrielle Procopio, PharmD, BCPS

**Agency:** Hackensack University Medical Center

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**Purpose:** To evaluate the use of a 4-factor prothrombin complex concentrate (4F-PCC), Kcentra®, for reversal of anticoagulation in patients acutely bleeding while on factor Xa inhibitors, apixaban, edoxaban, and rivaroxaban.

**Significance:** Oral anticoagulants are drugs often prescribed to prevent and treat deep vein thrombosis (DVT), pulmonary embolism (PE), and atrial fibrillation. Although factor Xa inhibitors have been proven to be safe and effective compared to standard of care, there is a concern with the lack of specific reversal agents in cases of life threatening bleeding or emergent surgical procedures. Recently, the FDA approved Kcentra® as the only 4F-PCC in the United States. While Kcentra® was proven effective in the reversal of warfarin, its effectiveness in reversing the effects of rivaroxaban, apixaban and edoxaban remains unclear.

**Method/Approach:** A retrospective chart review was conducted at Hackensack University Medical Center to explore the effect of Kcentra® given to 116 patients, who were on an anticoagulant and visited the emergency room with life threatening bleeding between August 2013 and October 2016. Of the 116 patients, only 28 patients were treated with rivaroxaban, apixaban and edoxaban and were included in the study. The data was collected through the use of Electronic Privacy Information Center (EPIC), an electronic medical records system. It included patients' age, gender, weight, date and time of admission and discharge, discharge location, type of bleed within the patient, surgical procedures, anticoagulant medication, reason for being on an anticoagulant and dose, Kcentra® dose and time of administration, initial creatinine levels, hemoglobin levels prior to and after administration of Kcentra®, formation of blood clots, reason for death in patients who passed away and administration of blood products, vitamin K and vasopressors. The data was analyzed by calculating the mean, median and range for the numerical measures and counting the respective variables for the qualitative measures.

**Outcomes:** Of the 28 patients 16 were male and 12 were female, with an average age of 78 years. The most common reasons for anticoagulation in the patients were DVTs (39%) and atrial fibrillation (61%), for which 15 of the patients were treated with apixaban, 12 with rivaroxaban and 1 with edoxaban. Nearly 28% of the patients experienced gastrointestinal bleeds, 61% had intracranial hemorrhages and 11% were miscellaneous bleeds. The average dose of Kcentra® administered was 31 units/kg with a range from 19 units/kg - 50 units/kg. Eight (29%) of the patients required a surgical procedure to stop the bleed. Additionally, 18% of the patients required transfusion of fresh frozen plasma (FFP) after administration of Kcentra to further reverse the bleeding and 21% required Vitamin K administration. About 7% of the patients developed a DVT after administration of Kcentra®, and 5 patients (18%) died. The causes of death noted were sudden death and withdrawal of care in patients who were placed on comfort care.

**Conclusion:** As per the results, 18% of the patients required subsequent administration of FFP after administration of Kcentra® to aid in the reversal of factor Xa inhibitors and stop the bleeding. From this data it can be concluded that a higher dose of Kcentra® may be required for successful reversal of factor Xa inhibitors in patients with life threatening bleeding.

## Internship Abstract

**Title:** The Importance of the Public Health Role in Preventing Alcohol Abuse in the Morristown Community

**Name:** Kristi Mobus

**Preceptors:** Lise Cooper, Preceptor, Clinical Coordinator Jefferson 4 Unit

**Agency:** Morristown Medical Center

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**Purpose:** Our Community Health, Community Engagement, and Health Improvement Department identifies one of the unmet needs in our surrounding communities as addiction treatment, interventions, or counseling. This finding is consistent with findings in the general United States population that there are missed opportunities for health promotion intervention in the alcohol withdrawal in-patient population.

**Significance:** Binge drinking can lead to many other health risks besides alcohol poisoning. It can lead to unintentional injuries such as car accidents and/or falling and injuring one's self, or it can lead to intentional injuries that can result in homicide or assault. If the opportunity to encourage an overall healthier population of that community occurs, it is necessary to take action. Consistent with a life span framework for alcohol-use problems, normally, child abuse, alcoholism, depressive disorder, and alcohol or drug-use problems, are interrelated (Flynn). The issue of alcohol-use problems can be targeted with bedside counseling and the number of readmissions and relapses may decrease. The goal is to complete and intervention and get the patients the help they need, instead of providing treatment and discharging them without ever addressing the underlying issues of alcohol abuse or independence..

**Method/approach:**

1. We first performed a retrospective chart study of qualified in-patients from December 2015 to May 2016 based on the alcohol abuse and dependence ICD-10 diagnostic codes.
2. We then use the Alcohol Use Disorder Identification Test (AUDIT), a short questionnaire asking about our in-patients drinking habits.
3. When we have doctoral candidates in Psychology begin motivational interviewing at the bedside and provide referrals for continued help after medical discharge.

**Evaluation/Conclusion:**

Starting December 8, 2016 and going until May 25, 2017, the intervention of motivational interviewing at the bedside will occur. From the retrospective chart review we know that our previous in-patients with alcohol-use problems are English speaking, white, single, not employed, never receive a psychiatric evaluation, and only admitted once into our facility. We expect to see similar results when analyzing the group that will receive bedside counseling. One year later for the same time frame we will again collect data on medical records to see if the bedside counseling made a difference in the population coming to the hospital. We are also working with our Community Health Nursing Department in an effort to address the community needs assessment of addiction treatment, interventions, and counseling services.

## Internship Abstract

**Title:** Patient's Progress and Outcomes in Cardiac Rehabilitation  
**Name:** Kristin Murphy  
**Preceptors:** Direct Supervisor: Jose Maniquis; Registered Nurse: Ellen Weiss  
**Agency:** Robert Wood Johnson Cardiac Rehabilitation

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**Purpose:** To collect data and analyze the factors associated with the pre-surgery/pre-treatment of cardiac patients.

**Significance:** Approximately 610,000 people die of heart disease in the United States every year—that's 1 in every 4 deaths. Heart disease is the leading cause of death for both men and women. According to the CDC, every year close to 800,000 Americans have a first heart attack and 470,000 who have already experienced a heart attack have a repeat event. There are many risk factor associated with heart disease. The biggest ones include high cholesterol, lifestyle (diet and exercise) and obesity. Understanding the risk factors and taking action is the best way to prevent heart disease.

**Method/Approach:** The information regarding risk factors of heart disease was collected from the patients during their evaluation to reveal possible risk factors and patterns. The data collected was from 30 patients ages 36 to 84 and included age, gender, if the patient had diabetes or not, BMI, any family history of heart disease, high cholesterol, lifestyle, and smoking habits. This information was used to understand which risk factors were the most prominent in the patients that attended cardiac rehab.

**Outcomes/Results:** Of the patients currently enrolled in cardiac rehab (n=30), 19 (63%) were male and 11 (37%) were female. Seventeen (57%) have diabetes. The BMI range was from 17.1 to 44.5. 1 (3.3%) patient was below the normal BMI. Seven (23.3%) patients were between 19-25, which is the normal rate. Seven (23.3%) patients were between 25-29.9 which is overweight. Fifteen (50%) patients were above 29.9 which is considered obese. 24 out of 30 (80%) patients had a family history of heart disease. Twenty-seven (90%) patients had high cholesterol. Lifestyle scale is rated by 0-100. Any number greater than 58 is considered proper nutritional choices. Of the thirty patients twelve (40%) were below the 58 value and eighteen (60%) were above the 58 value. (30%) of the patients were smokers.

**Evaluation/Conclusion:** Of the main risk factors above, (90%) of patients had high cholesterol, (40%) of patients could improve their diet, and (50%) of the patients are considered obese. (60%) of the patients were male which is consistent with the statement that heart disease is more common in men. Data from the other risk factors are also significant in preventing heart disease. Blood pressure screenings, blood sugar screenings, lifestyle and exercise questionnaires and getting a yearly check-up can serve as effective strategies and preventive measures for cardiovascular disease and the issues associated. If people stayed compliant with these ideas it would reduce the number of people affected each year.



## Internship Abstract

**Title:** Examination of the Effectiveness of the VPVA's Outreach

**Name:** Cydney Murray

**Preceptors:** Laura Luciano, Interim Director

**Agency:** The Office for Violence Prevention and Victim Assistance (VPVA)

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**Purpose:** To spread awareness about the nature and prevalence of interpersonal violence throughout the Rutgers community, and to encourage participants to become advocates for survivors and engage in bystander intervention.

**Significance:** Studies show that women aged 16-24 are at greater risk of experiencing intimate partner violence. According to research funded by the U.S. Department of Justice, one in five will be the victim of sexual assault while in college. A method of addressing this issue is Bystander Intervention, a strategy of violence prevention that encourages individuals to intervene in situations that minimize, support, encourage or cause violence. Research funded by the Department for Education revealed that fraternity members trained in this practice were 40% less likely to commit a sexual assault. By educating individuals about interpersonal violence, and about effective Bystander Intervention, the rate of such violence on campuses can be abated.

**Method/Approach:** The VPVA facilitated a campaign during the week of October 17th titled 'Turn the Campus Purple' with the intention of raising awareness about interpersonal violence, and about the resources and services provided at Rutgers through the office. Events during the campaign included a Candlelight Vigil, an informational Twitter Rally, and Chalk the Block, during which individuals and groups were encouraged to contribute to a large chalk mural in support of survivors. Facebook, Twitter, and Instagram were utilized during this campaign and VPVA materials were distributed throughout the week in an effort to raise awareness.

**Outcomes/Results:** Approximately thirty individuals participated in the Candlelight Vigil. The number is indeterminate due to the vigil being held outdoors and passersby not staying for the entire duration. All tweets published during the Twitter Rally were liked or retweeted at least once. Six independent accounts participated during the online event. Five student organizations and five passersby participated in Chalk the Block, and at least fifty individuals stopped by the informational tables. Roughly three-hundred campaign bandanas and votives were distributed to students and faculty throughout the week. All participants were given a summary of the campaign's purpose, as well as information about the VPVA.

**Evaluation/Conclusion:** In comparison to last year's campaign, Turn the Campus Purple 2016 was an improvement and an overall success. The number of participants at the Candlelight Vigil increased by 50%. The new events, Chalk the Block and Twitter Rally, garnered more participation than anticipated. Participants were encouraged to provide their email addresses for the VPVA's newsletter so that they can stay engaged with the office's effort to end interpersonal violence on the Rutgers University New Brunswick Campus.

## Internship Abstract

**Title:** Developing new student fundraising initiatives for Dance Marathon

**Name:** Damon Namin

**Preceptors:** JoAnn Arnholt, Dean of the Office of Fraternity and Sorority Affairs at Rutgers University

**Agency:** Rutgers University Dance Marathon

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**Purpose:** To supplement the unprecedented loss of Dance Marathon's biggest platform for student fundraising, by discovering new and creative fundraising opportunities to assist students in reaching their financial goal.

**Significance:** On-street canning has been the most lucrative and reliable source of money for students to be able to fundraise their \$350 minimum to dance in order to raise money for Embrace Kids Foundation. Last year students fundraised \$130,000 through on-street canning. This year on-street canning has been eliminated due to safety and loss prevention concerns. New fundraising methods need to be implemented in order for the \$130,000 fundraised from last year's on-street canning to be sustained through safer fundraising methods in this year's marathon.

**Method/Approach:** Research was conducted by contacting other universities like Pennsylvania State University, who have similar Dance Marathons. Afterwards, a plan was formulated on the basis of two ideas; education and activism. The Finance team will educate the team captains of each organization on various fundraising opportunities to consequentially propel these team captains to be active in making sure each member of their organization reaches the fundraising minimum of \$350 to dance. Education will be done through fundraising workshops hosted by the finance team as well as in one on one meetings where captains will be thoroughly debriefed on alternatives to on-street canning like our letter-writing campaign, placing donation cans in local businesses, social media campaigns, and pedestrian canning. After educating the team captains the goal is to have them to be activists inside their organization to catalyze fundraising efforts.

**Outcomes/Results:** During the fall; the social media campaign brought in \$21,498.73, pedestrian canning brought in \$16,070, letter writing raised \$3,120, and donation cans raised \$1,010.16. Based on data from last year and the new fundraising initiatives being taught by the finance team to team captains, it is projected that dancers will raise \$40,000 from social media campaigns, \$37,226 from pedestrian canning, \$20,234.59 from letter writing, and \$12,000 from donation cans this spring. The pie chart shows the contribution of each of the four initiatives in beating the \$130,000 goal. The bar graph shows the actual money fundraised in the fall compared to the projected in the spring.

**Evaluation/Conclusion:** The \$130,000 benchmark that on street canning set last year was surpassed by the four alternatives that the finance team proposed. These new initiatives of social media campaigns, pedestrian canning, letter writing, and donation cans; coupled with educating the team captains has and should lead Dance Marathon to raise over \$150,000, to supplement the loss of on-street canning.

## Internship Abstract

**Title:** Health Information Exchange through Personal Health Records Assessment

**Name:** Kimberly Nguyen

**Preceptors:** Project Supervisor: Kathleen Glorioso, Office Manager  
Project Supervisor: Stephanie Wilhelm, Office Manager

**Agency:** Virtua Medical Group

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**Purpose:** To analyze how useful online patient portals are and engaged patients are when introducing electronic health information exchange systems.

**Significance:** Every year, many individuals face many barriers to quality healthcare because manual medical records do not provide patients and healthcare providers with all of the necessary information in a timely manner. Since 2011, eligible healthcare professionals and hospitals have been encouraged to adopt, implement, upgrade, and demonstrate meaningful use of certified electronic health record technology through the Medicare and Medicaid EHR Incentive Program. The purpose of this program is meant to improve quality, safety and efficiency when handling sensitive health information, engage patients and families throughout the entire healthcare process, and improve the coordination of care throughout the healthcare network.

**Method/Approach:** Office staff and interns have signed up patients from attesting physicians for the Virtua EHR account for the past two years. Follow-up surveys were then given to patients regarding their satisfaction with quality of care and service. Data for 761 patients were collected, but 354 patients did not effectively use their EHR accounts by opening up their medical documents more than once. Results from the survey were then collected and grouped according to service type. The results for the account could be found as 1) extremely helpful, 2) moderately helpful, 3) no difference or more complicating.

**Outcomes/Results:** Of the sample size cohort (n = 407), 124 individuals (30.5%) found the account to be extremely helpful, 186 individuals (45.7%) found the account to be moderately helpful, 97 individuals (23.8%) found the account to not have made a difference or more complicating.

**Evaluation/Conclusion:** Of the 761 patient records that were collected, 354 or 46.5% of the patients' answers were not eligible to be considered as part of the survey data because they did not fully use their accounts for medical needs. Telephone counseling and further education could remind and emphasize the importance of these accounts to patients so they could remember to use them more frequently in case of emergencies. Of the sample cohort, 97 or 23.8% of the individuals found the accounts to not be useful at all or more complicating in ways. Patients could offer further feedback regarding the nature of the accounts in order to improve and enhance the purpose of the EHR accounts.

## Internship Abstract

**Title:** Healthy mouth for a baby

**Name:** Evgeniya Nikolaishvili

**Preceptors:** Maxim Sulla, DDS

**Agency:** Tender Smiles 4 Kids

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**Purpose:** To develop a brochure to educate expecting and new parents of the importance of oral health for children up to age 6.

**Significance:** Children need strong, healthy baby (primary) teeth to chew their food, speak and have a good-looking smile, their first teeth help make sure their adult teeth come in correctly. Dental caries, more commonly known as tooth decay, is a global concern and is considered to be the most common infectious childhood disease. More than 25% of American children between the ages of 2 and 5 years have experienced dental caries. Furthermore, 50% of all children from lower socioeconomic families have dental caries.

**Method/Approach:** After observing and treating young children with poor oral health I decided to create a brochure that includes information about importance of oral health. Conversations with parents revealed that many were not aware of the consequences of poor prenatal care, poor diet, poor oral health. My preceptor, Dr. Sulla helped me to identify the most important areas that needs to be considered. I used scholarly articles and government agencies websites to compile facts for the brochure.. I used Canva to create the brochure.

**Outcomes/Results:** The completed brochure includes information about how to reduce the risk of caries in children, pacifier and finger sucking habits, diet, good and bad snacks, and consequences of poor oral health for expecting mothers. After displaying it in the office, I noticed parents reading it instead of magazines. There were 4 brochures taken out in the first day of displaying.

**Evaluation/Conclusion:** Increasing awareness through disease prevention programs may aid in reducing the incidence of early childhood caries among their children. The right information about early childhood caries and its prevention should be in pediatricians offices, OBGYN offices, and hospitals, especially maternity departments.

## Internship Abstract

**Title:** Employees retention problem in sales position

**Name:** Jiaying Ouyang

**Preceptors:** Sarah Chen, HR supervisor

**Agency:** Fuji Xerox Shenzhen, China

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**Purpose:** To identify internal and external factors which cause high turnover rate in sales positions and to reduce the turnover rate by redesigning the compensation system and the promotion system.

**Significance:** As a company which aims at direct-selling, Fuji Xerox devotes most of its resources in sourcing, recruiting, training and developing direct-selling talents. However, since the mobility of the sales position is very high, the high turnover rate has brought some economic loss to the company. Redesign of the compensation system based on company's external competitiveness and current labor market in Shenzhen can sufficiently control costs and increase revenues. Also, the number of qualified direct selling talents is very limited in Shenzhen. The high cost of living also makes it difficult for the company to source talents from other cities. Therefore, it is very necessary for the company to use a good compensation system and employees promotion system to attract and retain talents. Besides, the disparity between compensation and employees' efforts in sales positions has caused some dissatisfaction among employees. In this regard, a more complete compensation and promotion system would be beneficial to sales employees as well as increase job satisfaction.

### Method/Approach:

1. Conducted a job evaluation based on Fuji Xerox's strategies and values. Fuji Xerox's business strategy involves high-quality products and services designed in collaboration with customers.
2. Defined external competitiveness of Fuji Xerox. The main external competitiveness of Fuji Xerox is from its products and services market.
3. Decided compensable factors based on results of job evaluation and external competitiveness, and then weighted the factors according to importance.
4. Compensated these factors more than market level.
5. Developed one potential leader from each sales group every year.
6. Developed a special leadership training program for these leaders and evaluated their performances every month.

**Outcomes/Results:** □ The turnover rate decreased 30% from May to August. □ The number of qualified candidates who apply for sales position increased by 20%. The number of employees who were more satisfied with their jobs increased by 45%.

**Evaluation/Conclusion:** The turnover rate and job application rate were calculated based on company's staffing records and recruiting records. Employees were required to conduct a job satisfaction survey. The result shows that redesigning the compensation and promoting system is very necessary and helpful.

## Internship Abstract

**Title:** Electrocardiograms in Cardiovascular Service Lines  
**Name:** Tiara Owens  
**Preceptors:** Stephern Allison- Vice President of Cardiovascular Services & Case Management  
**Agency:** Robert Wood Johnson University Hospital

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**Purpose:** To increase staff productivity and develop an improvement plan to maximize throughput and efficiency in the Electrocardiogram (EKG) Department.

**Significance:** At Robert Wood Johnson University Hospital, electrocardiograms provide clinical staff with immediate validation to address minor to severe cardiac emergencies. RWJUH has certified EKG/stress technicians that provide care to over 34 different floors throughout the hospital. The technician receives the patient's order, performs the test, and downloads/edits the results into the database management system. The cardiologist then reads the results to determine the status of the patient regarding the next steps for their care. The cath lab and cardiodynamics are one of the highest volumed service lines in the hospital. With peak average EKGs performed in an hour being approximately 31 taking 10-13 minutes per EKG, it is pertinent that workflow and staff production are at its most efficient to benefit patients, along with providing a fluid and effective clinical course and overall experience.

**Method/Approach:** Using the process improvement methodology of LEAN, problem definition is completed through process mapping, observations, shadowing, and cause/effect analyses. Work flow variation is the defined problem and the observation measurements are obtained by securing measurements of outpatient/inpatient flow, number of EKGs done per technician, and average EKG time per patient. Post-measure, statistical analyses are performed to determine correlation and significance. Lastly, the results are improved and controlled to observe if the plan can actually be attained and sustained over time.

**Outcomes/Results:** From 2015-2016, the results and visuals supported the prediction that work flow variation has an effect on the number of electrocardiograms done daily. Bar graphs and flowcharts show an extreme variance of the average number of EKGs performed in 2015 and 2016, respectively, by each technician with 975 and 2,234 being the lowest and 6,087 and 4,845 being the highest of all the full-time staff employees measured.

**Evaluation/Conclusion:** Through LEAN methodology, it is seen that there is work flow variation affecting the efficiency of the service, patient experience, employee satisfaction, and physician satisfaction. The proposal is to initiate and introduce a staff schedule model that predicts the inflow of patients at a more granular level (hour of day, day of the week, flow location) coupled with quarterly re-training exercises to re-educate staff on maximizing the services we provide. Future plans should include collecting more primary research, following and measuring staff trends, and partnering with sister hospitals.

## Internship Abstract

**Title:** Health Steps 2.0

**Name:** Jerry Park

**Preceptors:** Parminder Savalia, Supervisor of Community Health and Community Benefit

**Agency:** Valley Health System: Valley Hospital, Ridgewood, NJ

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**Purpose:** To implement an employee wellness programs in local companies and businesses to ensure a healthier workplace environment.

**Significance:** Obesity in adults has reached a national epidemic having more than one-third of adults considered to be overweight or obese. Rates of obesity have increased significantly in adults and are taking a huge toll on health for Americans. According to the Community Health Needs Assessment (CHNA) of Bergen County, overweight and obesity were major problems. The prevalent rate of obesity among 18-39 year olds were 17.3% and among 40 -64 year olds were 29.5%. The prevalent rate of obesity in bergen county was 25.3% compare to the national average of 33.4%. Additionally, only 23.6% among 18-39 year olds, met recommended physical activity and only 28.2% among 40-64 year olds, met their recommended physical activity. The biggest issue facing obesity was insufficient physical activity among the middle aged population. However, the American Heart Association recommends that walking 30 minutes a day which can help by improving blood pressure, reducing your risk for coronary heart disease or stroke, maintaining your body weight and lowering your risk of obesity.

**Method/Approach:** The goal of Healthy Steps 2.0 is to advocate the importance of physical activity among people of all ages particularly in a workplace setting. Given the amount of time employees spend at work, it makes sense for employers to think about opportunities to encourage physical activity in and around the workplace. The project consisted of making a brochures, flyers, and a toolkit on walking and making a walking group within a company. The toolkit was designed to provide employers the skills and ability to improve physical activity behavior in the workplace and create effective walking groups to create a dynamic and energetic work environment. Additionally, body fat percentage analysis will be conducted, and bloodwork to see HDL, LDL, Total cholesterol, and A1C level in participant of the program.

**Outcomes/Results:** This project is based on improving the obesity rate within the middle aged population in bergen county. Healthy Steps 2.0 offers a simple and easy way for companies to initiate and encourage physical activity within the workplace and to improve the lives of their workers. This will create a healthier, happier and more productive workplace environment.

**Evaluation/Conclusion:** Evaluations will be conducted using pre-tests and post test, designed to see the impact of the program, which will given to all of the participants of Healthy Steps 2.0. The test will consist of questions on the impacts of this program to their overall well-being. This evaluation will give an idea on the effectiveness of the program and provide ways the program can improve to ensure employees a healthier lifestyle.

## Internship Abstract

**Title:** Empowering New Brunswick Through Innovative Student Solutions

**Name:** Sweta Patel

**Preceptors:** Rangasri Ramji, Program Manager

**Agency:** Google Community Leaders Program

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**Purpose:** To create and deploy a case competition to crowdsource for innovative solutions to improve the efficiency and efficacy of nonprofit organizations in the New Brunswick community.

**Significance:** Digital literacy allows small businesses, nonprofits, students, and individuals to connect with potential customers, people in need, donors, educational tools, and resources that can improve quality of life. The Google Community Leaders Program was created to improve the digital literacy of these groups in order to ensure that communities in need are connected to the resources necessary to thrive in the technologically literate world. New Brunswick has multiple nonprofits that work to improve the quality of life for residents. Specifically, the city has approximately 20 food pantries to tackle food insecurity. Adequate knowledge of technology and understanding available online resources allows New Brunswick food pantries to improve their effectiveness and their efficiency. In order to understand the possibilities of utilizing technology to empower New Brunswick food pantries, the Google CLP created a case competition for students at Rutgers University to crowdsource for innovative technological solutions.

**Method/Approach:** Google Scholar, Rutgers Libraries, and data from the Rutgers Voorhees Fellowship was used to understand the topic of food insecurity. A case packet was created based on general information on food insecurity and information specific to New Brunswick including demographic information. The case competition was implemented to students across Rutgers through social media, Rutgers University listservs, and word of mouth between November 9th, 2016 and November 18th, 2016. An introductory event was created to give an overview of the organization and the community challenge.

**Outcomes/Results:** 22 teams of four students each participated in what was deemed a “community challenge” by submitting Google slides with abstracts detailing their solutions online to the Google CLP team. One solution sought to create an in-store, culturally appropriate food donation application. Another team suggested the creation of garden that would engage community members. Through the case packet, students learned about the topic of food insecurity. Google CLP received 1 submission from each team in the initial round. Google CLP invited 8 teams to present to a panel of judges that included a Google recruiter, professors, and community leaders at the Rutgers Business School. Judges then chose the top 3 submissions based on innovation and feasibility of implementation.

**Evaluation/Conclusion:** The Google CLP team received 22 ideas that could be used to assist a New Brunswick food pantry. Based on feedback from the judges, the Google CLP can work with the winners to implement their strategy. Through the case competition, the Google CLP team was able to receive multiple ideas that could be adjusted to better fit the needs of food pantries in New Brunswick.



## Internship Abstract

**Title:** Managed Long Term Service & Supports Waiver Renewal

**Name:** Jalen Ramos

**Preceptors:** Direct Supervisor: Laura Hoey, Chief Operating Officer  
Project Supervisor: Phil Scalo, Chief Executive Officer

**Agency:** Bartley Healthcare Nursing & Rehabilitation Jackson, New Jersey

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**Purpose:** To analyze the Managed Long Term Service & Supports (MLTSS) waiver and recommend changes that will serve the needs of clients at Bartley and other long term care facilities in New Jersey.

**Significance:** There are many issues with the current Managed Long Term care programs according to the Health Care Association of New Jersey (HCANJ). When MLTSS is fully implemented it will be responsible for payment and management of roughly half of the long term care Medicaid beneficiaries who reside in long term care facilities. The existing Medicaid approval and payment system has resulted in delays in approval for benefits and in payment to providers. The MLTSS system development is the responsibility of the New Jersey Department of Human Services (NJ DHS) who sets regulations and monitors Managed Care Organizations awarded with the MLTSS contracts. The problem is the new system was implemented without full analysis of the old system and the parameters for facility participation and rate setting are not finalized. The result has been a system without parameters for MCOs, no mechanism for setting rates, and no enforcement mechanism for NJ DHS regulations.

**Method/Approach:** Research on other states that have had the program longer than NJ and their success was conducted. The focus was put on states such as Minnesota, Iowa, NY, and Florida. A SWOT analysis between all of the Managed Care programs researched including NJ. The SWOT analysis was able to tell what weaknesses and strengths the program has in its entirety.

**Outcomes/Results:** The information gathered revealed what the main issues regarding MLTSS are. The main concerns deal with the rate setting system, and allowing any willing provider to qualify. The weaknesses were delayed admissions, incorrect fees and rates, claim denials, and late payment. These weaknesses come as a result of the main concerns. In order for the strengths to be relevant, the current NJ MLTSS program needs to undergo adjustments that will solve the major issues.

**Evaluation/Conclusion:** The information gathered has created a source of knowledge regarding improvements for Managed Long Term Service & Supports. Based on past and current use of the program it is clear that NJ has to implement a regulating system to ensure beneficiary access to services. The current NJ MLTSS program must address these issues with options such as assuring access to services by mandating that any willing provider can participate in the MLTSS System as opposed to the poorly made arbitrary selection system controlled by the MCOs. The second key element is to have a state controlled rate system that provides reasonable compensation via rates that assure that quality care can be provided to beneficiaries as the priority over MCO profits.

## Internship Abstract

**Title:** End of Life Care Education Initiative

**Name:** Katherine Santner

**Preceptor:** Lucy Forgione, Health Officer/Registrar Health Educator/Youth Services Coordinator

**Agency:** Bernards Township Health Department

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**Purpose:** To assess the effectiveness of the end of life educational intervention for adults in Bernards Township.

**Significance:** Four in ten Americans aged 65 and older don't have their end-of-life wishes written down in a document, such as an advanced directive. In January of 2016, Medicare started covering advanced care planning but only 17% of adults had a conversation with their healthcare provider about end of life wishes. Of advanced cancer patients, only 27% discussed end-of-life issues with their oncologist. More than 90% of Americans think discussing end-of-life decisions is important but only 30% have had these discussions. Discussing these wishes is a chance to unburden families, make wishes known and relieve pain and suffering.

**Method/Approach:** A Pre and Post Test was completed by adults who attended the event. Before the event attendees were asked to fill out the five question sheet. After the event everyone who attended, excluding the speakers were asked to fill out a new sheet with the same five questions. As an incentive to fill out both pre and post tests, a basket was raffled off after the post test. The questions assessed if attendees documented end of life wishes, how comfortable they were recording their wishes in a legal document, if they had spiritual concerns, how knowledgeable they were on hospice options and if they felt comfortable making end of life decisions. Participants could rate their answers from 1) not at all 2) a little 3) somewhat 4) very, indicate if they had 1) none 2) some 3) many spiritual concerns and indicate if they 1) had documented wishes 2) wanted to in the future 3) did not document them. The event was held at the Visiting Nurse Association (VNA) in Somerset Hills. The speakers included two registered nurses from the VNA, who introduced the topic and spoke about hospice and palliative care options. A local elder care attorney spoke about the legal issues with end of life decisions and a spiritual coordinator from the VNA reassured adults about their religious concerns.

**Outcomes/Results:** The sample cohort (n=29) initially included 32 people for the Pre Test but due to loss to followup only 29 people completed Post Tests. In the Pre Test 22 (69%) of participants already documented their wishes, 2 (6%) hadn't previously but would in the future and 8 (25%) did not document their wishes. The Post Test revealed 17 (59%) of participants already documented their wishes, 11 (38%) hadn't previously but wished to in the future and 1 (3%) didn't record their wishes.

**Conclusion:** The presentation proved to be very beneficial for comfort and knowledge in legal, hospice and general end of life care decisions. This event will continue in the future to serve as support to Bernards Township residents in making their end of life wishes known.

## Internship Abstract

**Title:** Evaluating Aspects of the Safety Ambassador Program

**Name:** Monisha Sarathi

**Preceptors:** Diana Starace, Injury Prevention Coordinator  
Carol Lavitt, Safety Ambassador Program Coordinator

**Agency:** Robert Wood Johnson University Hospital

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**Purpose:** To assess the knowledge acquisition as well as retention of high school students participating in the Safety Ambassador program.

**Significance:** Up to two-thirds of unintentional injury deaths in children are preventable. Proper education and outreach are the number one methods in injury prevention. Damon (1984) found that the two effective forms of peer education are peer “tutoring” and “peer collaboration”. The Safety Ambassador program utilizes peer outreach methods to teach injury prevention and safety to the youth. Safety Ambassadors are high school volunteers that serve as peer educators for elementary school children.

**Method/Approach:** Knowledge of the 2016-2017 high school Safety Ambassadors as well as the 2015-2016 Safety Ambassadors was assessed through pre and post tests. Pre tests were administered prior to the “Safety Summit” in a quiet academic setting within respective high schools. Post tests were administered within a week following the safety summit. Data from 4 different high schools was used. Pre tests and post tests are identical to each other. Pre and post tests used in both the 2015-2016 program and the 2016-2017 program are also identical.

**Outcomes/Results:** The sample cohort included pre and post tests from 71 students between a two year span (n=71). Tests were scored out of 11. The average pre-test score from the 2015-2016 program was 7.057 and the average post test score was 7.829. The average pre test score from the 2016-2017 program was 7 and the average post test score was 8.771. The question that students answered correctly most frequently dealt with the “dangers of an airbag” of which 70 students (98%) answered correctly on pre tests. When this same topic was asked on post tests, 68 students (95%) answered correctly. The question that students answered incorrectly most frequently dealt with the “Safety Belt Fit Test” of which 17 students (25%) answered correctly on pre tests. When this same topic was asked on post tests, 35 students (50%) answered correctly.

**Evaluation/Conclusion:** The Safety Ambassador program serves to educate students on important safety topics. Safety Ambassadors are able to acquire knowledge on topics they were formerly poor on (25% increase of correct answers “Safety Belt Fit Test”) and retain knowledge on topics they were familiar with (only 2% difference of correct answers on “dangers of an airbag”). More attention should be given to Motor Vehicle Safety as it is identified as a topic high school students are least familiar with.

## Internship Abstract

**Title:** Efficacy of Culturally Tailored Community-based Health Promotion programs

**Name:** Anupama Shah

**Preceptors:** Shailja Mathur M.S., M. Ed., RDN, Senior Program Coordinator

**Agency:** Rutgers Cooperative Extension, Department of Family and Community Health Sciences

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**Purpose:** To analyze the efficacy of culturally tailored stroke education in the South Asian community

**Significance:** New Jersey has the third largest statewide population of South Asians and the SA immigrant population is one of the fastest growing racial minority groups in America.<sup>1</sup> South Asians are persons who originate from the Indian subcontinent which includes India, Pakistan, Sri Lanka, Nepal, the Maldives, Bhutan, and Bangladesh. The incidence of stroke appears significantly higher in SA's compared to Caucasians, but few stroke prevention efforts in the US are targeted at the high risk SA group.<sup>2</sup> Several studies have concluded that educating the general public about stroke could be the key in primary and secondary stroke prevention.<sup>3,6</sup>

**Method/Approach:** An initial demographic survey was taken to measure the participants' characteristics and a brief medical history was completed. All participants were of South Asian descent. A stroke nurse conducted the first South Asian Health awareness about Stroke (SAHAS) session and prepared a powerpoint that included information educating participants on recognizing signs and symptoms of stroke, stroke occurrence, affects on the body, risk factors, and treatment and prevention of stroke. In the second session, a dietitian led a class about healthy eating and exercise. A self-reported pre and post-test was administered to 260 subjects during this grant period, only 191 could be used in analysis due to incomplete data. The tests seek to evaluate the effectiveness of the SAHAS curriculum. The questions have all been validated, and the questions that measured attitudes were measured using the Likert scale.

**Outcomes/Results:** Of the sample size cohort (n=191) that completed both educational pre and post tests, there is a statistically significant improvement in stroke education questionnaire scores after the SAHAS stroke program. A part of the participants did not complete both questionnaires, their baseline characteristics were analyzed in order to determine whether there is any bias in the completed data pool of subjects. There was a significant difference with regards to age, years in the US, and stroke risk. Those who had incomplete data tended to be older, lived fewer years in the US, and had higher stroke risk. All subsequent calculations adjusted for these variables. The number of years a subject has lived in the United States has a significant effect on score improvement. The greater the number of years a person has lived in the U.S., the smaller the improvement.

**Evaluation/Conclusion:** The SAHAS program is effective in increasing knowledge about stroke symptoms, risk factors, and prevention. It was found that the number of years a subject has lived in the US has a significant effect on score improvement, suggesting that the SAHAS stroke program is more effective for recently-arrived (<5 years) immigrants. Finding methods to accurately track behavior change would be a useful tool to ensure the effectiveness of this program.

### Works Cited

<https://docs.google.com/document/d/1t8g9bIYB6RWHkomkH6JFU0nBzCHAFoY6E63T0pgerio/edit#heading=h.ifhefgh2zr10>

## Internship Abstract

**Title:** Medical Reserve Corp (MRC)  
**Name:** Renée Sheriff  
**Preceptors:** John Dowd, Division Head and Lori Karabinchak, Health Educator Risk Communicator  
**Agency:** The Middlesex County Office of Health Services

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**Purpose:** Apply effective marketing strategies to increase knowledge about the program and enrollment for younger populations (18-24) for the Middlesex County Medical Reserve Corps.

**Significance:** The Middlesex County Medical Reserve Corp was initiated in 2002 under a grant from the United States Office of the Surgeon General. It is a critical element in the nation's Citizen Corps initiative that is designed to enhance existing health and medical staffing with community-based volunteers for daily activities and deployment during public health emergencies. This reduces the structural strain on emergency services within a community and empowers its citizens to act. In addition Medical Reserve Corps focuses on improving the health, safety and resiliency of their local communities through education and local outreach programs.

### Method/Approach:

1. Developed marketing materials and strategy for promotion
2. Distributed marketing materials through various mediums
  - a. Flyer Locations
    - i. Rutgers University (5 Student Centers, 12 select buildings)
    - ii. Local libraries and high schools within 11 municipalities within Middlesex County (21 locations)
  - b. Social Media (Facebook: 15 Rutgers Group Pages)
  - c. Email Listservs (3 within Rutgers University)
3. Performed Community Outreach
  - a. 3 Tabling events at Walmart locations within the county
  - b. Presentation at Middlesex County Vocational School, Piscataway

### Outcomes/Results:

1. Increase in new volunteers during internship: 18 and ongoing
  - a. This year's total new volunteers: 41 volunteers
  - b. Increased number of volunteers by 200% over previous year's enrollment
2. Distributed at least 500 educational materials on the Medical Reserve Corps program
3. Spoke with over 100 individuals by phone, social media, and in-person presentations

**Evaluation/Conclusion:** New volunteers asked through phone questionnaire where they heard about the Middlesex County Medical Reserve Corps program. All 18 new members have reported learning about the program through a Rutgers email listserv, a flyer on campus, or a Facebook page.

## Internship Abstract

**Title:** Assessment of The Strengthening Families Program

**Name:** Rita Smith

**Preceptors:** Kathy McFadden

**Agency:** Atlantic Prevention Resources

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**Purpose:** To evaluate the effectiveness of the Strengthening Families Program.

**Significance:** Juvenile crime is on the rise all over the country. Atlantic County New Jersey has one of the highest rates of juvenile crime in the state. Out of 61 (8.96 %) juveniles charged, 35 (9.83 %) were found guilty and sentenced. Studies show that lack of education, lack of strong morals, peer pressure, and substance abuse are contributing factors. Atlantic Prevention Resources offers help to families suffering from substance abuse and violence. The Strengthening Families Program provides support that families need in order to raise well-adjusted children. This program is evidenced based and was part of a research study that showed over time families that participated had better outcomes, than the families that did not complete the program. This project will measure the effectiveness of this program by pre and post tests given to the families.

**Method/Approach:** For seven weeks families partake in SFP. At the first meeting a pretest was given to see in what areas improvement was needed. Areas such as family communication, discipline, and child bonding time were measured. First 30 minutes the families were served dinner. At each meeting the parents are separated from their children for 1 hour. During this time the parents were taught how to communicate better, how to set boundaries, and how to promote positive feelings towards their child. The children were taught social skills, and how to communicate better with each other and their families. The last hour families were reunited. At this time families do activities that help to create a more positive bonding time with each other, strengthen family communication, and discipline practices. The last week families were given a posttest to see if there was an improvement in the noted areas.

**Outcomes/Results:** Ten families took part in SFP. When comparing the pre and posttests there was minimal change. Both tests were broken down into three sections: family communication, discipline, and child bonding time. On the pretest for family communication all 10 families (100%) felt there was no issue in communicating. No change on the posttest. For discipline 4 families (40%) felt that they had to discipline better. When given the post test that (40%) felt they now knew how to discipline more effectively. For the final part 1 family bonding (10%) felt that they didn't spend enough time with their child. After post test was given that 1 family felt they spend more time with their child now.

**Evaluation/Conclusion:** Overall there was minimal change. There were positive changes noted in parts 2 and 3 of the pre and post tests on the discipline and family bonding sections. Six month follow up recommended for the families after completion of SFP.

## Internship Abstract

**Title:** Passive Messaging Board Campaign to Promote Alcohol and Drug Awareness to Rutgers University Freshmen

**Name:** Joanne Strand

**Preceptors:** Tanisha Riley, Health Education Specialist

**Agency:** Health, Outreach, Promotion, Education (H.O.P.E.) of Rutgers Health Services

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**Purpose:** To increase knowledge and awareness on safer behavior and risk reduction regarding alcohol and drugs among Rutgers University freshmen in residence halls on campus through the use of passive messaging boards highlighting the dangers of alcohol and drug abuse.

**Significance:** Each year, 1,825 college students ages 18 to 24 die from alcohol-related unintentional injuries. Additionally, 696,000 students ages 18 to 24 are assaulted by another student who has been drinking and 97,000 students ages 18 to 24 report experiencing alcohol-related sexual assault or date rape (National Council on Alcoholism and Drug Dependence, 2016). Furthermore, 47,000 people died in the United States in 2014 due to an overdose in prescription drugs, prescription opioid pain relievers, cocaine and heroine (National Institute on Drug Abuse, 2016). The first 6 weeks of freshman year are a vulnerable time for heavy drinking, alcohol-related consequences, and drug abuse because of student expectations and social pressures at the start of the academic year. This evidence indicates a gap in understanding the dangers of alcohol and drug abuse along with other external factors. Passive messaging boards can address these gaps in knowledge and help overcome peer pressure to educate freshmen on the dangers of alcohol and drug abuse. This was shown to be true in previous successful internship projects at H.O.P.E.

**Method/Approach:** Seven outreach attempts through email and Facebook posts were conducted each day to 294 resident assistants (RA's) of freshmen residence halls. The posts were to urge RA's to set up alcohol and drug workshops and to promote the passive messaging board campaign. Information was spread through the distribution of educational reading materials and research was conducted on effective passive messaging techniques. Research proves that messages are more effective when repeated and well-maintained and structured boards with balanced photos and text are vital (Business Insider, 2014).

**Outcomes/Results:** 63% of freshmen residence halls participated in the passive messaging board campaign. The boards highlighted strategies that students can practice to remain safe if they decide to drink or do drugs and website links to Rutgers Health Services. All of the resident assistants who implemented a board were overall satisfied with their board, as conducted by a survey. Additionally, 60% of students in residence halls with a board stated that after reading the board, they had increased knowledge of H.O.P.E., as conducted by a survey emailed to residents by their respective RA's.

**Evaluation/Conclusion:** Approximately 150 residence assistants learned about H.O.P.E.'s services through promotion of the passive messaging campaign. Resident assistants will be asked to report their satisfaction of the bulletin boards through surveys. In the future, this campaign could be improved by assessing if the boards decreased alcohol and drug abuse amongst freshmen with pre and post tests.

## Internship Abstract

**Title:** Assessing Currently Used Methods of Patient Recruitment

**Name:** Sanjana Subramhanya

**Preceptors:** Deloris Dockrey, Director of Community Organizing

**Agency:** Hyacinth AIDS Foundation

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**Purpose:** To assess current methods of patient recruitment at a newly founded AIDS clinic and increase patient load and retention

**Significance:** The US HIV/AIDS epidemic began with no treatments, limited understanding, and a very negative societal perception. Today, advancements in drugs have made it easier to live with HIV and awareness campaigns have helped alleviate the stigma. Unfortunately, Newark remains one of New Jersey's "hotspots" for high HIV transmission rates, yet many patients still do not get the care they need. By reviewing Hyacinth's new clinic and their current methods of patient recruitment, new practices focusing on increasing patient load can be implemented.

**Method/Approach:** First, the clinic's current method of advertising to and recruiting patients was recorded. Then, general data about patient demographics (age, race, gender, etc.) was collected from the clinic's patient files. Finally, doctors and staff were interviewed for their opinions on patient recruitment efficiency. All this information was compared to published articles on the topic to help evaluate the successes and fails of the currently used system and improvise and add new techniques. The data was also analyzed to see why patients may not be visiting clinics as often as they should. All of this data was compiled to create a comprehensive guide for possible recruitment techniques fit to the clinic's needs.

**Outcomes/Results:** Currently, the clinic serves about sixty active, HIV+ patients. It is open Tuesdays and Thursdays from 9am to 1pm, based on doctor availability and provides medical care, support groups, a discharge planning service for incarcerated patients within 3 months of being released, and free, walk-in HIV testing. The majority of patients are African American males over 18. About 25 negative patients are being treated with PrEP, an HIV prevention drug. Most patients are covered by Medicaid, Medicare, or a private insurance and required to visit the clinic at least twice a year. Limited clinic funding comes from the Ryan White 340B program. For medical services, the clinic uses a rebate system with a local pharmacy that gives back partial funds for every drug purchase. Based on the needs of this start-up clinic, the recruitment guide recommends creating a more updated system of patient appointment reminders using texts, starting an incentive program for patient referrals, increasing medical staff by using volunteer student doctors for basic care, and promoting HIV awareness by providing brochures with every visit.

**Evaluation/Conclusion:** The clinic's ultimate goal is to at least double their patient load by increasing recruitment, expanding beyond just infectious disease treatment, offering primary care to both positive and negative patients, reaching out to the transgender population, and hiring more medical staff. After adopting new methods based on the guide, patient load will be reevaluated for improvement and trends.



## Internship Abstract

**Title:** Water is Life! From Standing Rock to Ramapough at Ramapo College of New Jersey

**Name:** Marielle Sumergido

**Preceptors:** Direct Supervisor: Matt Smith, Regional Organizer

**Agency:** Food & Water Watch, New Brunswick

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**Purpose:** To organize a fundraiser at Ramapo College, in partnership with the Ramapough Lunaape Nation, and advocate for state and federal policy to protect New Jersey's water resources.

**Significance:** The Ramapough Lunaape Nation, with a population of approximately 5000, live in the Ringwood and Mahwah area of New Jersey as well as in Hillburn, just over the border in New York. As with many indigenous tribes, the Ramapough carry a considerable burden of environmental health issues. From 1967 to 1971, toxic materials were disposed of in Ramapough neighborhoods, resulting in rare cancers, autoimmune diseases, and premature deaths. Yet again, the Ramapough face potential contamination of the New York-New Jersey Highlands watershed from Pilgrim Pipelines, 170-mile twin oil pipelines. With direct parallels to the plight of the Standing Rock Sioux Nation in North Dakota and the Dakota Access Pipeline, and the drinking water for millions of residents at stake, an educational fundraising event will undoubtedly intensify the opposition against Pilgrim Pipelines.

**Method/Approach:** To organize the event, the project supervisor and two interns narrowed the focus of a naturally multi-faceted issue for the event, and decided on the date, time, and venue. Once the reservation at Ramapo College was cleared, a ticketing page was set up and promotional materials were developed. The projected goal for attendees was 200 people, raising \$3000 from ticket sales. Invitations to potential panelists were sent and confirmed, and advertisements were published online. Next, co-sponsors were contacted to further support the event. Lastly, allies on Food & Water Watch's listservs were invited to the event through email and by phone.

**Outcomes:** The event ran successfully on November 30, 2016. The number of co-sponsorships totaled 40, which bolstered the number of attendees at an estimated 360 people. Although the auditorium was filled to capacity, overflow attendees could filter in once people left; this hampered efforts to determine an exact attendance number. 98 of the attendees signed a petition in opposition of Pilgrim Pipelines. The total amount raised for the Ramapough Lunaape and Standing Rock Sioux was \$8,088.

**Evaluation:** All projected goals were surpassed. The goal for attendees was surpassed by 180% while the fundraising goal was surpassed by 270%. These results can mainly be attributed to the successful solicitation of 40 co-sponsors, who in turn advertised the event to their constituents. In addition, online advertisements on news websites and the Facebook event page yielded 219 attendees. Phone outreach to individuals yielded just 16 attendees of those who answered. Future event planning should be focused on garnering co-sponsors, who can communicate to their constituents personally, and on online and social media outreach.

## Internship Abstract

**Title:** New Methods to Supervise the Implementation of Poverty Alleviation Policy

**Name:** Yingsheng Tan

**Preceptors:** Direct Supervisor: Gangliang Huang, Party Secretary and Minister  
Sumei Tan, Secretary General Project Supervisor: Xiaozhen Pang, Chairman

**Agency:** Chongyang Federation of Industry and Commerce, Hubei Province, China

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**Purpose:** To supervise the implementation of a poverty alleviation policy and see whether the funds and other donating materials are in place.

**Significance:** There were 47 poor villages in Chongyang County, Hubei Province in China with 63,300 in poverty representing 12.6% of its total population. Promoting the living and sanitary conditions, providing jobs for farmers and letting more school-aged rural children receive education are important methods to reduce poverty. The Chongyang Federation of Industry and Commerce was devoted to attracting and encouraging socially responsible local enterprises to provide financial support and other helps to poor villages. A monitoring system to control the poverty alleviation process was necessary to assure success.

**Method/Approach:** One-to-one mutual monitoring was adopted where one poor village and its corresponding enterprise monitored each other. There were 28 pairs of contracted poor villages and supporting local enterprises under the unified management of Chongyang FIC upon completion of the internship. Each pair of contracted business and village was required to make phased and detailed implementation plans for taking poverty alleviation measures by reporting the project progress to each other for checking every Monday. They were also asked to regularly report the progress to Chongyang FIC for censoring and achieving purposes.

**Outcomes/Results:** The 28 pairs of contracted poor villages and local enterprises established a benign supervision mechanism in this way. During six-week internship, they contacted each other frequently and got immediate feedback that helped them to arrange their future efforts. In this way, they generated successful experiences of phased poverty alleviation work and made sure the project progressed. The Chongyang FIC kept an updated project progress summary table which contained the updated information of the project progress from the 28 pairs of poor villages and supporting local enterprises.

**Evaluation/Conclusion:** All of the related poor villages and local businesses actively accepted the mutual supervision method and they consciously finished the phased works based on requirements. Though there existed 5 pairs of villages and businesses who failed to finish the phased poverty alleviation work on time, but they caught up afterward. It was an efficient and productive way of pushing forward the poverty alleviation project among the 28 poor villages in Chongyang County.

## Internship Abstract

**Title:** Female Athlete Project

**Name:** Medha Tandon

**Preceptors:** Gloria Bachmann, M.D. , Associate Dean for Women's Health and Interim Chair of the Department of Obstetrics, Gynecology, and Reproductive Science at Robert Wood Johnson Medical School

**Agency:** Women's Health Institute at Robert Wood Johnson Medical School

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**Purpose:** To explore the contributors to what forms and establishes an Olympic female athlete.

**Significance:** Women's health is an important aspect of medicine and wellness and it becomes extremely specialized when dealing with specific sub groups, specifically female athletes. There is a huge lack of data in the biological and mental perspective of the health of female athletes. There is no singular piece of literature dedicated to the research and globalization of the medical aspect of female athletes, especially those who participate on a competitive level on the national and world stage. Thus it is important to explore this field and create literature on the contributions and factors that develop and establishes these competitive female athletes, especially at the Olympic level.

**Method/Approach:** The Women's Health Institute approached the exploration and creation of this literature topic from a Public Health as well as a medical perspective. A literature review, and informational survey were taken into account to determine the mental, historical, biological, and social implications of the Olympic female athlete. The literature review was conducted using sites like Pubmed and other scholarly sites as well as think tanks. Further literature review utilizing news articles and news interviews also was conducted to create a fuller and more personal picture. These reviews resulted in a comprehensive look at the social, as well as biological implications. An informal survey was conducted using several Rutgers University students in order to determine social implications of being a female athlete versus a male athlete.

**Outcomes/Results:** A combination of all the research results yielded over 150 articles. Of those 150 articles, approximately 20 were reviewed completely. At least 10 articles were used in production a manuscript that could be used as the basis for a chapter. The majority of the articles were used to provide a background on the Olympics and when female athletes started to participate, as well as the biological implications of being a female athlete. The remaining articles were used to determine the historical impact as well as the mental health of female athletes versus non female athletes versus male athletes. The surveys and research furthered the theory that there is not a lot of literature on the unique requirements to be and the many stresses that occur to female athletes that perform on the Olympic stage.

**Evaluation/Conclusion:** The major findings showed a huge gap in education as well as literature dedicated to female Olympic athletes. It also indicated that there were biological, mental, and social impacts of being a female athlete competing at an Olympic level. Since the data suggest there are gender differences in how female versus male athletes respond to sports trauma, fracture, and concussion, more research is needed that is specifically geared to female athletes. The creation of this literature will hopefully bring attention this as yet relatively unexplored area.

## Internship Abstract

**Title:** Implementation of Marketing Methods for Health Class Attendance and Effectiveness

**Name:** Patricia Taylor

**Preceptors:** Direct Supervisor, Gerald Kozlansky, Director

**Agency:** Silver Lake Nature Center, Bristol, PA

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**Purpose:** To develop innovative marketing strategies aimed at improving Center participation in physical health education programs.

**Significance:** Obesity is considered a chronic disease and epidemic which nearly 35% of Americans are affected. It takes a toll on many levels of an individual's health and overall life. According to the U.S. Department of Health and Human Services, the main cause is lack of Energy Balance, meaning more energy goes in than out, equating to weight gain. This lack of balance, accompanied with regular inactivity and a high caloric lifestyle leads to obesity. It is therefore vital that the public is educated about the importance of regular physical activity through promotion of physical health classes such as yoga. These marketing implementations will help promote this vital instrument of health to the public.

**Method/Approach:** Health class attendance data were collected and recorded from October 2015 to September 2016, to provide basis of comparison for final analysis of results. Feedback surveys were created, 18 surveys were completed from an anonymous cohort group of men and women ages 18 and older, who attended health classes. Results were analyzed, recorded and suggested strategic marketing implementations were discussed with class instructors. To increase attendance, three main strategies were implemented. The first was creating a flyer focusing on the class's special offers and its' health benefits. Next was expanding modes of advertising through Center's website, several legal distribution areas, and using unique advertising bases. The last was implementation of feedback survey suggestions. Attendance comparison of data was recorded from September 2015 to that of December 2016, to determine if marketing strategies were successful at increasing attendance.

**Outcomes/Results:** 18 Class feedback Surveys were collected. 12 of the surveys found that no changes were necessary and 6 suggested changes in length, time and instructor voice projection. Suggestions were implemented along with additional ones, such as Health Class Flyer creation, distribution to over 15 types of sites, as well as web and verbal promotion. These marketing changes promoted the health class attendance much further than the preceding year's comparable months of September, October and November well over 50%.

**Evaluation/Conclusion:** These marketing strategies and implementations were a simple and cost effective way to promote health class education, benefit public awareness and increase attendance. This Center and other centers can use these methods for additional health class promotion and optimize their class attendance in the future as well.

## Internship Abstract

**Title:** Water is Life, Clean Water Advocacy Event at Ramapo College of New Jersey

**Name:** Isha Tendolkar

**Preceptors:** Matt Smith, Regional Organizer

**Agency:** Food & Water Watch, New Brunswick

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**Purpose:** To coordinate an educational fundraiser at Ramapo College, in coalition with the Ramapough Lenape Nation, advocating for federal legislation in defense of New Jersey's clean water resources.

**Significance:** The Pilgrim Pipelines are a set of twin pipelines proposed to transport Bakken crude oil and refined petroleum products through municipalities in New Jersey and New York. This intended route cuts through the home of the Ramapough Lenape Nation. Like many indigenous nations, The Ramapough have been disproportionately afflicted with environmental injustice. From 1967 to 1971, millions of gallons of toxic industrial waste were dumped into their communities, leading to higher rates of cancer, birth defects, bronchitis and other health problems. Presently, the Ramapough are facing another potential threat with the construction and operation of these pipelines. According to the National Transportation Safety Board, there have been approximately 123 serious pipeline accident reports filed since 1969. The dangerous contents that would run through the Pilgrim Pipelines would be the same as those running through the Dakota Access Pipeline, threatening the Standing Rock Sioux Nation's well-being as well. Holding a fundraiser that draws parallels between the Ramapough and Standing Rock and emphasizes the prospective dangers of these pipelines can fortify the opposition against the Pilgrim Pipelines.

**Method/Approach:** The event was coordinated with the joint efforts of the project supervisor and two interns. Flyering, phone-banking, and social media and news advertising increased awareness of the event. Our online presence was solidified with the creation of the event page and pre-registration ticketing page. Allied organizations were contacted to co-sponsor this event to increase community outreach. Lastly, confirmation calls were made to secure attendance.

**Outcomes/Results:** The event was held on November 30th, 2016 with an estimated 360 guests in attendance. The chaotic influx of attendees made it difficult to make a precise account. The total amount of funds raised from both online and in-person ticket sales was \$8,088. Additionally, 98 petition signatures were collected in support of opposing the Pilgrim Pipelines.

**Evaluation/Conclusion:** All preliminary goals were exceeded. The fundraising goal of \$3,000 was surpassed by 270% and the attendance goal of 200 was surpassed by 180%. This success can be accounted for by the procurement of 40 co-sponsors which expanded event awareness and the formation of our online presence through a Facebook event page, which reached an audience of 1,600 and secured 219 attendees. Additionally, phone-banking proved to be an effective method as it grew our audience and led to the confirmation of 16 attendees. As these outcomes reveal, future event planning should utilize methods that engage directly with constituents.

## Internship Abstract

**Title:** Cold-Spotting Obesity Prevention Programs in Middlesex County

**Name:** Bhavika Thakkar

**Preceptors:** Margaret Drozd, MSN, RN, APRN-BC, Director Community Mobile Health Services  
Zachary Taylor, MEd, CHES, Coordinator, Community Health Consortium of  
Central Jersey

**Agency:** Community Mobile Health Services at Saint Peter's University Hospital

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**Purpose:** To analyze obesity prevention programs and to identify “cold spots” for targeted intervention in Middlesex County.

**Significance:** One priority of the 2016 Middlesex and Somerset Counties\* Community Health Improvement Plan (CHIP) focuses on prevention of health risk factors such as obesity. It aims to increase the number of available obesity prevention programs and increase the number of people engaged in obesity prevention programs amongst all age groups, by the year 2019. Obesity is a health issue, which is linked to various health problems including heart disease, type II diabetes, high blood pressure and certain cancers. By identifying “cold-spot” regions, which are communities where social determinants of health, access to primary care and support have been broken down, proper intervention strategies can be determined in order to increase engagement in obesity prevention programs.

**Method/Approach:** The criterion to identify obesity prevention programs was determined by researching guidelines for effective programs. Nutrition programs were identified as places which had one or more of the following: educational materials, workshops/classes and meal programs. Physical activity programs were identified as places, which had one or more of the following: educational materials, fitness equipment, counseling and workshops/classes. Access points were defined as recreation centers and farmer's markets. The number of hospitals and federally qualified health centers were also identified. Research was conducted to locate the number of obesity prevention programs in each town and was used to develop a map of Middlesex County to identify “cold-spots,” for targeted intervention efforts.

**Outcomes:** From the 36 towns in Middlesex County, 5 (14%) towns did not have any type of obesity prevention programs located in their community. Eleven out of thirty-six (31%) towns did not have any nutrition programs available, and ten out of thirty-six (28%) did not have any physical activity programs. Furthermore, 16 (44%) towns did not have any recreation centers in their community and 22 (61%) did not have any farmer's markets. Lastly, 31 (86%) towns did not have a hospital in their community and 33 (92%) did not have a federally qualified health center.

**Evaluation:** This data will be used to determine which towns need to expand on the available number of obesity prevention programs in their community. Further analysis of the impact of the programs on the members of the community can help determine effective intervention strategies.

## Internship Abstract

**Title:** Healthy New Jersey 2020 Midcourse Review

**Name:** Abigail Thompson

**Preceptors:** Loretta Kelly, Research Scientist  
Colette Lamothe-Galette, Division of Population Health Director

**Agency:** New Jersey Department of Health (NJDOH), Division of Population Health

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**Purpose:** To analyze the mid-decade status of The Healthy New Jersey (HNJ) 2020 initiative to inform the State Health Assessment.

**Significance:** Healthy New Jersey (HNJ) 2020 is the NJDOH's model for assessing and addressing key, state health needs and issues. One half of the HNJ model--the State Health Assessment (SHA)--requires a collaborative process to collect, analyze, and communicate data and information on health status. The SHA highlights state health challenges, assets, and resources. The process culminates in the identification of the state's leading health priorities to be addressed by appropriate action strategies.

**Method/Approach:** This portion of review involved four foci. First, HNJ 2020 health indicators were analyzed to measure progress toward achieving end-of-decade targets. Next, research was conducted to analyze the community health assessments (CHAs) or community health improvement plans (CHIPs) of NJ's counties to identify local-level health priority areas. Third, internal HNJ Workgroup meetings were convened with members to review data, initiatives, assets, and challenges. Finally, health disparities were observed as evident through data collection, county CHAs/CHIPs, and HNJ Workgroup discussion.

**Results:** First, data tables and charts of 59 HNJ health indicators were created in Socrata, the cloud-based software service that supports the agency's HNJ 2020 website. Preliminary analysis for the classification of 143 health indicators across 20 health topic areas by progress status show: 14 indicators (9.79%) have met or exceeded their 2020 targets; 47 indicators (32.87%) are improving; 42 indicators (29.37%) show little or no detectable change; 18 indicators (12.59%) are getting worse or a lot worse; and 22 indicators (15.38%) have only baseline data. Further calculations using the Healthy People 2020 methodology for measuring progress toward target attainment are necessary to support preliminary results. Next, the top 5 leading health priorities among NJ's 21 counties are: 1) Mental health and substance abuse; 2) Access to physical and behavioral health services; 3) Nutrition, physical activity, and weight status 4) Chronic disease; 5) Alcohol and Drug Abuse, Smoking. Lastly, analysis of health disparities is ongoing.

**Evaluation/Conclusion:** Analysis of HNJ leading indicators demonstrated that the NJDOH and its partners are making progress towards improving the health of NJ'S citizens, with 43% of health indicators showing positive progress since 2010. The evaluation process is ongoing, notably with the compilation and publication of the SHA draft report, which will be followed by a 30-day public comment period.

<sup>1</sup>Talih, M. and Huang, D. T. (2016). Measuring progress toward target attainment and the elimination of health disparities in Healthy People 2020. *Healthy People Statistical Notes*, no 27. Hyattsville, MD: National Center for Health Statistics. 2016.

## Internship Abstract

**Title:** Effect of a Comprehensive Regional Plan on Municipal Facilitation of Transit-Oriented Development

**Name:** Sarah Tomasello

**Preceptors:** Miriam Salerno, Senior Public Relations & Outreach Specialist

**Agency:** Voorhees Transportation Center, New Brunswick, NJ

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**Purpose:** To gauge the effect of a regional planning initiative on local land use planning in northern New Jersey, and to discern how municipalities facilitate transit-oriented development (TOD).

**Significance:** In 2015, Together North Jersey (TNJ) released a regional plan for sustainable development. The plan's success could positively impact many facets of public life in the region, such as transportation, education, the environment, and the economy. Staff at Voorhees Transportation Center are beginning to facilitate implementation of the plan, which entails tracking hundreds of specific actions, including encouragement of TOD. This research is aimed specifically at comparing the success of fostering TOD in municipalities involved with TNJ with those that were not involved.

**Method/Approach:** This study's population consists of municipalities within the North Jersey Transportation Planning Authority's purview that contain transit hubs. From this population, 18 municipalities were identified as having been greatly involved with TNJ and 15 were identified as not having been involved. Interviews focusing on land use planning goals were conducted with seven planning officials from both groups. A tour was taken of the area surrounding each municipality's transit station, twenty-nine walking tours and four virtual tours, and observations of development were recorded. Each municipality was then scored using Northeastern University's eTOD rating system.

**Outcomes/Results:** Interviews with planning officials showed that even if they are not involved with TNJ, they are aware of progressive planning tools. However, municipalities not involved with TNJ were less likely to have a dedicated department responsible for planning and development. Planning officials at such municipalities were also less likely to describe coordinating with surrounding towns or county and state agencies. Walking tours revealed more apparent instances of development in TNJ municipalities, though both groups had similar variability in the aesthetic quality of transit hub areas. Within Northeastern University's rating system, preliminary results show similarity in both groups for transit affordability and job access. TNJ municipalities have an average Walk Score 10 points higher than those not involved, while the latter has on average a greater land area accessible via transit.

**Evaluation/Conclusion:** Municipalities involved in TNJ were generally more primed for TOD, though this relationship is not necessarily causal. Further analysis could be done to determine the impact of funding on a municipality's capacity to facilitate TOD relative to others. TNJ may sustain its impact by working particularly close with municipalities that both possess transit hubs and have high poverty rates, as well as by suggesting the creation of development departments in municipalities that lack them.



## Internship Abstract

**Title:** Continuing Education Program Development

**Name:** Nirajana Tripathy

**Preceptors:** Mark Cruz, Health Education Specialist

**Agency:** Rutgers Health Services - Health Outreach, Promotion and Education (HOPE)

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**Purpose:** To design and implement a continuing education program for peer health educators to enhance their knowledge of the various health education topics and their workshop facilitation skills.

**Significance:** The peer education program at HOPE educates and facilitates discussion about issues relating to student health and college life. A survey, conducted in Spring 2016, assessed how comfortable the educators felt doing their job and how confident they felt in their skills and abilities in relation to their job. Major findings of this survey indicated that the most commonly noted area of improvement was public speaking (44% of peer educators felt moderately confident of their ability to keep the audience engaged, 7% felt slightly confident), and that the educators suggest organization of more training events and workshops by HOPE for them.

**Method:** The survey gave us some information about what aspects of the peer educators' training needs to be worked on, but a more detailed understanding of the issue was essential. To achieve this, a needs assessment study in the form of focus groups was conducted. At least two people from each peer education team (SHADES theater, mental health, sexual health, nutrition, alcohol/drug abuse) participated in a total of three focus groups. The focus group followed a semi-structured style of discussion. Six questions were compiled pertaining to their likes and dislikes about their job, what they feel confident about while doing their job and what they feel unsure about, how the audience can be kept interested, and what kind of environment best facilitates their learning. Follow up questions were also asked on most occasions. Answers were recorded by writing down what the peer educators were saying.

**Outcomes:** The main findings of the survey conducted in Spring 2016 were confirmed through the conduction of focus groups. More than half of the educators mentioned feeling not as confident while conducting a workshop, especially with new material, or when presenting alone. All of them mentioned the need for training opportunities from HOPE to build on their workshop presentation skills. As a direct result of this study, Facilitator's Skill-Building workshop is going to be organized by HOPE as a bi-yearly event for peer educators. The agenda for this training workshop includes a significant amount of hands-on learning opportunities, as well as time for educators to practice with each other. Discussions are underway for revamping the peer education system based on these findings, hence the bigger and more aggregate outcome is yet to be determined.

**Conclusion:** The peer health education program is an indispensable tool for education of college students in areas that directly relate to university life. Addressing the gaps and areas of difficulty expressed by the educators will go a long way in making the program stronger and more influential on campus.

## Internship Abstract

**Title:** Princeton Campus Recreation becomes accessible

**Name:** Mario Vitola

**Preceptors:** Direct Supervisor: Daniel Bennett, Director of Campus Recreation at Princeton University

**Agency:** Princeton University Campus Recreation

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**Purpose:** To make operational routines of Dillon Gym, Princeton University's only recreational facility, more efficient and accessible by integrating the use of iPads into everyday use.

**Significance:** According to online waste management sources, Americans use over 90 million tons of paper a year. It takes about 12 trees to make a ton of paper, therefore Americans waste about 1,080,000,000 tons of paper a year. By integrating the use of an iPad into Dillon Gym everyday use, Dillon facilities and operation staff will be doing its part to lower the number of trees cut throughout the world. Campus Recreation will also be saving money on paper and printing ink which can potentially be allocated for other uses in the gym. The integration of iPads will also make employee interactions more efficient by deleting unnecessary steps in operational procedures. A specific example of this would be Campus Recreation's outdated locker rental system which had been in place for over 10 years. Originally the locker rentals were done on paper and then transferred into a web based form only to be printed out. With the use of the iPads, Dillon facilities and operation staff can enter rental information in real time into the google drive while avoiding all of the extra steps.

**Method/Approach:** Princeton University has been trying to "go green" and become more accessible for quite some time now. One by one, each of their recreational sub departments incorporated the iPads for daily use. After researching which methods would be appropriate, the facilities and operation staff decided to install a google drive with all of front desk operational forms for Dillon Gym. This included daily operational tasks such as guest passes, membership sales, and fitness class sales along with crucial documents such as accident and incident reports.

**Outcomes/Results:** Princeton University's recreation department has become more accessible for the public by integrating the use of a google drive into its everyday use. Although it is too early for a numerical value to represent the amount of money saved and paper saved, it is already evident that there will be a good amount of money saved on printing in the long run.

**Evaluation/Conclusion:** The integration of the google drive into everyday operational use for Dillon Gym of Princeton Campus Recreation has and will continue to be a huge help for Princeton University's attempts to go green and become more accessible.

## Internship Abstract

**Title:** Utilizing OSHA to Prevent Workplace Injuries and Illnesses

**Name:** Claudia Wai

**Preceptors:** Direct Supervisor: Marianne Horta, Personnel Director  
Project Supervisor: Magdalena Frangos, Principal Personnel Clerk

**Agency:** Woodbridge Township Personnel Department

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**Purpose:** To assure accurate reporting of workplace injuries and illnesses to OSHA that, if scrutinized and utilized correctly, can provide the best practice for recommendations to prevent workplace damages.

**Significance:** In the four decades since the Occupational Safety and Health Act (OSHA) was implemented, job-related incidents have decreased by more than 60 percent. However, the nation is still suffering an unacceptable number of work-related deaths, injuries, and illnesses. According to the United States Department of Labor, approximately 4.1 million workers suffer from a serious job-related injury each year and 12 workers each day. Not only do workplace injuries cause physical and emotional hardship for employees, they also cause burdensome debt, loss of wages, and even bankruptcy as the result of medical bills. In order to protect workers' rights, the OSHA Injury and Illness Recordkeeping forms are provided to maintain records of serious incidents. The evaluation of the reports can, in turn, lead to an improved workplace health and safety environment.

**Method/Approach:** Woodbridge Township reports these injuries and illnesses to OSHA by reviewing the initial report forms that are filled out by workers from the Woodbridge Municipality. If a report indicates that no treatment is required, it is kept for future reference if future damages are to arise from the initial incident. Otherwise, once a report has determined to be further investigated, specific characteristics such as time of incident, nature of incident, and location of the event, are to be noted onto the OSHA Injury and Illness Recordkeeping forms. The information is then analyzed by the department heads who will complete a Supervisor Injury Form so that corrective action can be taken and future accidents avoided. The collected data will also be reviewed at the Quarterly Safety Committee meetings to prevent recurrences and possibly enforce new policies.

**Outcomes/Results:** Within January to October of 2016, Woodbridge Township has a total of 48 cases, in which there are reports of 45 injuries, 2 skin disorders, and 1 respiratory condition. In short, there is a total of 446 days away from work and 9 days of transfer or restriction. The total number of workplace occurrences in the year of 2016 is still in progress. It should be noted that cases from the police personnel are excluded as their OSHA reporting is handled by the State.

**Evaluation/Conclusion:** Compared to the total amount of workplace occurrences and assessment of data from 2015 to 2016, we will be able to determine possible preventative measures and the extent of policy enforcement. The analysis of workplace injuries and illnesses will not only reduce cost and provide appropriate educational interventions, but also enhance the organization's operations overall.

## Internship Abstract

**Title:** Cervical Cancer Health Intervention Assessment  
**Name:** Hina Walajahi  
**Preceptor:** Mariam Merced, Executive Director  
**Agency:** Robert Wood Johnson Community Health Promotion Program

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**Purpose:** To measure the success of cervical cancer health interventions through the promotion and utilization of free Pap smear screenings by the residents of the New Brunswick community.

**Significance:** According to the 2013 CDC incidence report, cervical cancer currently affects approximately 12,000 women in the United States every year. It also exists as one of the most preventable cancers, with greater prevalence among populations who have limited health literacy, poor access to screening and/or other preventative measures, and insecure health statuses. Hispanic women have the highest risk of contracting cervical cancer when compared to other ethnic groups due to a combination of poor screening rates and limited access to health tools.

**Method/Approach:** The success of cervical cancer health interventions will be assessed through a comparative analysis of bilingual pre/post-surveys administered at a Pap smear clinic sponsored by Robert Wood Johnson University Hospital in conjunction with Rutgers Medical School, the RWJ Community Health Promotion Program, Family Medicine, and the Middlesex County Health Department. The clinic is available for women in the community who are uninsured. The pre-survey will be administered while women complete their paperwork before receiving a Pap smear. After taking the pre-survey, women will be informed on the new recommended screening guidelines, the instruments used during the exam, and the role of the HPV vaccine in preventing cervical cancer through poster visuals and handouts. Once women complete their Pap-test exam, they will be given a post-survey which assesses whether or not the procedure as well as the information session enhanced their awareness of screening guidelines and the HPV virus and vaccine.

**Outcomes/Results:** A total of 11 women attended the Pap smear clinic. The pre and post-survey data demonstrated an increase in awareness regarding screening guidelines, the HPV virus, and the HPV vaccine. Before the test and the information session, 73% of women knew the current screening guidelines for cervical cancer, 45% were familiar with the HPV virus, and 36% were aware that an HPV vaccine existed. After the Pap smear and the information session, there was a notable increase in positive responses with regards to the same health literacy measures. For all categories, 86% of women now knew the current screening guidelines as well as what the HPV virus and vaccine were.

**Evaluation/Conclusion:** The pre-test data indicated substantial knowledge of cervical cancer screening guidelines prior to the Pap smear and information session; however, it also depicted a very low understanding of the HPV virus and vaccine. These findings demonstrate that, to an extent, there is a limited understanding of the breadth of cervical cancer prevention methods among the women in New Brunswick, which asks broader questions about the accessibility and distribution of information regarding the virus and vaccine. The small sample size along with the particular insurance characteristics of the women who attended the clinic, however, make it difficult to generalize the results to a larger population. Furthermore, the increase in positive responses to the same questions regarding methods of cervical cancer prevention indicates the benefits of an educational intervention as a strategy to enhance the health literacy of a population.

## Internship Abstract

**Title:** Analysis of Affordable Housing Efforts at Transit-Oriented Development (TOD) Locations in Denver, Colorado

**Name:** Tamara Weg

**Preceptors:** Project Supervisor: David Listokin, Ph.D., Co-Director of Center for Urban Policy Research

**Agency:** Center for Urban Policy Research, New Brunswick, New Jersey

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**Purpose:** To describe and assess the affordable housing efforts at Transit-Oriented Development (TOD) sites in Denver, Colorado and propose policy recommendations for Denver and other communities with TOD.

**Significance:** TOD is dense, mixed-used, and pedestrian development located within walking distance (a half mile) of a fixed-route transit station, usually a passenger rail, ferry, or bus rapid transit system. Pendall and Gainsborough, et. al. (2010) found that new development exacerbates housing affordability challenges and forces out many low-income, ethnic and/or retired households. Such is the case near Denver's TODs. Since 1999, Denver has spearheaded efforts to address this challenge by constructing affordable housing near a number of its 89 rail stops (2010). These efforts merit study for both Denver and other cities encouraging TODs.

**Method/Approach:** Data were collected from scholarly and non-scholarly articles and email/phone communication with developers in Denver. The research focused on the history of Denver's transit system and practices, its TOD communities, affordable housing at these TOD locations, and current and future challenges the city faces. Also examined were the economics and demographics of all TOD affordable housing locations, especially the area's average median income (AMI). In order to understand Denver's progress, similar cities were compared and contrasted on these same factors.

**Outcomes/Results:** The findings, presented in the form of a research paper, indicate that Denver recognizes the affordable housing challenge at existing rail transit TOD sites and is actively attempting to address this. Private development is incentivized through tax deductions, and the research examines 17 sites with proposed, developing, or completed affordable housing projects, both mixed with and separated from market-rate units. These affordable units are located close to rail stops, available for people with 0%-80% of the area's AMI, and offer housing options for individuals, families, and elderly people. In the future, Denver plans to simultaneously build affordable housing and TOD communities in order to reduce social inequity.

**Evaluation/Conclusion:** While Denver is a national leader in providing affordable housing in conjunction with TODs, there are a number of shortcomings, as only 19% of Denver's TOD locations will have affordable housing by 2018. Follow-up data need to be collected in order to assess the long term effectiveness of Denver's efforts to expand housing affordable options by the city's TODs.

## Internship Abstract

**Title:** Deodorant Penetration Study Based on E-commerce Shopper Behavior

**Name:** Manqi Yang

**Preceptors:** Vivian Li, Research Manager

**Agency:** Kantar Retail Zdology Marketing Research & Consulting (GZ) LTD.

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**Purpose:** To increase deodorant penetration in China via E-Commerce: first to raise purchase intention among potential users, and then to convert the penetration into regular and consistent usage.

**Significance:** Unilever assigned the market research project to effectively broaden the target shopper groups for deodorant, which is a personal care product that has high potential growth in China. Rexona and Lynx, the two brands under Unilever were chosen for focussed target groups (18-25, university students and 1st jobbers) as a prime marketing reserach technique. These shoppers usually come into the category because of external pushes (e.g. 1st job, temperature, etc.), but then they drop out or use infrequently because of a lack of internal pulls. Therefore, the brands should do more than create superficial interests in the product, and instead, take longer to educate small target group to develop the ideal usage habit.

**Method/Approach:** 96 qualified respondents, who are current users or potential users of deodorant, were selected in three main cities in China to participate in the long-term research process. The first step of the research is to tap into the shoppers' needs, hobbies and interested topics/activities with an assigned self-introduction and a questionnaire. After that, a Wechat Listening is scheduled to promptly capture deodorant target shoppers' daily routine, and to analyse their consumption attitude by observing their Wechat moments. Another important step is the Shopper Behavior Tracking on mobile and PC. Participants were invited to install mobile app 'mTracker' on their mobile phones, and to download PCTracker on their personal computers to enable passive observation of their online behavior.

**Outcomes/Results:** The respondents have similarities in entertainment hobbies, interested topics and activities, but they hold different consumption attitudes and thus were divided into four groups: Quality Seeker, Smart Shopper, Promotion Seeker, and Economical Shopper. The shoppers chose various shopping channels to finish different shopping missions, including replenishment, promotion driven, replacement and occasional need. The key trigger for users' first time usage is their psychological needs to leave a good impression on others when attending an important event, and the main barrier for non-users is the lack of physical need. Many of them have misunderstanding of deodorant's effect and wonder if the product would do harm to their skin. Shopper's online shopping route includes four steps: trigger, review, engage, and purchase.

**Evaluation/Conclusion:** Within shopper's online shopping path, the three pages that most respondents stay are E-tailer Homepage, Product List Page, and Product Detail Page. The report thoughtfully analyses shopper's online shopping process to effectively increase deodorant penetration on E-commerce in each step. It provides feasible suggestions for the brands under Unilever to design proper advertisement and promotion events to attract potential customers of deodorant.

## Internship Abstract

**Title:** Strengthen the Ability of Archives Management in China Mechanism Bank

**Name:** Zou Yang

**Preceptors:** Direct Supervisor: Feng Liu, Chief Secretary Officer

**Agency:** China Mechanism Bank, Wuhan

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**Purpose:** China Mechanism Bank needs to build a system which can easily and rapidly receive, process, archive and manage business and official documents.

**Significance:** Based upon the close relationships between China Banking Regulatory Commission and China Mechanism Bank(CMB), the secretary office of CMB will receive a bunch of dispatches from them by fax or mail almost every day and need to assign these documents to relative departments for implement. Besides these dispatches, CMB, different departments will have their own documents that need to inform other departments. The Secretary office needs to not only pass and reserve these documents online but also archive them in physical documents. Moreover, efficient management of these documents can positively response for the annual inspection from Banking Regulatory Commission. For example, the Banking Regulatory Commission will check whether the business behaviors that CMB implements are consistent with their financial plans. Since different documents have their own level of significance and time of validity, CMB needs a system to better arrange and archive these documents and to prevent them from disorder and loss.

### **Method/Approach:**

1. For physical documents archive, documents should be divided into two sectors: administration and business in a horizontal line; In a vertical timeline, according to their content and departments, place them into 3 categories: 10 years, 30 years and permanent based on their level of significance.
2. After putting them into different categories, these documents will be rearranged in order following their time and department.,
3. Then each document will be assigned a serial number ready for archiving. Documents with new information and orders will be typed into computer again in order to better assess them next time. Finally, each box will be enclosed with an index to help identify contents.

**Outcomes/Results:** Before the implement of this approach, it was really difficult to find a document quickly, especially for long time documents. However, after implementing this new proposal for documents in 2014 and 2015, documents are easy to access when Banking Regulatory Commission comes for its inspection.

**Evaluation/Conclusion:** Before building this system, employees in Secretary Department need to spend two hours or more to find some documents that China Banking Regulatory Commission asks for. However, after implementing it, documents can be found within a half an hour correctly and quickly.

## Internship Abstract

**Title:** Barrier Analysis for Zika Prevention  
**Name:** Anna Yu  
**Preceptors:** Vivian Chan, Rural Research Assistant  
**Agency:** AMOS Health and Hope

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**Purpose:** To identify barriers that residents face in using family planning methods to prevent the Zika virus in Nejapa, Managua, Nicaragua.

**Significance:** In February 2016, the World Health Organization declared Zika virus a Public Health Emergency of International Concern.<sup>1</sup> Zika is such a great concern because it is a highly infectious disease that causes microcephaly and other neurological disorders in infants.<sup>2</sup> Zika can be transmitted sexually, through mosquitoes, or from mother to child. Since September 2016, there have been over 1800 cases of Zika in Nicaragua, more than 986 of which are pregnant women.<sup>3</sup> AMOS has been conducting community research and implementing effective ways to prevent Zika in Nicaragua.

**Method/Approach:** The Barrier Analysis model<sup>4</sup> (derived from the Health Belief Model) was used to identify significant barriers to family planning. The survey questions were derived from the 12 determinants that enable or prevent one's decision to perform a behavior. The residents of Nejapa were surveyed on their knowledge, attitudes, and practices towards family planning. The participants were separated into 2 groups: the Doers and Non-Doers. A Doer is one that does the promoted behavior, while a Non-Doer does not. In this project, the promoted behavior for females was using contraceptive injections and for males was using condoms to prevent sexual transmission of Zika. The research team surveyed 50 female Doers, 43 female Non-Doers, 42 male Doers, and 52 male Non-Doers. The responses of the Doers were compared with that of Non-Doers. Barriers that were statistically significant as differences between Doers and Non-doers were identified. Recommendations and potential interventions were then planned to target these significant barriers.

**Outcomes/Results:** The determinants that were statistically significant in differences between Doers and Non-doers were: self-efficacy, perceived advantages and disadvantages, and perceived social norms for both genders. In addition, policy and perceived severity were also statistically significant for females, while perceived divine will was also statistically significant for males. People were more likely to use family planning if their friends/family approved of it and if they understood its advantages. Perceived disadvantages, lack of money (for females), and perceived divine disapproval (for males) were all significant barriers to using hormonal injections or condoms.

**Evaluation/Conclusion:** The determinants that were statistically significant were presented to the community health workers (CHWs). The interns, staff, and CHWs planned interventions to reduce these significant barriers. During this time, AMOS had also just begun implementing the Care Groups Model.<sup>5</sup> In this model, staff educate a Care group (~10 community members) on important health issues. These community members then proceed to educate their neighbors, friends, and family. Lesson plans on family planning and Zika were also made for the curriculum of future Care groups.

**Citations:**[https://docs.google.com/document/d/1W0TaGBJmLWaPlofGb\\_RKbDEswSjshxuQdsybwJIUpR8/edit?usp=sharing](https://docs.google.com/document/d/1W0TaGBJmLWaPlofGb_RKbDEswSjshxuQdsybwJIUpR8/edit?usp=sharing)



## Internship Abstract

**Title:** The Improvement of Financial Reimbursement Procedures

**Name:** Ruolan Zhang

**Preceptors:** Direct Supervisor: Tong Yu, Dean of Economic Management School  
Project Supervisor: Xiaohua Shen, Administrative Staff in Economic Management School

**Agency:** Heyuan Polytechnic, University Town, Donghua Road, Heyuan City, Guangdong Province, China

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**Purpose:** To improve the financial reimbursement system in Heyuan Polytechnic by simplifying the reimbursement procedures.

**Significance:** A rational financial reimbursement system is essential to boost the development of research in universities and colleges. However, the financial reimbursement procedures have become much more complicated since the anti-corruption campaign under Xi Jinping started. Professors and researchers are forced to spend a lot of time calculating the exact expenses and have more than six required signatures for approval of the financial reimbursement application form. This process delays research development.

**Method/Approach:** First, different time periods are set for various schools. For example, Economic Management School can only apply for reimbursement on Wednesday and Friday. Second, the newest reimbursement policy and the samples of required materials have been uploaded online. Third, schedules of directors are shared with other alumni, because of which, researchers go to directors' offices and have them sign on application forms without waiting for a long time.

**Outcomes/Results:** The development of an online financial reimbursement system saves professors and researchers' time by simplifying procedures and speeding processing. People do not need to wait in lines for hours for reimbursement or spend lots of time in having six signatures for approval the application forms. Professors and researchers devote more time to research instead of financial reimbursement.

**Evaluation/Conclusion:** After the improvement of financial reimbursement system, different schools have their own time periods for financial reimbursement. Waiting time has been shortened from over two hours to no more than one hour. Signatures from directors are also easier to get because the schedule of directors are shared with other alumni.

## Internship Abstract

**Title:** Design a new iOS App for Bank of China  
**Name:** Yuqi Zhang  
**Preceptors:** Project Supervisor: Huaming Lin, Director of Operation Department  
**Agency:** Bank of China, Shenzhen, Shekou Sub-branch

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**Purpose:** To design a new user-friendly and multifunctional mobile App for mobile banking clients of Bank of China.

**Significance:** A fast-growing mobile market, combined with a large and growing consumer economy, means that China is now poised to become a global force in mobile banking and payments (To and Lai 1). Today, the banking industry is getting more competitive for the Bank of China. With the popularization of the smart phone, banking clients are now relying much more on the mobile banking. However, as the most crucial medium of mobile banking, the App provided by Bank of China does not appear to meet its client's need. Clients are expecting a more convenient, user-friendly and secure App. This indicates the gaps between the clients' need and the current BOC App. Therefore, a properly-designed mobile banking App will address these gaps to improve the user experience and the bank performance.

### Method:

1. A retrospective literature reviews on how mobile banking can impact the bank performance was conducted to show the need of redesign the mobile App of Bank of China
2. A survey was conducted to figure out the user's need
3. New functions was added to the past App, including:
  - Connect to Alipay ID
  - Connect to Wechat ID
  - Connect to Apple ID
4. Private security protection mechanism was changed
5. Enhanced the symbols and layout
6. Fingerprint authentication login system was added

### Outcomes:

1. Real-name system was established to protect the client's' interest
2. The transaction security was greatly enhanced by fingerprint authentication system
3. Online shopping payment was much easier and convenient for User
4. User can track their transactions and make appointments through the App

### Evaluation:

1. A survey was conducted to evaluate the user experience of the new App.
2. User data were collected from pre and post redesign.(BOC employees involved)
3. App Store rate status was considered.

## Internship Abstract

**Title:** Nurse Kit Distribution Design

**Name:** Bridget Zhong

**Preceptors:** Direct Supervisor: Michael Prasad, CDM, Disaster Support Functions Director

**Agency:** American Red Cross

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**Purpose:** To create an effective and sustainable process of distribution and replenishment of nurse kits to the Disaster Health Services workforce in Red Cross shelters.

**Significance:** Though the cost of natural and other disasters differ depending on its severity in any particular year, there is no surprise that the economic losses create an astounding expense on the United States government and non-governmental organizations (NGOs) that tirelessly work to prevent and create solutions in these events. Since 1980, the United States have sustained 200 weather and climate disasters where overall damages and costs have exceeded \$1.1 trillion (NOAA). Though the damage of property and possessions may account for a large percentage of these costs, there are also significant costs for health services following disasters. Much of this extra costs to NGOs can be mitigated by enacting a sustainable program that provides immediate first aid care and basic health services to Red Cross shelters situated around the state. The current strategy lacks organization and is inefficient, creating an ineffective process of distribution and replenishment resulting in losses in materials and delays in providing these services.

**Method/Approach:** The methodology chosen for this project involves a standard operating procedure to maximize efficiency and sustainability. Its initial step involves the concentration of all kits that need to be filled into the Tinton Falls site, where they are properly documented and labeled. The next step involves the restructuring and reorganizing of a section of the Red Cross warehouse to be solely dedicated to nurse kit materials to store in the shelter bags; this also creates a sustainable system of replenishment in the event that the kits which are distributed to the assigned shelter sites are exhausted. Materials will include medical consumables, first aid material, and a handbook with necessary medical contracts, forms, and a nurse manual. After filling up 30 kits, several more are created at the project site in the event that they are exhausted and need to be immediately swapped out. This creates a system where no disaster health service activities within shelters will ever lack medical supplies, which can also be used on a larger scale statewide notice event.

**Outcomes/Results:** In 8 weeks, 24 of the 30 bags were filled and ready to be sent out to the appropriate sites. Utilization of the standard operating procedure made this system practically efficient. However, medical over-the-counter consumables have been harder to get together, as they were not filled in the same location, slowing down the project's progress significantly.

**Evaluation/Conclusion:** Management of medical consumables should be handled in the same general location of the first aid supplies for the shelter bags. A centralized location for all supplies will be essential to the system's core efficiency, functionality, and cohesiveness.

## Internship Abstract

**Title:** Historic Preservation Survey for Chinese National Relic Department

**Name:** Xiaotian Zhou

**Preceptors:** Jie Zhang, Director of Research Department

**Agency:** Tsinghua Tongheng Urban Planning and Design Institute

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**Purpose:** To analyze relic management cases in state-listed historic and cultural cities and design a historic preservation survey to assess local municipalities' performance for Chinese National Relics Department.

**Significance:** Currently China has 129 historic and cultural cities with rich historic resources. However, of these cities, only 14% have established offices for historic preservation. Only 23% of them provide adequate funding programs. The loss of heritage caused by insufficient preservation results in social and cultural fractions between generations. Inappropriate redevelopment projects caused by the lack of supervision destroys relics' historic characteristics. By implementing a national historic preservation survey, which assesses municipalities' performance, municipalities will make a greater effort on heritage preservation.

**Method/Approach:** Data collection on 32 sample historic and cultural cities was completed collaboratively by senior and assistant researchers within the first 6 months. The data include cities' financial reports, relevant construction projects, and existing management methods. In addition, research on 6 sites was conducted to evaluate maintenance of historic properties. These cases were categorized as positive or negative in each of the three aspects: protection, management and utilization. They were then analyzed by researchers to design criteria with structured scoring keys ranging from excellent, moderate to poor. A draft historical preservation survey was proposed and reviewed by National Relics Department and the National Relics Commission. After discussion among these members, a final survey was proposed for further tests on pilot cities.

**Outcomes/Results:** The general scoring keys were divided into excellent (>75%), moderate (40% - 75%) and poor (<40%). The dimension of protection was divided into three secondary dimensions including procedure effectiveness, maintenance status and emergency countermeasure, with 5 technical criteria for each section. The dimension of management was divided into local laws and ordinances effectiveness, financial mechanism and organizational setting, with 3 criteria for each section. The dimension of utilization was divided into development model and utilization intensity with 3 criteria for each section.

**Evaluation/Conclusion:** The survey will distinguish municipalities' performances on relics preservation, which provides a standard for the National Relics Department's penalties. Implementation of the survey can reduce events of illegal demolition, reconstruction cases in the 129 historic and cultural cities, which help to preserve and present Chinese culture and history to Chinese next generation.