

Summer 2016 Internship Abstract Book

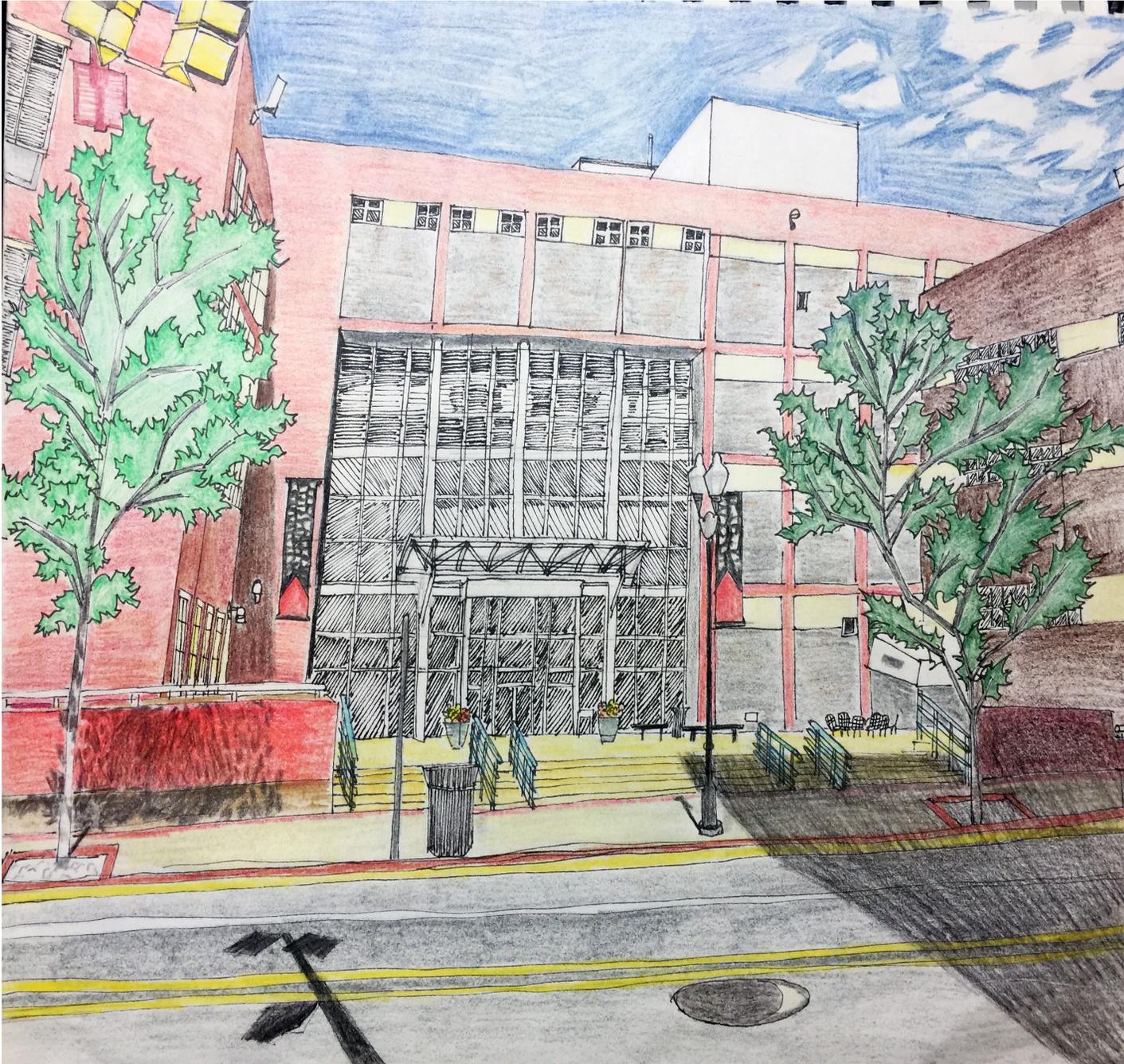


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Edward J. Bloustein School
of Planning and Public Policy

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Internship Abstract

Title: GLP-1 Co-Agonist and Obesity - A Retrospective Study
Name: Riyaz Abidi
Preceptors: Dr. Syed W. Rizvi (M.D-Endocrinologist)
Agha M. Abbas (Senior Clinic Manager)
Agency: R-Endocrinology (Hamilton NJ), Imamia Medics International

Purpose: To conduct a retrospective study on the efficacy of GLP-1 receptor co-agonist drugs on obesity control and lowering weight/BMI, based on patient data collected.

Significance: According to CDC there are approximately 78.6 million obese Americans including a 70.7% of adults consisting of the age of 20 and older, and 46.6% of children and adolescents from ages 2 through 19. Obesity is defined as being grossly fat or overweight between the 85th to 95th Body Mass Index percentile of height to weight ratio, in both adults and children. A drug known as Glucagon Like Peptide-1 Receptor Co-Agonist (GLP-1) was introduced to control glucose levels in body and boost metabolism. Research shows GLP-1 co-agonist drugs help reduce weight/BMI. Physicians now are prescribing GLP-1 co-agonist drugs to patients, to control their weight and BMI. This cohort study, evidently explains the correlation between GLP-1 drugs and obesity.

Method/Approach: A retrospective, longitudinal cohort review was completed to assess the efficacy of GLP-1 co-agonist drugs on weight reduction. Patient data for 67 obese men and women (currently on GLP-1 drugs) from ages 27-80, in the past 10 years was exported to an excel spreadsheet, and of those, 24 did not have data recorded. After proper investigative protocol, probed clinical soap notes, nutritional sheets, BMI and patient interview, the data was further exported to SPSS for correlations and descriptive statistical review. Of these patients, 37 (72.5%) showed an decrease in weight and BMI, 4 (7.8%) showed no increase or decrease in weight or BMI, and 10 (19%) showed an increase in weight and BMI.

Results: Of the 51 of 67 that had data, 37 (72.5%) patients showed an decrease in weight/BMI in which 25 were female. 4 (7.8%) patients showed no increase or decrease in weight/BMI of which 3 were female. And 10 (19%) showed an increase in weight/BMI of which 7 were female. The mean BMI before/after use was 39.152 and 38.037 respectively with a Standard deviation of 11.82/11.18 respectively. The Pearson's R value is +.915 and spearman correlation of +.908 significant at the 0.01 level. Paired sample T Test results at the 95% confidence interval had .003 significance.

Conclusion: More than half (n=37) of the sample size cohort had an decrease of weight/BMI after taking GLP-1 co-agonist. The results prove a strong positive correlation between GLP-1 Drugs and reduction of obesity, as well as prove to be an effective method of weight loss/lower BMI. Physician recommendation, pamphlets, and televised marketing use of GLP-1 Drugs will (a) help reduce obesity, (b) lower obesity prevalence and (c) raise awareness against population obesity. Those patients had negative or no effects, may not have taken the dosage properly, not exercised daily and or not a balanced diet.

Internship Abstract

Title: Quality Direct Service Employees & Employers Survey Assessment

Name: Ayesha Banerjee

Preceptors: Sarah Murchison, Human Services Coordinator

Agency: Somerset County Department of Human Services: Office of Operations and Planning and Human Services Advisory Council

Purpose: To survey non-profit organizations in Somerset County by assessing employers and employees in direct service to improve the quality of care and their compensation.

Significance: Over the past 8 years, the State of New Jersey's funding towards direct care workers has not increased. Somerset County Non Profit Purchase of Service Funding to human services contracts for direct services only increased at most 2% per year over the past 3 years. From 2009 to 2013, funding remained stagnant. Direct Service employees play a vital role to servicing individuals. Therefore, they need to be paid at the rate that increases the ability to recruit quality employees and improves the consistency and the quality of services provided. According to a Division of Developmental Disabilities Survey done by NJ Department of Human Services in July 2011, the number of individuals who are in need of care surpass the few number of direct service workers. The Direct Service Survey assesses the impact of the lack of increase in salaries for the quality of services provided in Somerset County and determinates a method to retain qualified direct service employees.

Method/Approach: This task for assessing Quality Direct Service employees came out of the 2016-2020 Human Services Priority Populations planning process. The Human Services Advisory Council (HSAC) oversees the assessment of human services priority populations needs in Somerset County, providing this county with plans and administers State grants. After analyzing unmet needs for the priority populations, one of the unmet needs identified was quality workers. As part of the plan's implementation, Quality Staff was assigned to a planning subcommittee. The committee intends to survey the direct service employers and employees of all non-profit organizations in Somerset County. The questions asked assist in the justification of the unmet need and the manner by which quality of service and appropriate compensation is then to be resolved. Survey availability is online through Survey Monkey and paper copies, which are manually entered online.

Results: Once the committee receives feedback from the Direct Service Surveys, HSAC plans to substantiate the need and retain the workers across all human services in the county. These initiatives are to ultimately increase the quality of service provided and reducing the turnover rate. As turnover rate decreases, organizations improve their work quality, productivity and lower the cost of turnover, which include costs like hiring, training, and productivity loss.

Conclusion: After the construction of preliminary surveys, there is distribution of the survey to the members of HSAC and their nonprofit organization employees. Once their organizations and members complete the survey, they are to provide feedback on the efficiency and the effectiveness of the survey. Once there is preliminary analysis of the results, the committee plans to send out this survey to the rest of the nonprofits in Somerset County.

Internship Abstract

Title: Exploring the Prevalence of Intestinal Parasites in Companion Animals
Name: Jamie Berger
Preceptors: Director and Project Supervisor: Scott Turowsky, DVM, Associate Veterinarian
Agency: Millburn Veterinary Hospital and Laser Surgery Center

Purpose: To investigate the prevalence of intestinal parasites in a canine and feline companion animal population in order to better understand the potential zoonotic risks.

Significance: Zoonotic diseases are “disease[s] that can be passed between animals and humans.” Specifically, gastrointestinal parasites spread from companion animals to humans through fecal, oral, or skin contact. According to the Companion Animal Parasite Council, owners often lack awareness and knowledge of zoonotic risks. One study found that over 34 percent of dogs will become infected with gastrointestinal parasites while 1 to 3 million people are zoonotically infected with roundworm.

Method/Approach: A retrospective review was completed to assess the prevalence rate of intestinal parasites among patients at Millburn Veterinary Hospital and Laser Surgery Center from March 5, 2016 to July 9, 2016. Data for 319 dogs was exported to a spreadsheet. Sixty-three dogs tested positive. Data for 45 cats was exported to a spreadsheet and 9 tested positive. Investigative protocol probed data, tests and results from IDEXX Laboratories. Fecal results included: 1. Giardia Elisa, 2. Giardia cysts, 3. Roundworm (Toxocara), 4. Hookworm, 5. Tapeworm, 6. Whipworm, 7. Coccidia, 8. Flea tapeworm and 8. Capillaria Sp. Ova.

Results: Of the 319 dogs, 63 had intestinal parasites (19.75%); 27 (8.46%) 0-1 year olds tested positive for Giardia Elisa; 4 (1.25%) >6 tested positive for Giardia Elisa; 6 (1.88%) 0-1 year olds tested positive for Roundworm (Toxocara); 4 (1.25%) 2-5 year olds tested positive for Coccidia; 5 (1.56%) 0-1 year olds tested positive for Giardia cysts; 5 (1.56%) tested positive for hookworm; 1 (.31%) 0-1 year olds tested positive for Capillaria Sp. Ova. Of the 45 cats, 9 had intestinal parasites (20%); 3(6.66%) >6 tested positive for Giardia Elisa; 1 (2.22%) >6 tested positive for flea tapeworm, Giardia cysts and hookworm; 1 (2.22%) 2-5 year olds tested positive for Giardia Elisa and roundworm (Toxocara); 1 (2.22%) of cats 0-1 year of age tested positive for Coccidia.

Evaluation: Approximately 19.75% (63) of the dogs tested positive while 20% (9) of the cats tested positive for intestinal parasites. Communicating effectively with owners during exams, (especially with new puppies and kittens), handing out informational packets and performing annual testing will serve as effective strategies to (a) increase the detection of parasitic infections, (b) decrease the prevalence of disease and (c) raise awareness for zoonotic diseases.

Internship Abstract

Title: Sun Safety Awareness
Name: Christina Cadet
Preceptors: Direct and Project Supervisor: Noah Hetzell, Assistant Health Officer
Agency: Cumberland County Health Department

Purpose: To create outreach material in order to promote sun safety awareness for the residents of Cumberland County.

Significance: In the United States, one out of five Americans will develop some type of skin cancer in their lifetime (Skin Cancer Foundation, 2016). According to the CDC, most skin cancers are partly due to excessive UV ray exposure. One out of every three adults in the U.S. have been sunburned in the past year, and they are not taking the necessary precautions to protect themselves (2016). This educational video is necessary to teach the residents of Cumberland County the importance of sun safety, in order to decrease sunburn frequency.

Method/Approach: Research was conducted to find sun safety tips and cancer statistics from reputable sources, such as the CDC and the American Cancer Society. This information, as well as captivating photos, were put together in a four minute video with a voice over using Windows Movie Maker. The purpose of the pictures was to help viewers make a connection with each topic. The script for the video was made so the average county resident could comprehend the material with little difficulty. In order to test the video after it is made, a group that represents the population of the county was needed to critique the material. After the video was created, it was tested among the residents of Cumberland County before it was released to the public. The residents were asked if the video was easy to understand, if it provided them with new information, if there were any concepts that needed to be repeated, and if there was any other information that should be included in the video. After this information was collected, the video was edited and released to the Cumberland County Department YouTube and Facebook page.

Results: In the time span of two weeks, the video received 12 views from YouTube and four likes from the Facebook page.

Conclusion: The video was shown to a group of 21 Cumberland County residents at the county fair. The group consisted of seven adults and 14 school children, varying from grade school to high school. The residents thought that the video was not hard to understand for the most part, but some concepts needed to be repeated to make it stick. One resident thought that information on expired sunscreen should be added into the video. The residents thought that the information presented in the video was useful, one in particular expressed that he has dealt with many sunburns in his lifetime and wished he knew this information before. Many expressed that they were not aware about some of the information presented about sun safety. After these observations were made, the video was edited with the requested information.

Internship Abstract

Title: Colorectal Cancer Detection Test Superiority Determination

Name: Emily Clark

Preceptor: Evelyn Robles-Rodriguez, Director

Agency: Cooper University Hospital, Camden, NJ

Purpose: To compare the Hemocult ICT versus the OC-Auto Fecal immunochemical tests (FIT) as part of the colorectal screening process through evaluation of collected data and further research.

Significance: Colorectal cancer is the second leading cause of cancer-related deaths in the United States. In the past few decades, the death rate due to colorectal cancer has been decreasing for both men and women. This can be attributed to proficient screening techniques, which find polyps before they become cancerous, or are in the earlier stages of the disease; thus an important to have the most effective screening technology. The FIT assays are part of the one or two-step process presently used to screen for colorectal cancer. This study will provide data to support the claim that OC-Auto FIT assay, currently used by the Camden County Cancer Screening Project (CCCSP) at Cooper University Hospital, is more effective than the Hemocult ICT FIT test, which was formerly used by the screening project, in screening for colorectal cancer. This evidence-based evaluation of the two tests could be used to prove the need for the FIT kits as an essential part of the cancer screening process at CCCSP and cancer screening programs alike.

Method: Data collected from colorectal cancer screenings at Cooper University Hospital from July 2013 to June 2016 from the Camden, NJ area. During this time, both the Hemocult ICT and OC-Auto FIT assays were used, with the implementation of the latter on November 21, 2014. The CCCSP at Cooper University Hospital administers free colorectal screening by providing patients with a colorectal screening kit during an office visit and relying on the patient to complete the kit at home. The fulfillment of the kit is contingent upon a bowel movement and the timely return of a swab of the specimen via the mail in a pre-stamped envelope, which is sent directly to a lab for analysis. To note, the Hemocult ICT assay requires that the patient take stool samples from bowel movements from two days while following a restricted diet and medication intake. The OC-Auto FIT works similarly, however, the samples are only collected over a one-day period and the test does not impose restrictions on food or drugs. A positive test result indicates the presence of blood in the stool, which could indicate cancer, or pre-cancer in the colon or rectum. The patient is then referred for a colonoscopy, which is often covered by charity care. The values from both FIT assays were contrasted, and the data was discussed with members of The Cancer Screening Project to determine the implications of the values.

Results: After switching to the OC-Auto FIT assay, there was an overall 9% increase in the number of returned colorectal screening tests. A 35% decrease in the number of positive test results was observed in the OC-Auto FIT assays as compared to that of the Hemocult ICT tests. There was also an 11% increase in the negative test results after the switch.

Conclusion: Overall, the OC-Auto FIT assay was overall found to be more effective in testing for colorectal cancer than the Hemocult ICT FIT for the CCCSP. However, this study cannot measure true sensitivity as not all patients received colonoscopies following the screening to confirm the results of the screening tests. Most importantly for the cancer-screening project, the OC-Auto FIT assays are correlated with the number kits that are completed and returned to the lab for evaluation. This is primarily due to the convenience of the OC-Auto FIT assay versus the original Hemocult ICT for the patient. This increase is an important factor in reducing the incidence of colorectal cancers.

Internship Abstract

Title: Growth Management Plan Analyst
Name: Eric Derer
Preceptors: Mirah Becker, PP, Director of Comprehensive Planning
Agency: Middlesex County Office of Planning

Purpose: To research and analyze advancing technologies in urban and suburban settings to incorporate and make recommendations for Middlesex County's new growth management plan.

Significance: Technology can provide linkages and better connections between government departments and the work that they are responsible for carrying out. The field of 'smart cities, a subfield within the domain of smart growth, focuses on enhancing quality of life through improved technology and communication. One example of smart city technology is Motor City Mapping. The organization "Is a comprehensive effort to digitize Detroit's property information and create clear communication channels back and forth between the public, the government, and city service providers" (motorcitymapping.org). The consolidation of Detroit's property data has expedited the process of removing blight from the city. Technology and data can also improve the involvement of residents, as Code for Philly has done. This organization aims to use tech and data for civic engagement through the creation of applications created by residents that are meant to improve citizens daily life (codeforphilly.org/pages/mission). It can be seen that it is important to include ideas and recommendation for technological advancement that will benefit the public in new growth management plans. Middlesex County is one of the fastest growing counties in New Jersey, and urban and suburban IT will help improve the lives of its residents through more open information, accessibility and convenience.

Method/Approach: Since the field of urban technology is very broad, defining the concept in relationship to the county is imperative. after some research the keyword 'smart cities' was found to be pertinent to Middlesex County's growth management plan. Currently, there is no universal definition of a smart city. To define the keyword, a literature review of scholarly articles that use specific examples to explain smart cities was conducted. Specific articles were chosen which best explained the term based on the county's needs. To further inform the matrix, case studies of urban technology projects were also researched. The research was compiled into a cohesive document that includes a definition of a smart city and how technology can affect different parts of Middlesex County's government.

Results: The matrix will define the term smart cities, and provide recommendations for new software and applications for potential use in Middlesex County.

Conclusion: The County can use the matrix to create the final technology element in house through the literature review and matrix provided. They can also use the matrix as a starting point for contractors who can be called in to create the technology element of the master plan. The final evaluation will be the finished product of the technology aspect of the growth management plan.

Internship Abstract

Title: Understanding the Unmet Needs of Families

Name: Jasmeen Dhillon

Preceptors: Jessica Delgado, Coordinator

Agency: Prevent Child Abuse - New Jersey

Purpose: Encourage communities to develop healthy lifestyles for children and effective solutions to issues that affect the development of young children through using community resources and guidance.

Significance: For many parents in low income families, it can be stressful and overwhelming to raise children and also look after themselves. When parents are more involved and engaged with local providers and community members, they respond more effectively to community resources. Service providers and community members can connect with families to provide them with information and assistance in finding solutions to issues that affect families of young children.

Methods/Approaches: Through Middlesex County Council for Young Children (CCYC) meetings and workshops a group of parents, caregivers, residents, and community partners work together to discuss similar concerns. Parents and caregivers brainstorm solutions, receive free leadership training, and learn about resources and workshops in their communities. During these meetings surveys were conducted to better understand the needs of families. This data will be used to evaluate community needs and concerns and create a strategic plan to address the most pertinent issues.

Results: A 45 question community needs assessment survey was distributed to expectant parents, parents, and caregivers that provide care for children ages 0-8 and live in Middlesex County to better understand the needs of families. The survey was available in English and Spanish, as well as online and in paper version. Surveys were distributed by community providers at community fairs, meetings, and through e-mails. The questions focused on educational services, health services, economic wellbeing, and safety resources. We received 80 English surveys and 51 Spanish surveys online and in person, a total of 131 surveys. Once the results were received, they were analyzed and each question from both surveys was manually combined on Excel.

Conclusions: After receiving feedback the results were evaluated and analyzed. The main challenges which parents faced with providing proper educational services to their children were cost and quality. Even for medical health services, the main challenges were cost and quality along with availability. Not only do parents face challenges obtaining the health services but they also encounter the same challenges when providing healthy nutrition to their families and engaging them in physical activities. Through this survey the organization will be able to take further action by addressing the most important needs and concerns. Workshops will be provided on these issues and on topics that would help parents get new or better jobs for economic well being.

Internship Abstract

Title: Hillsborough Township Community Profile
Name: Adam DiSarro
Preceptors: Supervisor: David K. Maski, Planning Director
Agency: Hillsborough Township Planning and Zoning

Purpose: To compile the most recent and relevant demographic and economic data into a comprehensive community profile projecting and analyzing future trends in Hillsborough Township

Significance: Hillsborough Township is a unique municipality, which consists of three main landscapes: the municipal core, eastern sub-developments, and rural north and west ends. This leaves the Township with a plethora of planning and land use options. Simultaneously, school age and senior citizen populations determine the appropriate amount of public and private establishments to be operated for their respective populations. Transportation options and geographic location are a factor to economic performance, including major highways, public transportation, and distance from major cities. The data compiled in a community profile will help prepare for greater success in the future, with Hillsborough utilizing appropriate planning actions for each of its three landscapes.

Method/Approach: Demographic and economic data are collected from fifteen different communities, including Hillsborough Township, its eleven surrounding municipalities, Somerset and Hunterdon Counties, and the State of New Jersey. To further analyze the movement of trends, data are compared over time, including United States Census and American Community Survey empirical data ranging from 2000 to 2014. This data include, but are not limited to, total population, age groups, median age, median and per-capita income with and without inflation adjustment, number of business establishments, and commute times and methods.

Results: From 2000 to 2010, population climbed from 36,634 to 38,303 residents, and median age climbed from 35.7 to 39.9 years old. North Jersey Transportation Planning Authority (NJTPA) predicts a population of about 53,000 in the year 2030. Population age 45 years and older has increased about 44 percent, while population between age 44 years and younger decreased about 14 percent. Population age 55 years and older has increased by 63 percent, with a gain of 3,255 people. School age population has decreased about 8 percent. Statewide and regional per capita and median household incomes have decreased between 1999 and 2014 when inflation-adjusted to 2016, but Hillsborough's inflation-adjusted incomes have held fairly steady.

Conclusion: The Township of Hillsborough, County of Somerset, and the State of New Jersey continue to slowly add population, while the median age continues to climb. Simultaneously, several surrounding municipalities and the County of Hunterdon started losing population during the economic downturn, following many decades of growth. Facilities and infrastructure should be planned accordingly in Hillsborough in order to fit projected trends, but not without realizing the possibility of the unexpected.

Internship Abstract

Title: Epidemics and WebMD Web traffic
Name: Evan Dunatov
Preceptors: Eric Bursack , Director of Client Services
Agency: WebMD, 350 W 50th St, New York, NY 10019

Purpose: To assess the effect of recent global epidemics such as the Zika virus has on traffic of the WebMD website and use this information to mobilize Zika related interventions.

Significance: Over the last two years, the Zika virus has entered the international spotlight. On July 8th, the Zika Virus claimed its first casualty in the United States, adding to the death toll that is approaching ten in South America. Zika has been linked to microcephaly, a birth defect causing reduced skull size in infants. Over a thousand of Zika related microcephaly cases have been reported thus far, and these numbers are expected to climb. With athletes and fans of 206 countries coming to Brazil for the 2016 Olympics, the potential for Zika to spread worldwide is astronomical. Being able to distribute information to the public about Zika prevention efficiently is vital to interventions focused on containing the virus.

Method/Approach: The best way to achieve this goal was to first research and create a timeline of the most notable and newsworthy events that were related to the Zika virus (gathered from the WHO). This includes breaking news that involved Zika-related deaths, developments of the spread of the virus, and new information involving the behavior and effects of the disease itself. This timeline was cross referenced with a report of Zika and infectious diseases related web traffic which was previously created by the Business Intelligence department of WebMD. The relationship between web traffic and the timeline was analyzed and the web traffic on days where no Zika related news was released was measured against and compared to web traffic on days where Zika related news had broken and this information was used to create a comprehensive report summarizing the findings.

Results: There was a clear spike in web traffic on the day of and several days following major Zika virus related events. There was a spike of anywhere from 10 to 20 percent in web traffic depending on the significance of the event. The WebMD website averages about 4.8 million hits a day, and the most significant Zika related thus far (the death in continental USA) resulted in an average of about 5.8 million hits over the next few days.

Conclusions: These clear patterns provide a blueprint for institutions such as the WHO that want to run effective, internet based health interventions against the Zika virus. The analysis shows that the period during and after Zika related breaking news is the best time to promote internet based interventions because of the increased number of citizens interested and concerned about the issue. This means that it is essential for institutions implementing internet based interventions should have information prepared so it is ready to be released when news breaks, thereby increasing exposure. The more concerned and aware people that are exposed to Zika prevention based material, the more effective interventions will be.

Internship Abstract

Title: Correlations Between Failed Large to Mid-sized Nonprofits: A Closer Look at Why Nonprofits Fail

Name: Shelly Espejo

Preceptors: Direct Supervisor: Sandra Cristina Guerra, LMSW, Program Administrator
Project Supervisor: Sandra Cristina Guerra, LMSW, Program Administrator

Agency: The Fordham Center for NonProfit Leaders (FCNPL)

Purpose: To re-examine past failed nonprofits and analyze traits that contributes to the failure or success of nonprofits to incorporate a strategic method for The Fordham Center for Nonprofit Leaders.

Significance: Nonprofit human service organizations play a critical role in building and supporting the well-being of New Yorkers, enabling 2.5 million of New Yorkers to contribute to their communities. Nonprofits build the welfare of individuals by training and helping keep workers in good jobs, providing early childhood education, and respond to emergencies and natural disasters, among many other community services.

Method: An in-depth analytical review was performed on past studies done by FCNPL, longitudinal studies done by the Human Service Council, and qualitative studies on FCNPL's sponsored seminar, "When Nonprofits Fail: What to Do When Deficits Hit". Nonprofits' closures were right after designated into 5 particular sectors: Financial condition, Infrastructure, Leadership, Oversight, and Relationship between nonprofits and government funders. Nonprofits' failures were then analyzed and organized with recommendations provided by panelists and FCNPL's book, "Nonprofit Management: A Social Justice Perspective" allowing identifying major problems among failed nonprofits: instrumental in helping gather best practices for nonprofit and create a system to success.

Results: Organizations with budgets from \$10- \$49 million are more likely to be in financial distress than those with budgets of less than \$1 million, and 60 % are financially distressed, having no more than 3 months of cash reserves. Underfunded government payment rates are primary driver of financial distress with only paying 80¢ or less of each dollar of true program delivery costs. Underfunding and contract payments delays lead to costly borrowing, acquiring interest not covered by government contracts. Redundant audits, unfunded mandates, weak internal financial and programmatic reporting, and other oversight mechanisms add up to overwhelming administrative costs and inability to alert short and long-term fiscal dangers early enough to address them.

Conclusion: Three major common problems were discovered: cash flow obstacles and chronic underfunding, ineffective and unworkable programs, and lack of adequate risk assessment in the sector. Capitalizing the sector, Program collaboration, and Risk assessment (CPR) will serve as an effective strategic method to A) reduce staff turnover, invest in infrastructure, training, and accounting systems, B) avoid repeated audits, reduce cost, and highly-designed, appropriated evaluated program, and C) implement a financial/pragmatic reporting system and enhance board members and staff engagement.

Internship Abstract

Title: The Role of Emotional Intelligence in Work-Life Balance
Name: Chrystal Estevez
Preceptors: Vincent D. Joseph, Executive Coach
Agency: Robert Wood Johnson University Hospital, New Brunswick

Purpose: To analyze the role of Emotional Intelligence among physicians and healthcare workers of RWJUH and propose educational interventions to achieve a more satisfactory work-life balance.

Significance: Physicians spend more than a decade in post-secondary education and once in practice, they generally have high degrees of satisfaction with their career choice but experience high degrees of professional burnout and dissatisfaction with work-life integration (Shanafelt et al.). Insufficient attention to EI training during undergraduate, medical, and postgraduate education may limit the ability for physicians and healthcare workers to handle interpersonal relationships and stressful career demands (Hammerly et al.). These findings show that physicians and healthcare workers are neglecting personal and professional long-term goals and focusing on short-term urgent matters. Evidence-based interventions will serve to expand the role of EI in physicians and healthcare workers to achieve important long-term goals and work-life balance (Covey).

Method/Approach: A survey was completed to assess the personal and professional life for male and female physicians and healthcare workers aged 25-60. Data for 12 subjects was analyzed based on the likert scale of 1) Strongly Disagree, 2) Disagree, 3) Neutral, 4) Agree, 5) Strongly Agree, for topics of neglect, time management, managing demands, work, and responsibilities.

Results: The sample size is (n=12) and the results are as followed. (50%) often bring work home with them, (33.33%) have difficulty separating their personal life from their professional life, (33.33%) often feel stressed during the work day, (45.45%) feel guilty about not being able to do all that they want to at work and home, 4 subjects have concerns that one aspect of their life or the other is being neglected, (75%) take the time to prioritize and have good time management, (33.33%) feel they have control over their schedule and how they do their work, 6 subjects recorded having effective strategies to manage their demands, (41.67%) feel that they do not feel constantly overwhelmed with all their responsibilities, and lastly, 5 subjects feel that they are able to get most of what they want done each day.

Conclusion: More than half of the subjects responded that they take the time to prioritize and have good time management, yet that statement is contradicted when the majority feel guilty that one aspect of their life is being neglected as well as being unable to accomplish work and home responsibilities. These findings indicate that they need better time management. This will be assessed using a time management matrix to educate subjects on how to set and achieve important short and long-term goals in their personal and professional life.

Internship Abstract

Title: Inhibiting *Trichomonas Vaginalis* Virus Uptake in Human Cells

Name: Angelica Kene Ezeigwe

Preceptors: Raina Fichorova, MD, PhD, Lab Director, Hidemi Yamamoto, BA, Lab Manager and Gabriela Santone, BS, Lab Member

Agency: Brigham and Women's Hospital, BWH STARS Program

Purpose: To Identify pathways of TVV uptakes by the human cells and inhibitors that can block those pathways in order to reduce the inflammation associated with TVV infection.

Significance: Trichomoniasis is the most common nonviral sexually transmitted infection and transmitted by *Trichomonas vaginalis* (TV), a parasite that resides in the genitourinary tract. Infection is most common in women of reproductive age and the inflammatory pathways activated by the parasite increases the vulnerability of contracting other STIs such as HPV and HIV, in addition to increasing complications that women and their babies face. Concerns for public health rose even more after the discovery that most *T. vaginalis* clinical isolates are infected with virus (TVV), which is capable of amplifying harmful inflammation. TVV signals through intracellular Toll-like receptors (TLR-3); however, it is unknown how TVV enters the human host cells to cause TLR-mediated inflammation.

Method: We infected human vaginal and cervical epithelial cells with TV that carries virus (TVV+) and TV cured from the virus (TVV-), in the presence or absence of escalating dose of a potential inhibitor of pathways involved in TVV traffic. A synthetic dsRNA mimicking the TVV genomic RNA was used as a positive control for virus-driven immune responses. Various cell viability assays were performed to define the non-toxic dose range of the inhibitor. A luciferase assay was done to measure the activation of the proinflammatory transcription factor NF-kappa B. Meso Scale Discovery immunoassays were used to quantify levels of chemokines in epithelial culture supernatants. Microscopic observations were recorded for each treatment condition. GraphPad Prizm and ANOVA with Bonferroni post test for multiple comparisons were used for statistical analysis.

Results: The luciferase activity was not significantly affected by the inhibitor. However, a significant inhibitory effect was observed in chemokine expression. As expected the TVV+ TV induced higher levels of IL-8 as compared to TVV- TV ($p < 0.001$) and only the TVV+ TV and the dsRNA mimic induced RANTES in the human vaginal epithelial cells. The inhibitor suppressed IL-8 induced by the TVV+ ($p < 0.001$) but not the TVV- TV and it also suppressed the virus-induced RANTES ($p < 0.001$) in a dose-dependent manner.

Conclusion: We identified a weak link in the viral-protozoan pathogenesis that can be manipulated to prevent harmful inflammation. More research is needed to confirm the translational potential of our findings.

Internship Abstract

Title: Outcomes from Safety Ambassador Program

Name: Mohammed Farooqui

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

Agency: Robert Wood Johnson University Hospital, Trauma and Injury Prevention

Purpose: To educate Middlesex County NJ high school and elementary students about four risk areas (Falls Prevention, Pedestrian Safety, Safety in and around Cars and Wheeled Sports) through student-to-student interaction. This program is designed to improve safety knowledge and behaviors in order to decrease unintentional injuries in area youths.

Significance: Preventable injuries are the leading cause of injuries treated in hospitals and they are the leading cause of death for children and adolescents, both nationally and within New Jersey. As reported by the CDC, transportation and fall related injuries account for 60% of the Emergency Room visits for 0-14 year old children. This number jumps to 72% for children age 5-9 years old. In Middlesex County, 22% of the population consists of children and adolescents under the age of 18.

Method/Approach: Working with 23 high schools and 27 elementary schools, the Safety Ambassador Program works to educate children and teens about safety. In late September, high school students or “Safety Ambassadors” are taught the four key safety topics as mentioned above as well as presentations skills at the “Safety Summit” held at Robert Wood Johnson University Hospital. The Safety Ambassadors then develop safety presentations targeted to first and second graders and deliver them once per month during the February –May period at Elementary Schools. Safety Ambassadors are given a kit, which includes safety equipment like a helmet, booster seat, and additional teaching materials such as puppets to aid them in their presentations. Parent handouts are also given to allow for reinforcement of information.

Outcomes: The Safety Ambassador Program increases awareness about safety for children and teens on how to avoid injuries during basic activities like riding in a car, walking, riding a bicycle/skateboard or playing on the playground. Analysis of the data will measure the effectiveness of the program in decreasing childhood injuries and improving safety knowledge and behaviors in children and adolescents. Additionally, countless high school Advisors, elementary school teachers and principals continually applaud the merits of the program.

Evaluation: The Safety Ambassadors take a pre-test at the beginning of the school year and a post-test at the end. Additionally, the first and second graders take their pre-test in January before the lessons begin in February and the Post-test in June after the presentations are complete. The Pre-tests are then compared to the Post-test results to determine if the Safety Ambassadors and the elementary school children are, in fact, safer at the end of the year. Data collected shows significant increase in safety knowledge and behaviors in both age groups.

Internship Abstract

Title: Phase II Study of the Effectiveness of Trastuzumab in Combination with Capecitabine/ Cisplatin in Patients with Metastatic HER2-positive Gastroesophageal Junction and Gastric Cancer

Name: Carly Fein

Preceptors: Principal Investigator: Yelena Y. Janjigian, MD Direct Supervisor: Nickolas Sophos, M.S., Clinical Research Supervisor

Agency: Memorial Sloan Kettering Cancer, New York City

Purpose: To determine the disease progress of patients with Metastatic HER2-positive Gastroesophageal Junction and Gastric Cancer when participating in a combination of oral and intravenous chemotherapy.

Significance: Gastric cancer is the fourth most common and second leading cause of cancer mortality worldwide. This constitutes a global public health problem. In 2015, an estimated 22,220 people will be diagnosed and 10,990 will eventually die of their disease in the United States alone. Even with maximal therapy (combinations of surgery, chemotherapy, and radiation therapy), gastric cancer prognosis remains having a 5 year survival rate of 5%. A majority of patients who initially respond to chemotherapy ultimately suffer from disease progression. This is why a new development of therapeutic options is necessary. Phase II and III randomized gastric cancer trials has demonstrated that a combination of chemotherapy results in a significant improved overall survival compared to single-agent chemotherapy.

Method/Approach: This will be a single arm study of ramucirumab 8 mg/kg administered intravenously on days 1 and 8 + trastuzumab (8 mg/kg loading dose; 6 mg/kg maintenance) administered intravenously every 21 days. CT/MRI scan will be performed after the initial 3 weeks (1 cycle) to determine response to ramucirumab with trastuzumab, and every 9 weeks thereafter. On subsequent cycles for all patients capecitabine 850 mg/m² will be added, taken orally twice a day for fourteen days (days 1 through 14) followed by a 7 day rest period, in addition to cisplatin 80 mg/m² administered as an IV infusion every 21 days. Each cycle consists of 21 days.

Results: Progression free survival [Time Frame: 6 months] as measured from the start of the ramucirumab and trastuzumab to the date of either documentation of disease progression on chemotherapy with trastuzumab and ramucirumab or death.

Conclusion: The trial is still open for accrual. This means that patients are continuously put on this study if their doctor sees them fit. There is no public data accessible.

Internship Abstract

Title: Jewish Renaissance Medical Center Needs Assessment and Market Analysis
Name: Jessica Feliciano
Preceptors: Project Supervisor: Jorge Cruz, Chief Strategy Officer
Agency: Jewish Renaissance Medical Center (JRMC)

Purpose: To decipher which departments, demographics, or health concerns within the organization's service areas require more attention based on comparative data; and a market analysis that will highlight high risk concerns.

Significance: Even with the strong infrastructure of healthcare services, the population size and severe economic distress of Newark coupled with a disproportionate representation of hospital-based services create demand for Federally Qualified Health Center (FQHC) services. An organizational Needs Assessment is a critical component to the operation of any FQHC, such as the Jewish Renaissance Medical Center. This document will be used as a guiding tool during the development of the JRMC Strategic Plan in September. This plan embraces dynamism and purposely offers JRMC's leadership with the framework to navigate current and projected change. The Needs Assessment essentially determines the amount of funding sponsors will allocate to the organization based on outcomes. Highlighting the gaps in the communities we serve will allow beneficiaries to commit to the JRMC mission.

Method/Approach: Research was conducted by collecting and analyzing the following public documents to incorporate their data into the JRMC's market analysis; U.S. Census 2015, Middlesex County Needs Assessment, NJ Behavioral Health Volume Report, U.S. Department of Housing and Urban Development, and United Way of Central Jersey Compass Needs Assessment among others. Data was compared from previous years to last year's outcomes using the JRMC's Universal Data System. Perth Amboy is considered a medically underserved town with a growing population of obesity, diabetes and other public health concerns. This led my preceptor and I toward targeting a specific health concern and identifying the factors that affect the Perth Amboy community. Being that diabetes stems from obesity and malnutrition, adult obesity in Middlesex County was chosen as the focus.

Results: The obesity rate among adults in New Jersey is approximately 25% to < 30%. As of 2015, 23% of adults residing in Middlesex County reported a Body Mass Index of 30 or more, only down 1% since 2013. Being that this was a self-reported survey, the data produced a margin of error of 21-24%, weakening its reliability. Other outcomes produced throughout the Needs Assessment, however, highlighted how to close this gap, raise awareness and make a change in the JRMC service areas. Medical encounters, departmental statistics and demographic breakdowns have fallen. Although many of the areas compared during analysis have decreased in growth since they were last measured, this may be seen as positive; less medical encounters and smaller amounts of new patients may be signs of a medically served and well community. The JRMC and other neighboring organizations have teamed up to create "Better Together--Perth Amboy", a program that focuses on improving the degree of health and wellness of the community. On July 1st 2016, the four-year program was granted \$200,000 in funding to serve all of Middlesex County.

Conclusion: The "Better Together --Perth Amboy" project is a step in the right direction, toward health, wellness, and influencing people to foster a healthy mindset and lifestyle. Within the first year, the leaders of the project will create an action plan with a timeline, which will define their tasks and progress. This timeline will illustrate how the next three years of funding will be assigned. Once a plan is active, Middlesex County should see notable changes in access to healthier food options, medical services and fitness opportunities, deeming this project a success.

Internship Abstract

Title: Patients' Knowledge of Continuing Exercise After Shoulder Injury

Name: Alexandra Grambone

Preceptors: Kevin Corso, Clinical Director/ Physical Therapist

Agency: Professional Physical Therapy

Purpose: To analyze the rate of patients returning to physical therapy for repeated shoulder injuries and develop educational interventions on methods and exercises to reduce post therapy re-injury rates

Significance: Shoulder injuries are commonplace, especially in the physical therapy, and re-injury is always a risk after rehabilitation. Lack of knowledge of the importance of stretching and maintaining strength in the injured shoulder after physical therapy largely contributes to repeat injuries following the completion of physical therapy. In sports especially (those including overhead movements like baseball, tennis, and football), the shoulder is at a disproportionately higher risk for injury (Cools, A., et. al). For active patients, it is of the utmost importance that there is a fundamental understanding of the importance of maintaining health in the healed shoulder.

Method/Approach: Throughout the first six weeks, research was done on current male and female patients, ranging from 10 to 95 years old. Of the 200 patients on file, 20 had returned for a re-injury involving the same shoulder (post-operational and otherwise). A survey was created to evaluate reasons for return, and understanding of the importance of continuing exercise in order to prevent re injury. A comprehensive brochure was then created for common shoulder injuries and how to ease back into daily activity following completion of an entire six week (or longer) session of physical therapy.

Results: Of the sample cohort (n=20), 4 women (20%) and 16 men (80%) had returned for shoulder injuries. Of the returning patients, 15 were returning for rotator cuff (75%) which can be further broken down into 6 post-operational (47%) and 9 patients without surgery (53%), and 3 with Impingement Syndrome (20%). The other 2 patients had come in for other, uncommon shoulder injuries. Less than half (35%) of the patients had reported keeping up with the exercises taught at physical therapy, but 90% patients reported continuing with daily stretching of the muscles following their session. 4 patients (20%) returned to physical therapy after performing the same activity that injured their shoulder the first time (sports, laborious work, ect). 100% of the patients reported understanding the importance of continuing exercise practices following physical therapy.

Conclusion: Following the retrieval of the surveys distributed, the information was evaluated and a comprehensive brochure was distributed to first and second-time shoulder injury patients. These brochures explained the importance of daily exercise and strength training of the shoulder following physical therapy, and listed five of the most common exercise and stretch routines to complete at home every day.

Internship Abstract

Title: Forming a Winning Solution To The Gig Economy in Vermont

Name: Emma Haggerty

Preceptors: Direct Supervisor: Tara Pereira, Intern Manager
Company Supervisor: Pat Heffernan, President of Marketing Partners and member of Vermont Businesses for Social Responsibility and Women Business Owners Network

Agency: Marketing Partners, Inc., Burlington, VT

Purpose: How to guide diverse stakeholders to identify a positive solution regarding the gig economy in Vermont.

Significance: In 2015, the IRS recovered more than “\$74 million in back wages for more than 102,000 workers” nationwide who were misclassified (“Wage and Hour Division (WHD)”). During this time the IRS also formed a 3 year “Memorandum of Understanding” in the state of Vermont to further prevent this type of worker classification mismanagement. Beginning in the 2016 legislative session, Bills drafted were either too pro-business, pro-union/employee, or pro contractor. On top of that, the Department of Labor and IRS have conflicting rules as to who is and is not an independent contractor making it difficult to follow both sets of regulations. Because of these changes, locally owned businesses are now in a dilemma and hesitant to hire the necessary independent contractors for fear of being fined for worker misclassification. In Vermont, business owners and contractors who are members of either the Vermont Businesses for Social Responsibility or Women Business Owners Network have begun meeting with one another to establish a Joint Summer Task Force and find a much-needed solution. The public policy legislators, business owners, employees, and independent contractors at these meetings represent and work within a range of industries from construction to consulting with vastly different wages and problems regarding the gig economy in Vermont.

Method: Background research on the nationwide scale was conducted in order to find a possible resolution applicable to the state of Vermont. Then, through a series of meetings with Vermont Businesses for Social Responsibility and Women Business Owners Network public policy legislators, business owners, employees, and independent contractors their main issues were identified as well as their potential solutions. Their responses were varying and a lot of the members wanted to see different outcomes. However, the one statement all members could agree on was that the current worker’s laws in Vermont are not working. After the last meeting on July 25, 2016, two 10-question surveys were created on Survey Monkey that were intended to be emailed to the members of these two committees and answered by the next meeting at the end of August. The two different surveys were for business owners, non-business owners, and the 10 survey questions focused on the demographics and opinions of the members. The responses will be used to inform the ongoing effort created by the Joint Summer Task Force.

Results: The quantitative data from the Survey Monkey surveys results are not complete at this time. However, when analyzed their answers will be useful for the next meeting and potentially be used for a research report to be shared with the media and Vermont legislative.

Conclusion: Following the retrieval of the survey data the results will be useful in drafting the report and policy statements from the Joint Summer Task Force of Vermont Businesses for Social Responsibility and Women Business Owners Network.

Internship Abstract

Title: Certified Nurse Assistant Orientation Manual for New Hire

Name: I'antha Trishia Harvey

Preceptors: Direct Supervisor: Jennifer Moyer RN, Director of Nursing
Project Supervisor: Scott Carpenter, Nursing Home Administrator

Agency: Laurel Square Healthcare & Rehabilitation Center (Formerly Marwood Rest Home)

Purpose: To develop and design an orientation manual that will be of benefit to newly hired Certified Nurse Assistant (C.N.A.) on proper etiquette and care procedures towards the residents (patients).

Significance: Of all the employees working in the long term nursing skilled care, certified nursing assistant (CNA) spend the most time with residents, and provide the majority of the direct care that the resident received on a daily basis. A CNA is a member of an interdisciplinary healthcare team. They are under the supervision of nurses (RN or LPN/LVN). According to the United States Department of Labor-Bureau of Labor statistics there are approximately 1.5 million individuals in this country employed as certified nursing assistant. A annual growth rate of 18% is expected through the year 2024 to meet the demands of the “baby boomer” population. This growth rate reflects a faster average than all other occupations. The U.S. Census Bureau defines the term “baby boomer”, as an individual born between the years of 1946-1964. The Nursing Home Reform Act of 1987 has established guidelines and requirements on nurse assistant training in long term care and rehabilitation facilities (LTC) that receive federal funds such as Medicare and Medicaid.

Method/Approach: The first focus was an evaluation of current material utilized for CNA orientation. The second focus involved observation of interactions between CNA with residents, peers, and their supervisors. The third focus involved conducting open ended interviews focusing on 5 questions on training, equipment, resources, preparation and job satisfaction with CNA from all three work shifts on specific issues related to techniques involving the care of residents, and communication. Qualitative analysis was completed on interview responses. Finally, orientation material was developed based on the findings.

Results: Data from interviews showed that a majority of CNA felt that the orientation information provided was not sufficient. For example, there was a lack of training involving residents with dementia and other memory impairments. Observational data found that there was a deficient in communication and teamwork among CNA and their peers and supervisors.

Conclusion: The findings indicate the presence of a training deficiency. Nursing assistants have the least amount of pre-employment training of any other member of the interdisciplinary healthcare team. An increase in the number of orientation hours will reduce anxiety, encourage self-sufficient increase job satisfaction, and increase employee retention rate.

Internship Abstract

Title: Assessing the Level of Patient Education at an Optometrist Office
Name: Grant Hirschberg
Preceptors: Direct Supervisor: Dr. Nancy Argano, O.D.; Project Supervisor: Kim, Office Manager
Agency: Eye Physicians of Central Jersey

Purpose: To educate patients about the purpose, expectations, and results of each test administered by the doctors at Eye Physicians of Central Jersey and illustrate how these tests are associated with specific eye diseases.

Significance: The Office of Disease Prevention and Health Promotion aimed to strengthen visual health of the country by prevention, early detection and rehabilitation in their most recent 2020 Healthy People initiative. In order to effectively complete this outcome, doctors must express reasons behind patient symptoms, diagnosis, medications, and future plans with the patients in a clear way that the patient can understand. When a patient feels informed, they are more likely to follow the doctor's regiment successfully, avoid any negligent behaviors that can worsen the condition, and establish loyalty to the office.

Methods: Posters are created providing the Eye Physicians of Central Jersey with appropriate information about the tests conducted on patients. The explanation behind the testing can allow patients to be more familiar with the optometry practice. A review of the machinery in the office will be explored to properly convey how and why certain machines are used in the office. Research from the company's websites and from the doctor's expertise in the office will allow accurate information to be garnered. Once knowledge about the machines is prepared, a poster will be constructed for each machine. On each poster, questions on how the machine works and why it is administered will be answered.

Results: Posters will be implemented in the office on July 15, 2016. Once posters are positioned in a location that is close in proximity to the testing machines, a survey will be carried out. The survey will address whether or not the posters are seen as informative, easy to comprehend and whether these posters provided the patients with any additional information they did not know in the past.

Conclusions: A random selection of five patients per day will take the survey over a two-week period. Office staff will also be participating in the survey and expressing their comments about the posters being added to the office. Technicians at the office will read all the open-ended responses. If a majority of the patients find the posters to be beneficial to their experience then the posters will remain in the office.

Internship Abstract

Title: Water lead sampling in NJ schools- Oak Ridge State University
Name: Alana Jimenez
Preceptors: Gary Schwartz, CIH, CSP, CMC, Company Owner
Agency: PHASE Associates LLC

Purpose: To determine the presence/absence of lead in water of the New Jersey College, Oak Ridge State University.

Significance: Drinking water is one possible source of lead exposure. Some drinking water pipes, taps, and other plumbing components contain lead. Lead in the plumbing can leach into water putting people, particularly children at risk. Lead is a toxic metal that is harmful to human health when ingested or inhaled (EPA, 2015). Concern grew rapidly when 30 buildings in the Newark Public School System had water supplies shut off due to elevated levels of lead and the Flint Michigan water crisis. In response to growing concern about the presence of lead in drinking water at schools, regulations by the New Jersey state Board of Education were passed in July 2016, stating that all schools in New Jersey must be tested for lead within a year (Associated Press, 2016). Governor Chris Christie announced in May that all schools will be required to test for lead. Districts that test within a year will be eligible for reimbursement of testing expenses through the state (Associated Press, 2016).

Method/Approach: We conducted initial random sampling in all the dorms in the University. Sampling followed the EPA's 3TS for Reducing Lead in Drinking water in Schools. First drawn or initial water samples were collected. This means the outlets being tested were not used for 8 to 18 hours prior to collection. The initial sample is representative of the water that may be consumed at the beginning of the day or after infrequent use. This is water that has been in contact with the faucet or drinking water fountain and the section of plumbing (EPA, 2015). Samples are then sent off to a certified drinking water laboratory to analyze samples.

Results: Two buildings (dorms) came back with samples higher than 15ppb of lead. Sixteen total random samples were taken from the two buildings. Eleven samples showed elevated levels of lead but below the action level, 15ppb. 4 samples showed elevated levels of lead above 15ppb.

Conclusion: When results come back with higher levels of lead than the action level, 15ppb, a follow up sample is needed to be done. Every single water source in the two buildings will be be sampled or resampled using a flush sample where water is run for 30 seconds before taking the sample. If the test results from the follow up samples show lead levels above 15ppb again, lead is entering your drinking water from the buildings interior plumbing (EPA, 2015). Additional samples may be needed to pinpoint the exact sources of lead. Some schools will have to replace piping completely, however if this proves too costly, many schools are adopting bottle water programs or other treatment options.

Internship Abstract

Title: Union Township Community CPR Program
Name: Maanaza Kalsee
Preceptors: Joseph McTernan Senior Director of Community & Clinical Services
Agency: Trinitas Regional Medical Center

Purpose: To analyze Emergency Department and Inpatient Admissions data identifying the major health issues within Union Township and propose a community intervention plan.

Significance: In the United States, cardiovascular disease (CVD) is the leading cause of death. Based on records from the American Heart Association, 801,000 people died from CVD in 2013. It is estimated that 356,500 of these deaths are from sudden cardiac arrest. Cardiac arrest can strike without warning and the victim's heart stops beating and they lose consciousness. Cardiac arrest usually occurs outside of a hospital, at home or in offices and the survival rate is about 12%. If CPR is administered within minutes of cardiac arrest the chance of survival increases to 39%. In Union Township, cardiac arrest is at the top of the list for reason of admission. Caucasian and African American senior citizens are the primary sufferers of cardiac arrest, but we are seeing this number grow in the middle aged population as well.

Method/Approach: The first part consists of obtaining demographic data from the Census to generate an overview of the people living in Union Township. Emergency Department and Inpatient Admissions data from 2015-2016 was analyzed to identify a target population and which disease, cardiovascular disease, most affected the community. After collecting data the second part includes developing a community intervention plan specific to cardiovascular disease. The planning involved creating a CPR program, developing a budget, writing a grant to obtain funds, obtaining resources such as information cards about cardiac arrest and CPR mannequins, and choosing which local organization to work with. The last part of this project involves hosting a CPR training program. Community members will be educated about the risks and symptoms of cardiac arrest and will be trained on how to perform Hands-Only CPR.

Results: Of the 1,606 records that were analyzed the cardiovascular disease accounted for 162 (10%) of the total diseases that affect Union Township. The top diagnoses for admission were cardiac arrest, chest pain, and coronary atherosclerosis. From the Inpatient Admissions data, 63% of the sufferers of cardiovascular disease are Caucasian and 15% are African American. From the Emergency Department data, 53% of the sufferers are Caucasian and 34% are African American.

Conclusion: A CPR program sponsored by Trinitas Regional Medical Center will be implemented in the last quarter of this year. The goal of this program is to increase the number of residents in Union Township who can identify the signs of cardiac arrest and perform Hands-Only CPR. Pre- and post surveys will be administered to participants measuring what the skills they have gained from training session. This will help increase the number of residents who will be able to perform CPR in the event that they are bystanders to cardiac arrest.

Internship Abstract

Title: Chronic Disease Self-Management Program and Diabetes Self-Management Program Assessment

Name: Joyanna Karuga

Preceptors: John Dowd; Division Head Public Health Preparedness and Health Education
Project Supervisor: Teri Manes; Health Educator, Twyla Paige; Health Educator

Agency: Middlesex County Offices of Health Services

Purpose: To assess the effectiveness of The Chronic Disease Self-Management Program (CDSMP) and the Diabetes Self-Management Programs (DSMP) by using a survey to track the progress made by past participants of the program.

Significance: Chronic Diseases are the leading cause of death and disability in the United States. The Center of Disease Control and Prevention estimates about 117 million individuals that have one or more chronic diseases. Given that chronic diseases are not curable, it is important to adapt techniques through which individuals who are affected by different chronic diseases identify ways to manage their lives and their health. CDSMP and DSMP workshops are evidence-based programs developed by Stanford University. These workshops are offered in community settings utilizing a variety of tools to assist people with chronic illnesses to manage their conditions. The workshops are facilitated by Peer Leaders who are trained under a license that has been issued to the State of New Jersey. Although a short survey is conducted at the end of the workshop, the participants' progress is not tracked. Therefore, to support continued utilization of the programs, it is important to find the long-term outcomes of the programs and assess the effectiveness of the programs in the participants' lives.

Method/Approach: A ten question survey was created utilizing Survey Monkey. An email was sent to former DSMP and CDSMP participants to inform them about the survey prior to distribution of the survey. The survey was sent out through a second email to forty-eight former participants who had provided their email contact information. Utilizing the same survey questions, eight surveys were conducted by phone and twenty surveys were distributed to a Senior Citizens Residence Facility in South Brunswick Township and the Senior Center in New Brunswick.

Results: There were 76 surveys distributed, representing the attendees of 8 workshops. Overall, the response rate of the survey was 40.8%. Of the 48 surveys that were sent through Survey Monkey, 27.1% were completed. The survey had a response rate of 50% for the phone surveys and 75% response rate in the Senior Residence Facility and Senior Center. Two follow up attempts were made to the individuals that did not respond to the first outreach and three reminder messages were sent through Survey Monkey to the individuals that had provided their email addresses.

Conclusion: Most of the participants reported that the CDSMP and DSMP workshops were useful and that the acquired skills helped them to better manage their lives and health. The participants recorded nutrition, decision-making and action planning as the most useful skills that they had acquired. Of the 64 females and 12 males that participated in the workshop, there was a response rate of 83.7% among women and 16.7% among men. The majority of the participants found out about the workshops in Senior Centers and Senior Residence Facilities. To reach more people, pharmacies and physician offices were identified as the ideal places to advertise the workshops. The outreach strategies stated above could be used to reach out to more men whose attendance to these programs is lower than that of women.

Internship Abstract

Title: Meal Planning: A Healthy Tool for Families
Name: Zachary Kazarian
Preceptors: Sara Elnakib, Family & Community Health Sciences Educator
Agency: Rutgers Cooperative Extension of Passaic County

Purpose: To assess and educate families on healthy eating in an effort to improve their overall health and reduce risk of obesity.

Significance: With a population that is consistently busy and working multiple jobs, many people eat 2-3 meals away from home each day. Food purchased outside of the home is often very high in sodium and fat content, contributing heavily to overall rates of obesity. As of 2010, more than two thirds of the adult population (age 20+) in the United States is overweight or obese, and these rates continue to climb annually. In New Jersey alone, 26.9% of the adult population is obese. This study will focus on the general population in an effort to reduce the obesity rate through skill building and behavior change.

Method/Approach: An online campaign was created in order to provide easy access to the target population. This campaign covered “healthy meal planning”, and was distributed to families within the general population. This online campaign consisted of a pre-test, an audio-visual presentation, and a post-test. The pre-test assessed initial knowledge, beliefs, attitudes, and intentions to change diets before being exposed to the presentation. After viewing the presentation, a post-test was given to assess the effects of the presentation on these core ideas. Data from these surveys was used to assess respondent’s knowledge of dietary recommendations and intention to change their dietary behaviors.

Results: We received a total number of 58 responses, while only 38 of these participants completed both the pre-test and post-test. Participants answered initial knowledge questions with a maximum of 54% accuracy. The post-test reported a 97% accuracy rate across all knowledge questions after the presentation. Participants initially reported 45% satisfaction with their diet, and 31% satisfaction with their diet after the presentation. The pre-test indicated that 50% of individuals were likely to use meal plans, and the post-test reported that 80% were likely to follow meal plans.

Conclusion: Participants showed that this education program was effective at increasing their knowledge on healthy meal planning. This was shown by the increases in knowledge question accuracy on the post-test. Participants also showed greater levels of dissatisfaction with their diets after viewing the presentation, showing that they are becoming more aware of the nutritional gaps in their diets. In addition to this, individuals demonstrated their intentions to change their dietary behavior. By increasing awareness of dietary recommendations and educating individuals about meal planning, individuals will be more likely to change their behaviors and improve their level of nutrition. This change in knowledge, attitudes and beliefs will help families eat healthier and reduce the risk for obesity.

Internship Abstract

Title: The Home Fire Preparedness Campaign
Name: Amreen Khan
Preceptors: David Huang, Disaster Program Specialist for the American Red Cross
Agency: American Red Cross New Jersey Regional

Purpose: To raise awareness at the home fire preparedness campaign, by educating the community in Central Jersey and installing free 10 years' lithium battery smoke detectors.

Significance: The American Red Cross goal is to decrease the number of injuries and deaths in the United States due to home fires up to 25% in the next 3 years. According to American Red Cross data, on average, seven people die in America due to home fires every day. Every year in United States, more than 2,500 people die from home fires and cause an estimate of \$6.9 billion dollars of damages. Nearly 4% of the homes without smoke detectors represent 40% of the home fires and working smoke detectors can double someone's chance of surviving the fire. In order to reduce this number, the American Red Cross have partnerships with the local communities, including local fire departments, faith based groups, businesses, schools, public health departments, social service agencies, neighborhood leaders and others to get involve and create awareness within the community nationwide.

Method/Approach: Using data collected by the American Red Cross from the year 2008 to 2012 in responses to home fires demographic neighborhoods in cities that are at greater risk such as low socioeconomic status, a poorer education system, areas that are affected by fires and mapped out. The American Red Cross set out a campaign on Saturday, July 16th, 2016 in Eatontown, New Jersey. Volunteers were set out to inform the residents in the neighborhood about the home fire preparedness program. On the day of the campaign, the American Red Cross provided all of the supplies needed. They were organized, labeled, and placed inside the truck. Volunteers with the partnerships then went door to door in those neighborhoods with home safety checklists, family disaster plan templates, and smoke detectors. Once invited into the residence, the volunteers completed the checklist and created a fire escape plan with the family while installing or replacing the smoke detectors.

Results: At the Home Fire Campaign in Eatontown, NJ on Saturday, July 16, there were total of 272 homes and 71 smoke detectors were installed. The campaign surpassed 10,000 smoke alarm installations in New Jersey. It has exceeded the New Jersey Home Fire Campaign install goal for the year 2017, which is 9,600. Since the campaign was launched in October of 2014.

Conclusion: As a part a five year campaign, all the data collected by the team documenters were entered into an online database created by the American Red Cross. These sets of data are used to figure out how many smoke detectors were installed and in what affected areas. Once statistics are calculated, then there is a clear measure to whether this campaign has been successful in reaching its goals. So far, 94 addresses helped save life nationwide throughout this campaign.

Internship Abstract

Title: An Examination of Preparation and Operations for Zika Virus in New Jersey

Name: Naiha Khan

Preceptor: Wendy Sheay, Public Health Planner, Emergency Preparedness and Operations

Agency: New Jersey Department of Health (NJDOH), Division of Public Health Infrastructure, Laboratories and Emergency Preparedness (PHILEP)

Purpose: To investigate the planning needs of local health departments in preparation for a response to local transmission of Zika virus in New Jersey.

Significance: Numerous local health departments in New Jersey do not have a planning document specific for responding to a locally transmitted case of Zika Virus. On June 22, 2016, the NJDOH co-sponsored a day long educational workshop where agency representatives from the 21 New Jersey counties attended to gain further knowledge about planning and response to Zika Virus. A survey was distributed during the workshop to gain feedback from the representatives to understand how the NJDOH could better assist them if they had a confirmed case of locally transmitted Zika Virus in their jurisdiction.

Method/Approach: A one-page survey with a total of seven questions (multiple choice and open ended) was distributed during the workshop. The questions addressed a few topics: whether the agency had a specific written plan to follow if there was a confirmed case of Zika Virus, if the agency representatives could rate the usefulness of certain documents which had been referred by the NJDOH (e.g., the CDC's guidelines or the NJDOH's Zika Plan), what tools did local agencies need to disseminate information to the public, the effectiveness of NJDOH's outreach efforts, and if they had additional suggestions for NJDOH to assist them with preparedness for local transmission of Zika Virus.

Results: Of the 112 local health department representatives, 76 answered the survey questions. 61 of 76 (80.3%) respondents stated that their agency did not have a written plan specific to Zika Virus. However, more than half (55.3%) claimed that their agency did intend to draft such a plan. 62 respondents stated that they would find New Jersey-specific local planning guidance for Zika operations helpful. Regarding the effectiveness of documents referred by the NJDOH, most responses varied between "Very helpful" and "Did not read". 60 (85.7%) respondents chose "Infographics/posters" and 59 (84.3%) picked "Brochures" as tools that would be most helpful in disseminating information to the public. 59 (84.3%) chose "Template for local health departments and counties" as their choice for an NJDOH outreach effort which would be effective for local agencies.

Conclusion: The local health departments will be better prepared to respond to a case(s) of Zika Virus if they have a plan written specifically for their jurisdiction. The most popular choice among respondents was assistance from the NJDOH with a template for the agencies, which would outline specifics regarding Zika Virus operations. Once the NJDOH was notified of the results of the survey, the Director of Emergency Preparedness & Operations contacted some local subject matter experts to ask if such a template could be drafted. As of August 8, 2016, a representative of the New Jersey Association of County and City Health Officials (NJACCHO), a private, non-profit public health organization, confirmed that NJACCHO will be writing a template for local health departments of New Jersey.

Internship Abstract

Title: Communication amongst Hospital

Name: Saadiah Khan

Preceptors: Direct Supervisor: Prof. Mrs. Afua A.J. Hesse; Project Supervisor: Ethel B.

Agency: Accra Medical College

Purpose: To analyze increase of deaths due to insufficient amounts of beds in hospitals, refusing medical care, or inadequate funds to pay for health care.

Significance: According to the World Health Organization there is always an insufficient amount of hospital beds per 1000 person for both acute and chronic care in Ghana. Many individuals would die in the process of being transferred to another hospital or they would arrive to another hospital to only find out that there are no more available beds. In the U.S. similar issues with insufficient amount of beds arise when numerous individuals begin to become infected by viruses. Refusal of medical care causes an increase in spread of diseases and in turn harms individual. Certain individuals in Psychiatric clinics refuse medical care and are forcefully admitted while others have inadequate funds to stay in a hospital or high-end facility.

Method/Approach: Working closely with information obtained from different hospitals of the amount of beds available was compared with the population of that area. In Ghana the information from World Health Organization was used to categorize those individuals who chose herbal medicinal care versus modern medical care. Information obtained from patients lifestyle and admitted status in four departments at Carrier Clinic, adolescents, older adult unit, general adult unit, acute care units; provided sufficient amount of data to explain the reason certain individuals were in the psychiatric facility. Information was mainly retained from charts and data, which was voluntarily provided to the Clinic. A strict HIPPA protocol was emphasized.

Results: There are a total of .9 beds available per 1000 individuals in Ghana. An increasing low amount that is not feasible to the population, similar situations arise in the U.S. with 3 bed being available per 1000 individuals. In times of crisis, there are insufficient beds and an increased number of individuals who seek medical care. However, during smoother transitional times some individuals refuse receiving yearly vaccines to avoid certain diseases to start with. Some individuals refuse to be admitted to psychiatric facilities and are forced to be admitted.

Evaluation: Close to a 100% of the population are obtaining vaccinations, however, some districts are not reachable so it is difficult to have access to them. However, during harsh weather conditions it is extremely difficult to ensure everyone had immediate assistance to healthcare and in turn leads to high mortality rates. The traditional lifestyles and social stigmas played a huge role in the decisions individuals make when it comes to receive healthcare in both the United States and Ghana.

Internship Abstract

Title: SIHLE in New Brunswick
Name: Cindy Krampah
Preceptors: Direct Supervisor: Deloris Dockrey
Project Supervisor: Tyeisha Adams
Agency: Hyacinth AIDS Foundation

Purpose: To recruit at risk adolescent females to implement an HIV/AIDS sexual risks behavior intervention program called SIHLE in New Brunswick.

Significance: New Brunswick is in need of a youth HIV/AIDS prevention program that is not an abstinence-based program. In 2012, women accounted for 25.5% of the adult/adolescent HIV/AIDS diagnoses in New Jersey. Women of color, particularly African Americans, represent the majority of the infections among women (64% African American, 21% Hispanic). By implementing a non abstinence-based program focusing on the reduction of HIV sexual risk behaviors, SIHLE is intended to increase knowledge about HIV/AIDS and improve communication, decision-making, and condom use among sexually active African American female adolescents.

Method/Approach: The first session for the New Brunswick intervention program called SIHLE was set to be started in August. As outreach, multiple youth programs in the New Brunswick area were contacted in pursuit of recruiting 10-12 African-American females between the ages of 14-18. Agencies were contacted by phone and via e-mail. Current Hyacinth clients were also contacted and given more information about SIHLE to reach out to our target population. A flyer was created and sent to different organizations. The SIHLE flyer was also posted on three social media networks, Twitter, Instagram, and Facebook, to reach out to a larger audience.

Results: Outreach targeted New Brunswick youth serving nonprofit organizations and Rutgers high school programs. Fifteen new agencies were identified and five Hyacinth clients were informed about SIHLE at a meeting. Seven (47%) of those contacted responded with interest and questions about SIHLE and two peer facilitators were recruited for future SIHLE sessions. A recent SIHLE session in Somerset with five participants served as a preliminary pre-test of the August meeting and was completed with the following outcomes: increased knowledge about HIV and other STD's as well as risk reduction strategies, knowledge on assertive communication skills, and enhanced comprehension when it comes to distinguishing between facets of both healthy and unhealthy relationships.

Conclusion: Pretest and posttest are administered at the beginning and ending of the four sessions. The knowledge of HIV and its risk factors are tested. Pretest and posttest also determine how effective the sessions were in helping young girls make healthier life choices.

Internship Abstract

Title: Preventing line of duty deaths for first responders

Name: Cynthia Lewitter

Preceptors: Direct supervisor: Ginny Rizzo, Secretary and Mike Gallagher, Fire Marshal

Agency: Middlesex County Fire Academy

Purpose: Prepare an action plan to lower the death rate of line of duty deaths (LODD) of firefighters with improved policies, procedures, and equipment.

Significance: Annually, there are over 100 firefighter deaths and more than 80,000 injuries across the country. It is estimated that 30% of these deaths could have been prevented. A major cause of these deaths is cardiac-related, rooted in the victim's lack of maintaining proper fitness and health. Other preventable causes of LODD include vehicle deaths and from the general firefighter mentality. The best way to help prevent injuries and deaths is to focus on prevention and inspections to potentially reduce the risk of injury by as much as 82%.

Method/Approach: A broad based educational and awareness program targeting preventable incidents will make firefighters more aware of the dangers they face and provide ways of avoiding them. Points would include: proper eating habits, regular physical exercise, periodic monitoring of health markers, and mandating the proper use of protective clothing. A county-wide plan will be developed involving standards for safety health using the NFPA criteria, the framework of Everyone Goes Home (16 initiative program). All firefighters will participate in ongoing health programs and physical exams. The program will be rolled out to 10 of the 54 fire departments in Middlesex County annually, with incumbent firefighters required to present proof of health physical annually. It is critical to implement penalties for non-compliance. Fire departments would be able to add to the basic county plan.

Results: Nation-wide objectives include goals to reduce LODD by 25% in 5 years, 50% in 10. Full implementation of the "16 initiatives" will give firefighters a better chance of going home safely. There is reason to believe that injuries and LODD rates will fall if all fire service organizations seriously implement a vigorous health and safety program. There have been 48 New Jersey LODD since 2004- a mere 10% reduction would mean five fewer deaths. Injuries and LODD will be lessened if each organization seriously committed itself to these programs. The results will be priceless if even one less family loses someone to LODD.

Conclusion: Similar programs have shown little or no change in LODD because most departments or individuals refuse to follow them. Unwillingness to change lifestyles, buy into the idea of healthy eating or regular physical training and periodic physical exams have caused the number of cardiac deaths to remain static. Despite improvements in protective clothing, education, and health care the numbers of line of duty injuries and deaths have remained relatively unchanged. There need to be stronger consequences for those firefighters that do not follow safety and health procedures. Firefighters, the industry, and the profession need to understand the causes of injuries and deaths and embrace the idea of change. At a minimum, department-wide policies should be implemented. Requiring yearly physical and fitness exams and removing from duty those that do not meet the standards would likely prevent a potential injury, or even death. It is critical that consequences for non-compliance be enforced. Currently, there is no recertification program for firefighters. Requiring physical exams and confirmation of adherence to safety protocols to renew certification would provide strong incentives and personal accountability. With no compliance to date, success would involve at least one department embracing the new standards.

Internship Abstract

Title: Management of Diabetic Adolescents in a Summer Camp Environment
Name: Alec Mais
Preceptors: Direct/Project Supervisor Joanne Oventhal RN BSN MSN, Medical Director
Agency: Blue Rill Day Camp

Purpose: Develop a set of evidence based protocols to more efficiently manage diabetic campers.

Significance: There are about 250,000 children under the age of 20 with diabetes in the United States (American Diabetes Association, 2014). According to Wolanski, Sigman, and Polychronakos (1995) “evidence suggests that serious vascular, renal and neurological complications resulting from poorly managed diabetes mellitus, can be prevented or reduced by” proper monitoring of glucose levels”. When children attend summer camps, the camp’s medical staff are tasked with monitoring diabetic campers. At Blue Rill Day Camp the diabetic campers blood glucose levels are taken when they come to camp in the morning, before and after instructional swim, before lunch, before and after free swim, before they leave on the bus home, and any time the camper doesn't feel well.

Method/Approach: A literature review was done comparing how Blue Rill Day Camp manages it’s diabetic campers compared to other similar institutions. These institutions included schools and other summer camps.

Results: Upon reading literature from other day camps, schools, and specialized diabetic camps regarding the management of diabetic adolescents, it appears that Blue Rill Day Camp operates within the recommendations in the literature. The one area that can use improvement is educating the nonmedical staff members about diabetes. The nonmedical staff members, like the diabetic camper’s counselors, often do not seem to grasp the complexity of the disease. More training than what is already done by the camp medical staff to further educate these staff members on diabetes is recommended.

Conclusions: Based on the literature review, the staff who interact with the diabetic campers need to be better educated about diabetes. The staff should go through an educational program given by either the head nurse or a diabetes educational company to learn how to deal with a diabetic camper. The program should include signs and symptoms of high and low blood sugar, dietary restrictions, as well as which medical concerns should precipitate a visit by a diabetic camper to the nurse's office to be evaluated.

Internship Abstract

Title: Amending Health Ordinances for Exterior Property Maintenance

Name: Ta'tyana Manning

Preceptors: Project Supervisor: Jacqueline Foushee, P.E., C.M.E
Director, Department of Community Development

Agency: City of Rahway, Department of Health

Purpose: To assess and amend Rahway municipal ordinances that are used, along with State Statutes, as a guideline for appropriate exterior property maintenance to improve public health within the community.

Significance: Every year, the number of occupied, vacant, and abandoned properties fluctuates. Many cities establish ordinances to create a certain criteria for residents to abide by in order to maintain their property. Today, vacant and abandoned properties are more than just a symptom of larger economic forces at work in the community. They are associated with crime, increased risk to health and welfare, plunging property values, and escalating municipal costs make them problems in and of themselves. These issues also contribute to the overall community decline and disinvestment. With these ordinances, the City of Rahway hopes to diminish any conundrums regarding exterior property maintenance that may obstruct residents' quality of life, create public health problems, or may be detrimental to the overall appearance of the community. Our goal is not only directed towards current residents, but also potential residents, business owners and individuals who may pass through town or visit whether infrequently or regularly.

Method/Approach: The City of Rahway has established ordinances in correspondence to N.J.S.A. (New Jersey Statutes Annotated) in order to implement laws that ensure cooperation and appropriate actions necessary for property maintenance. In regards to properties in Rahway, the City's Health Department has staffed three health inspectors one for each type of property; occupied, vacant, and abandoned. Together these health inspectors will regularly explore the community and document any unkempt properties or properties that meet violations.

Results: By having health inspectors examine the community, the Health Department has found that there is an inordinate amount of properties that tend to have undesirable characteristics such as: high grass, abandoned properties that attract rodents and debris, along with other exterior deterioration due to lack of maintenance. It is legal for an inspector to examine exterior properties, so the ordinances that have been set in place allows them to send out warnings and issues fines. Ideally, the fines and summons will pressure individuals to keep up with their property maintenance.

Conclusion: With approximately 28,394 individuals residing in the City of Rahway, it becomes difficult to monitor every property; especially those whom are unkempt, abandoned and have outstanding violations. These policies and ordinances will continue to work as a guideline for the municipality and residents to abide by with hopes of diminishing the number of unkempt properties and keep violations to a minimum in order to help keep the community from being exposed to detrimental health conditions.

Internship Abstract

Title: A Digital Revolution in Healthcare and Pharmaceuticals
Name: Sanya Nagpal
Preceptors: Mariam Ahmed, Co-Founder & VP of Business Development
Agency: Navinata Health, Inc.

Purpose: To analyze the impact of a digital education platform in place of drug representatives as agents of communication and education between pharmaceutical brands and physicians regarding new drug therapies.

Significance: Customarily, pharmaceutical companies are in primary control of disseminating information and marketing their products, while drug representatives are the primary source for physicians to gain insight on upcoming therapies. But with the rise of digital technologies, new avenues for information sharing are surfacing, including educational platforms that allow physician engagement and knowledge exchange. Doctors work long, hard hours so time is of immense value. A digital platform that reduces the time spent on drug representative visits, while providing all relevant drug information in one location so physicians can access and learn at their convenience, is both an innovative and efficient way to increase awareness and knowledge about upcoming therapies.

Method/Approach: Navinata Health's Knowledge Exchange Platform is a digital platform that replaces drug representatives as sources of education and initiates knowledge exchange through short educational modules. In this study, Educational videos were designed with a focus on new therapies for Multiple Myeloma, a blood cancer that occurs in the bone marrow. Oncologists and Hematologists who specialize in Multiple Myeloma treatment were asked to employ the digital platform at their convenience and provide feedback on its usability and overall efficacy. While the physicians specialized in the same field of medicine, they varied in primary practice setting. Follow-up questions addressed overall opinion on ease of use, prescription patterns, likelihood to utilize the platform, and general benefit.

Results: Of the 15 physicians who participated, 5 practiced in a private practice, 4 in a university/academic teaching hospital, 3 in a comprehensive cancer center and 3 in a non-teaching hospital. After utilizing the digital platform and educational modules, 73% of physicians reported accessing the internet for health and therapy related resources. 80% preferred a digital platform as opposed to visits from drug representatives. 66.7% reported they would be more likely to prescribe a drug after learning through digital resources. 33% of physicians still preferred to meet face-to-face with drug representatives. 100% of physicians felt that it beneficial to have all relevant therapy resources in one location i.e. on the platform.

Conclusion: Physician feedback indicates that digital technology integration in the pharmaceutical and healthcare industries is of value. Digitizing drug education is a convenient and efficient avenue for physicians, and ultimately has the power to transform the industry through increased physician engagement.

Internship Abstract

Title: Healthcare Experience Assessment Among Older People with HIV
Name: Sampada Nandyala
Preceptors: Deloris Dockrey, MPH, Director of Community Organizing
Agency: Hyacinth AIDS Foundation

Purpose: To assess sexual health discussions between healthcare providers (HCPs) and Hyacinth's older clients via a survey, and propose active methods to improve patient-provider experiences.

Significance: According to the Centers for Disease Control and Prevention (CDC), older adults with HIV are at higher risk for poor prognosis, and subject to stigma because of age. Research suggests older adults tend to lack sufficient knowledge about HIV and safe practices. Also, evidence indicates only 38% of men and 22% of women discuss sexual health with physicians after turning 50 years old, and of 135 surveyed primary care physicians, 60.8% rarely talk to patients over 50 about HIV/AIDS (Ports, Barnack-Tavlaris, Syme, Perera & Lafata, 2014). This disconnect between older adults and HCPs explains how the epidemic is rooted in limited awareness and education. Promoting regular sexual health discussions among older adults will help address this gap.

Method/Approach: A 21-question survey was distributed to client service managers (CSMs) at the six regional Hyacinth offices, and given to clients during weekly group sessions. The survey evaluated older clients' sexual health discussions with their HCPs, pre- and post-diagnosis. Stigma was also assessed by gauging treatment differences and clients' comfort levels when speaking about sexual health with HCPs. Four offices participated: New Brunswick, Newark, Trenton, and Jersey City.

Results: Of the 44 recipients, 35 (80%) are at least 50 years old, and comprise the sample cohort. Pre-diagnosis, 18 (51%) clients never had sexual health discussions with their HCPs. Of those who had discussions with their HCPs before diagnosis, 6 (43%) clients report their providers initiated them during every visit. Post-diagnosis, 11 (31%) clients report rarely having such discussions, and 7 (20%) never doing so. Of those who do have discussions with HCPs, 7 (32%) clients report their providers initiate these talks every visit. As for stigma, 12 (34%) clients strongly disagree that HCPs treat them differently, 12 (34%) agree they are uncomfortable discussing their sexual health with HCPs, 12 (34%) agree HCPs quickly dismiss their questions and concerns, and 13 (37%) agree HCPs think they have no sex lives.

Conclusion: Survey results were varied, but 51% of clients reporting never or rarely discussing sexual health with HCPs post-diagnosis indicates a need for improved patient-provider experiences. Therefore, a five-question guide was created for older clients to implement active, patient-initiated discussions during doctor visits, and help eliminate stigma from HCPs. Although reviewed by CSMs, the survey was neither pre-tested, nor validated. With the small sample size, this suggests that results should be carefully assessed and treated as preliminary findings for future studies by Hyacinth on this subject.

Internship Abstract

Title: The Essential Use of Integrative Medicine for Stress Relief

Name: Swathi Narayan

Preceptors: Dr. Babita Saaraswat

Agency: Geom Physicians LLC, Integrative Medicine

Purpose: To analyze the implications of a five-minute vocal meditation on an individual's overall mental health and stress levels.

Significance: Integrative medicine has become one of the many ways doctors are seeking to improve the overall quality of mental and physiological health of patients all over the world. Meditation has been proven to decrease levels of stress and anxiety through continuous practice. According to neurologist, Frederick Barrett from Johns Hopkins, "Meditation interventions have been shown to be effective in reducing stress and anxiety... it is a powerful and established method to alter human consciousness." Also according to a study conducted by the National Institute of Health about 8.0% of adults in the United States meditate, and each have found that it has been quite the compliment to their lives. Integrative Medicine is one of the many alternatives to prescription drugs that is slowly changing the lives of many worldwide.

Method/Approach: Dr. Saaraswat tabled at a local community event where she educated individuals about Integrative Medicine, and after she asked if they would want to be participants in her research. The participants were asked to fill out their age, occupation, physical, and mental well-being. They answered the eight questions on a scale from 1 being the least and 10 being the most about their overall health before the meditation began. Then a 5-minute vocal meditation, which guided the participant into a more meditative zone, was played while they relaxed. After the guided meditation was complete, the participant filled out a post meditative survey that was the same as the questions asked before the meditation started. The questions were a key indicator, which allowed for accurate measurements of the data.

Results: Of the twenty-eight participants that completed the study, nineteen were female and nine were male. The participant age range was from 16 to 70 from occupations such as students, physicians, software engineers, housewives, and even business analysts. Of the nineteen females, 42% felt no difference in their levels of stress before and after the study and 63% felt less stressed after meditating for five minutes. Of the nine males 33% felt no change in stress levels and 66% felt a decrease in levels of stress post mediation. None of the participants felt any levels of increased stress after meditating.

Conclusion: Research conducted by Dr. Barrett which stated that mediation can indeed decrease an individuals levels of stress and even their anxiety was supported by the findings presented above. Dr. Saaraswat will continue her study of meditation, which will involve individuals from all ages through the course of time.

Internship Abstract

Title: Trend Analysis of Tuberculosis (TB) Middlesex County Cases
Name: Jackson Ngatia
Preceptors: John Dowd, Marybeth Caruso and Teri Manes
Agency: Middlesex County Office of Health Services, Tuberculosis Clinic

Purpose: To conduct a trend analysis on tuberculosis (TB) cases in Middlesex County, NJ between 2011-2015 in an effort to identify variables that are linked to TB cases. The information will be used to help focus education and treatment in Middlesex County in order to minimize and control the spread of TB.

Significance: According to the County of Middlesex 2016 website, Middlesex County is a county of over 831,300 residents, making Middlesex County the second most populated county in the state of New Jersey. In 2014, according to the Center for Disease Control and Prevention (CDC) 9.6 million people around the world became infected with TB disease. In 1989, the CDC announced the goal of eliminating TB from the United States by the year 2010. However, TB remains active in United States and in Middlesex County. In 2011, Middlesex County had 53 confirmed TB cases, which was the highest incidence in New Jersey. Therefore, knowledge of the priority groups affected will help will help identify the variable affecting TB cases in the county.

Method/Approach: In compliance with state law all confirmed cases must in the county, regardless of the health care provider. The confirmed case must be reported and entered into a Microsoft Access database maintained by the Middlesex County TB clinic. Data from the 5-year period 2011-2015 was evaluated. Confirmed cases consisted of patients who were tested and diagnosed with active TB disease through either skin or a blood test. There were 216 total cases which were evaluated to show the geographic distribution, ages, clinic vs. private provider visits, and pulmonary vs. non-pulmonary cases. Utilizing Microsoft Excel, the data was analyzed to identify the trends of TB cases.

Results: There was a sizeable number of cases in each of the five years studied, ranging from a low of 32 to a high of 53 cases. Patients ranged from 0-9 years and as old as 90-99 years old. Persons identified as Asians had the highest proportion of cases, as compared to Black, White and Hispanic. This may be linked to high-density living situations. Patients in the age group of 30-39 years had the highest infection rate with 64 cases (30%) as compared to other age groups. Sixty-six percent (n=142) of the cases visited private practices for treatment as compared to thirty-four percent of patients (n=74). The cities of Edison and New Brunswick had the highest rate of patients with 51 cases (24%) and 22 cases (10%) respectively. Patients with pulmonary TB had a higher rate of infection as compared to those with non-pulmonary TB cases with 135 (62%) and 81 cases (38%) sequentially.

Conclusion: Data analysis as presented above shows the highest prevalence among Asians, persons 30-39 years old, patients with pulmonary TB, and those who visit private practices. Therefore, it indicates a need to focus education and treatment in these target groups, as they are the most infected with the TB disease in Middlesex County, New Jersey. Furthermore, continued surveillance is needed.

Internship Abstract

Title: Redevelopment Planning: Promoting Movement & Economic Opportunity

Name: Martina Okolo

Preceptors: Michele Alonso, Director of Planning and Redevelopment

Agency: Asbury Park City Planning and Redevelopment

Purpose: Analyze redevelopment planning in Asbury Park, New Jersey to establish how mixed-use buildings, improved transportation, and circulation address economic and social challenges.

Significance: The City of Asbury Park is experiencing new growth and economic activity that has evolved the area into an appealing summer vacation spot and a year round home to many. The East side of Asbury Park in particular continues to experience rapid development and increased economic opportunity. The East side has succeeded in bringing together the beauty and esthetics of the waterfront and a thriving financial district. However, a five-minute walk across Main Street is Springwood Avenue, frequently referred to as the West side of Asbury Park. This area has not seen the same opportunities for revitalization as the East side. The West side has yet to recover from disinvestment due to race riots more than 40 years ago. Compounding this was the economic downturn and a national housing crisis. The divide is evident in distressed, aging buildings and lack of commercial activity. Various economic and social challenges adversely affect the 31% of Asbury Park residing in the West end. Resulting in isolated city assets and limited economic opportunities for West end residents.

Method/Approach: Long Branch and Asbury Park are both beachfront towns that face similar challenges such as, limited parking, struggling commercial areas, deterioration of housing, and poor pedestrian circulation and linkage use. Research will largely rely on the Main Street Redevelopment Plan, Broadway Redevelopment Plan, Long Branch Sector plan, Connecting Communities Corridors report, Asbury Park Transportation Improvement study, Amended Springwood Avenue Redevelopment Plan. Specifically focusing on barriers/practices associated with the Broadway Center redevelopment, efforts used to address blight and the vision of public transportation in Long Branch. This project will examine how Long Branch used transit policies, streetscape design, and mixed-use buildings to encourage growth. A overall analysis of how Long Branch reversed economic instability of its commercial areas will be conducted, and how these same efforts can be utilized in Springwood and Main Street redevelopment areas. Interviews conducted with my preceptor, the Director of Planning and Redevelopment for Asbury Park and the Executive Director of both Long Branch and Asbury Park Housing Authority will help draw conclusions.

Results: The research will yield goals and identify tasks for the city of Asbury Park. Exploring how the redevelopment that promotes movement and economic growth can address west side residents' quality of life.

Conclusion: Recommendations will be submitted to Asbury Park to assist with current transformation planning efforts on the West end. Whether recommendations are utilized and how effective of a model Long Branch is for redevelopment in Asbury Park will evaluate success.

Internship Abstract

Title: D.E.S.I SEHAT - Colorectal Cancer Screening Education and Outreach Program

Name: Zain Padela

Preceptors: Direct Supervisor: Usman Khan, Health Educator
Project Supervisor: Sharon Manne PhD, Population Studies

Agency: Rutgers Cancer Institute of New Jersey

Purpose: To identify perceived barriers in cancer screening participation for colorectal cancer screening within the South Asian community in New Jersey and to improve screening participation rates.

Significance: Colorectal cancer remains the second leading cause of cancer related deaths within the United States with an expected 49,160 deaths in 2016. (ACS) While colorectal cancer mortality and incidence overall is decreasing due to cancer prevention and screening efforts, those rates are increasing within the South Asian community. (Glenn) The South Asian population in the United States is the third largest Asian group, comprising of 3.4 million persons and is also the fastest growing population, with a 106% growth between 1990 to 2000. (Manne) Studies have shown that colorectal cancer rates were significantly higher in South Asians living in the United States when compared to their counterparts in South Asia. (Jain) One explanation to this phenomenon is low participation in cancer screening with previous studies showing that only 31.9% of South Asians within New Jersey are adherent to screening guidelines compared to 68.9% for non Hispanic whites. (Manne) Conducting a pilot study to determine the factors influencing this disparity and delivering interventions to address those barriers should improve cancer screening participation.

Method/Approach: Eligibility criteria for the study were: South Asian's born outside of the US, over the age of 50, able to read and communicate in Hindi or English, and no recent history of colorectal cancer screening. Recruitment was done mostly through South Asian community organization networks and the formation of partnerships with these organizations. The study consists of three phases; a baseline questionnaire, educational intervention, and concludes with a follow up survey. Analysis will consist of frequency distribution and bivariate analysis ($p < .05$) between demographics and cancer knowledge.

Results: Of the same size ($n=35$), 42.9% were women and 57.1% were men. 25.7% had completed an education up to or below high school and 74.3% had completed at least some college or greater. 28.6% were uninsured while 22.9% did not have regular access to a PCP. 82.9% had not received screening recommendations from their PCP. 62.9% had heard about FOBT testing, 57.1% had heard about colonoscopies and, 14.3% heard about sigmoidoscopies. On the knowledge quiz, 37.1% had a score ≤ 0 , 51.4% between 1-4, and 11.4% between a 5-6. Positive correlations were found between a higher score on the knowledge quiz and PCP access ($p=.029$, $R=.309$) as well as being insured ($p=.004$, $R=.429$).

Conclusion: A large percentage of the sample size (88.6%) scored below a 5 on the knowledge quiz, showing inadequate knowledge regarding colorectal cancer. A similarly percentage (82.9%) of participants did not receive any screening recommendations from their doctors. Post study recommendations are to continue working on increasing outreach from health educators, specifically targeting uninsured populations and those who do not have regular access to a physician. Encouraging physicians to increase screening recommendations to high-risk populations could also prove to be high yield in improving screening participation and promoting healthy cancer prevention behaviors.

Internship Abstract

Title: Bringing Restorative Justice into the New Brunswick-Rutgers University Partnership
Name: Anish Patel
Preceptors: T.K. Shamy, City Attorney, City of New Brunswick
Agency: City of New Brunswick Law Department

Purpose: To analyze the qualitative impact of studentification in New Brunswick New Jersey and to research and propose changes in city ordinance enforcement to lower the student recidivism rate.

Significance: Studentification is defined as “influx of students within privately-rented accommodation in particular neighborhoods” (Smith, 2005). It is a process that has economic, social, housing public safety, and health consequences on communities. Students have been moving into the off-campus community in New Brunswick at a steady pace over the last several decades and their impact on quality of life in the local community has not been well-researched.

Method/Approach: Semi-structured interviews were conducted covering all of the consequences of studentification. A sample of subjects (n=20) was identified from different stakeholder groups from around the New Brunswick Community. have lived in areas which have been studentified. Interviewees were selected from local law enforcement (n=4), city administrators (n=4), landlords in the community (n=4), University administrators (n=4) and local residents (n=4). Later the interviews were coded to compare to examples in the literature. Secondly, a case study of the University of Colorado-Boulder was conducted. This case study analyzed a restorative justice model that the University of Colorado -Boulder used. This model was then discussed with the stakeholders in the New Brunswick and Rutgers community to determine changes necessary and overall potential efficacy.

Results: The interviews showed very high rates of concordance with the established consequences of studentification. 100% of interviewees mentioned public safety/crime and social concerns. Health concerns were mentioned in only 30% of the interviews. 70% of interviewees expressed major concerns over the housing market. Research on Boulder Colorado and the University of Colorado revealed similarities between the communities. Semi-structured interviews of similar (n=10) stakeholders revealed similar consequences in Boulder. The University used a restorative justice model, which allowed students to forgo traditional municipal sanctions for ones that are more educational.

Conclusion: Studentification is a phenomenon that is not well researched in the United States and specifically in New Jersey. However, the interviews show almost shocking similarity to the conditions faced by many communities in the United Kingdom during the late 1990s and early 2000s. (Hubbard, 2009) Studentification is an established and ongoing process, and it does have negative consequences for the community. However local government and University administration can implicate themselves and intervene in the problem by sanctioning student offenders in an educational way that promotes learning and community living.

Internship Abstract

Title: City of Newark Community Asthma Assessment
Name: Anjeli Patel
Preceptors: Dr. Felesia Bowen, PhD, DNP, APN
Agency: Center for Urban Youth and Families at Rutgers University School of Nursing

Purpose: Provide a comprehensive assessment of asthma resources and services available to residents of Newark, New Jersey.

Significance: Asthma is a chronic lung disease that affects approximately 16.4 adults and 70 million children in the U.S, regardless of their race, ethnicity, sex, and age. In New Jersey, 572,877 adults and 174,346 children are affected. Essex county, specifically Newark, has one of the highest populations of residents with asthma. Asthma cannot be cured but it can be controlled. However, access to knowledgeable providers, appropriate medications, individualized treatment plans and self-care education can decrease symptom severity and improve quality of life. Presently, there is no comprehensive resource guide for asthma related services for the city of Newark.

Method/Approach:

A manual and electronic review of all medical, support and assistance programs aimed at assisting residents with asthma was conducted. The search consisted of internet search at the municipal and state level. Interview of department of health provider staff for available resources. Additionally, the major hospitals within the Newark area were interviewed to determine what asthma specific services are available to Newark residents.

Results:

Information from the assessment was entered into an electronic format for use by the Newark Department of Health staff. The municipal website will be updated to include the asthma resource directory. Information gained from interactions with Newark Department of Health provider staff will be used as the bases for continuing education programs. Overall, the assessment revealed that there is a need for a comprehensive asthma resource guide for the city of Newark. The following service gaps were identified: specialty providers for children, accessible hours to specialty care providers for children and adults, community education programs for residents and providers, resources to address major triggers such as smoking cessation and cessation aids.

Conclusion:

Presently, there are very few community resources available to Newark residents with. Low-income minority residents of urban areas are disproportionately affected by asthma. Providing accurate and linguistically appropriate information regarding local asthma resources is one way to help Newark residents with asthma take control of their illness. The Center for Urban Youth and Families at Rutgers University will work with the Newark Health Department to develop a community plan to increase asthma resources for the residents and healthcare providers of Newark, NJ.

Internship Abstract

Title: Evaluation of Emergency Shelter and Wraparound Services for Homeless Families

Name: Bhavin Patel

Preceptors: Paula Massa, Affiliates Projects Associate
Ryan Berens, Technical Services Associate

Agency: Family Promise, Inc.

Purpose: To discern patterns in housing and employment outcomes for homeless population participating in shelter and support programs, and determine efficacy of said programs.

Significance: Many U.S. families are homeless or at risk of homelessness, a circumstance that is especially stressful for families with children. As the policy response to the problem of family homelessness has been inadequate, nonprofits have assumed much of the burden of providing emergency shelter and wraparound services to homeless families. To develop a proper account of family homelessness, it is important to study client data gathered by such a nonprofit.

Method/Approach: I conducted a retrospective review of responses to in-house ‘census’ surveys to discern patterns in demographics, economic circumstances and post-assistance housing outcomes of homeless families served by the nonprofit over the past three years. I used data management techniques and statistical methods to produce appropriate data visuals and analysis. I then revised the original surveys with the goal of garnering future responses that will provide a more thorough account of family homelessness in the U.S.

Results: 3634, 3741 and 3940 families were assisted in 2013, ‘14 and ‘15, respectively. During this period, families’ reported racial identity remained steady at approximately: 43% African American; 36% Caucasian; 10% Latino; 7% Multi-racial; 2% Native American; 1.5% Hawaiian/Pacific Islander; 0.5% Asian. The reported primary causes of homelessness in 2015 were 40% Eviction/Foreclosure, 26% Displacement and 34% Other Reason. From 2013-15, the percentage of families with at least one employed adult upon program entry increased from 26.4% to 33.6%. Across the years, ~80% of families who received assistance were from the county in which they received assistance. In 2015, 73% of families assisted by the nonprofit were able to secure permanent or transitional housing.

Conclusion: Though there is no clear breakdown of families with employment as single- or double-income households, the findings suggest that employment alone is not enough to secure housing. The high incidence of ‘Other Reason’ as the primary cause of family homelessness warrants further investigation. The findings on spatiality suggest that families will not travel very far for assistance, possibly out of concern for children’s school enrollment. The nonprofit has a high rate of success in rehousing families, especially considering the precarious situation and instability of a family experiencing homelessness.

Internship Abstract

Title: Company-wide Newsletter Project

Name: Dhara Patel

Preceptors: Direct and Project Supervisor: Veronica Guevara, EMR Coordinator

Agency: Riverside Medical Group, Secaucus, NJ

Purpose: To create an informative newsletter for Riverside Medical Group to be distributed to providers and clinical managers to improve communication amongst the various Riverside locations.

Significance: According to Purdue University, a newsletter is an efficient and creative way to get important information out to the public. Newsletters can increase awareness, create a sense of commitment to a project and can provide basic information. The Riverside newsletter was a 2015 project that was intended to be completed by the population health team at Riverside Medical Group but was not met because of insufficient time. This project gathers important and useful information and contributes it to employers in a vibrant, creative way. The newsletter is being planned to be released quarterly at company meetings to about 300 office managers, supervisors, providers and other collaborating parties. It is significant because it conveys important information regarding health guidelines pertaining to emerging diseases and outbreaks including tips on dealing with the Zika virus and the Meningococcal-b outbreak from this year.

Method/Approach: First, thorough research was completed by the EMR Coordinator and the Chief of Quality and Safety Officer, to assess the needed material for the newsletter. One provider from each location was required to submit a blurb about their given specialty. The specialties to be included were: Adult Medicine, Pediatrics, ENT, Gastroenterology, Podiatry, Rheumatology, Behavioral & Mental Health, and Population Health. A basic template was made to accommodate the colors and theme of Riverside Medical Group. Then, all the blurbs were exported to the template on Microsoft Publisher. Other information, like current events, new members, preventative screening facts, and education classes were added. The finished product was then printed on gloss paper and made into booklets to be distributed on tables at Riverside's quarterly meeting.

Results: About 500 copies were made of the newsletter that included eight different specialties and health guidelines. The newsletter was set on the tables of a quarterly meeting where 300 providers and clinical managers attended. The newsletter was showcased to the public in the beginning of the meeting by the Chief of Quality and Safety Officer, who mentioned that the project received positive feedback.

Conclusions: The nurses, managers, and the EMR Coordinator all claimed that the newspaper was a success when asked for feedback. Feedback was obtained by noting the positives and negatives from each viewer. A list was made and there were more positive comments about the structure and material rather than any negative comments. The extra newsletters were divided amongst various branches at Riverside for the employees to review. The Chief of Quality and Safety Officer requested that the newsletter for the next quarterly meeting be started immediately to allow enough time to review and make it flawless.

Internship Abstract

Title: American Red Cross Disaster Support Services
Name: Rinal Patel
Preceptors: Direct Supervisor: Michael Prasad, Director of Disaster Support Services
Agency: American Red Cross, New Jersey Region

Purpose: To improve the current planning and procedures for making Consumable Medical Supplies available to families that utilize Red Cross shelters during emergencies.

Significance: When a disaster occurs, the American Red Cross serves the community in several ways. One of their primary goals is to provide shelters for the victims. In addition, the organization also offers necessary supplies and services to victims for recovery. Consumable Medical Supplies, including over-the-counter medications, are some of the access and functional needs that the Red Cross provides at these shelters. As of now, there is no set arrangement in place to obtain over-the-counter medications in advance of the shelters opening.

Method/Approach: The suitable method to approach this project was to contact all the pharmacies in New Jersey that operate 24 hours a day. The store leaders of these pharmacies were asked if they would be interested in collaborating with Red Cross and providing “Push Kits” that contain over-the-counter medications. The Push Kits are essential for such shelters in an event of a disaster. In advance, the store leaders were to receive all the information about this project as well as a list of necessary medications that will be included in Push Kits. By doing this, the American Red Cross will only have to contact the nearest pharmacy in the disaster struck area to place an order for kits needed at the site. The pharmacy would need to have the kits ready for pick up within an hour. Alternatives are also being explored for bulk purchases/donations of generic over-the-counter medications from vendors such as Wal-Mart and Costco.

Results: The American Red Cross in New Jersey has a long-term goal of supporting up to 42 shelters statewide, each capable of housing 250 victims (i.e. three OTC push kits per shelter). At this time, they do have an immediate need of arranging for six shelters (i.e. 18 push kits) in order to plan for unpredicted events such as a multi-family fire or a winter storm. Also, another significant outcome is to align our staff with the 42 shelters for the purchasing and acquisition of the push kits on predicted events (i.e. hurricanes). Lastly, we are also looking into building a bulk plan to obtain over-the-counter medications from a single vendor such as Wal-Mart or Costco for all 42 shelters with advanced notice.

Conclusions: It was found that there are currently 45 pharmacies in-service for 24 hours statewide. So far, two have agreed on going through with this project and also offered other services like vaccinations at shelters. Other chain-pharmacies like Walgreens and CVS have shown interest and have sent this project to their corporate headquarters and we are awaiting approval. Further refinement of methods will be made by future volunteers that will be using this process during disasters.

Internship Abstract

Title: Fleet Management Committee

Name: Matthew Rollins

Preceptors: Direct Supervisor: Richard Washart, Assistant Director of EMS Operations

Agency: Atlanticare Regional Medical Center

Purpose: To assess and redesign Atlanticare's fleet management system used to monitor, maintain, and purchase their vehicles across all departments.

Significance: In the past, Atlanticare has spent significant amounts of money servicing their fleet of vehicles. Their fleet currently consists of 164 vehicles including all ambulances and EMS vehicles, courier services, facilities management, and patient transport vehicles. The current system was inefficient due to the fact that each department was responsible for maintaining their own vehicles. Departments were not properly maintaining vehicles, which resulted in thousands of dollars' worth of repairs. A committee was formed in order to redesign a new fleet management system that would be implemented companywide.

Method/Approach: The first goal of the committee was to assess the current fleet of vehicles. An outside vendor was used and a standard price was agreed upon for each vehicle assessment. The team was tasked with keeping track of the assessments for all 164 vehicles. An excel sheet was created with 20 categories for each vehicle and used to help identify the main problems being seen in each vehicle. During the assessment of the fleet, a new telematics solution had to be researched and agreed upon in order to keep track of maintenance schedules for such a large list of vehicles. Atlanticare had several companies sit down with a few members of the committee in order for them to determine which product was best suited for Atlanticare's needs. Research was done to help identify vehicle purchasing criterion used by different companies and healthcare systems in order to help set a standard for Atlanticare.

Results: After the assessment of the vehicles was completed, 15 vehicles had to be taken out of service. Many of the vehicles needed repairs that far exceeded their estimated value. In the past, departments were authorizing repairs on vehicles without any prior research into the car's actual value. It was immediately decided that all repair requests had to be approved by the committee. To further improve accountability, a new cost-sharing center will be implemented for vehicle maintenance that will be monitored by the committee. All departments will be sub-units under the single cost-sharing center. The telematics solution will be paid for by each department based on the number of vehicles they use.

Conclusion: It was determined that all future repair requests exceeding \$1,000 will have to be approved by the committee, as well as all vehicle purchasing requests. A standard vehicle purchasing criteria was discussed, approved and implemented companywide. The new telematics solution will allow departments to successfully track each vehicle's maintenance schedule in order to avoid future costly repairs as was seen in the previously used system. With the excessive number of vehicles that had to be taken out of service, the committee agreed to let department's rent vehicles from an approved vendor, which had an existing contract with Atlanticare, until new vehicles could be purchased. It was decided that several EMS vehicles were to be repurposed for the departments that lost a significant amount of vehicles.

Internship Abstract

Title: Evaluation of Healthy Corner Store Model in Trenton

Name: Claudia Rugama

Preceptors: Direct Supervisor: Maria Victoria Coll, DDS. MPH, Regional Director of NJ and NY

Agency: American Heart Association, New Jersey/New York Regional Offices

Purpose: To analyze the effectiveness of the Healthy Corner Store Model in Trenton by comparing the sales before and after the implementation of the program and enforcing owners to continue to adhere to guidelines.

Significance: Trenton has been identified as a food desert, thus showing a need for greater access to fruits and vegetables. The Healthy Corner Store Initiative aims to improve the availability of fresh produce and healthy options. The model started in the Philadelphia area and has recently been implemented in some corner stores in New Jersey. However, there is no available data on the progression or effectiveness of the model. Along with making healthier options available, the initiative also has guidelines to make options affordable and easier to locate. It also include ways to promote healthier options to customers by providing food tasting and culturally relevant recipes using ingredients found in the corner stores. If there is an increase in sales and new customers traffic, more corner stores will be inclined to become part of the possible solution to food deserts in Trenton.

Method/Approach: There is a total of four corner stores contributing data. The effectiveness of the program can be measured by comparing the percent revenue increase before and after the program was implemented in the corner stores. To compensate for any errors due to seasonal trends, the owners will be asked to use revenue of the previous year as the baseline for possible percentage increase. Also, a qualitative research will be conducted to measure the owner's satisfaction with the program. Through interviewing owners with a series of open-ended questions, the possible increase in customer traffic, purchase of healthier options and their opinion of the outcome of the program will be measured.

Results: The program has been implemented for only a year for all corner stores. There has not been any significant increase in revenue. Through interviewing the owners, many have seen a greater selection of healthier options. There has not been an increase in new customers, but usual customers come to the corner store with greater frequency. The owners see potential in the program once the availability of healthier options becomes greater and when the products are advertised to the community.

Conclusion: Based on quantitative data received from owners, there was no significant increase or decrease in revenue. Several reasons for this result include the short timeline since the program was implemented and poor adherence to guidelines. Based on qualitative data, a greater amount of customers are purchasing healthier options and owners have a positive outlook of the effectiveness of the program. With greater cooperation of the owners and greater promotion of healthier options available, the program shows potential to be successful in the future.

Internship Abstract

Title: Leadership Resource Library

Name: Gina Ruscil

Preceptors: Warren Moore, President and CEO & Ruth Bash, VP and Chief Culture Officer

Agency: Children's Specialized Hospital

Purpose: To design and publish an online resource library for all Children's Specialized Hospital's (CSH) leaders, to provide them with an opportunity for continuous learning.

Significance: The resource library was a 2015 Employee Engagement goal that was not met. Many employees had various articles passing around the office and lying on their desks. With the deliverable in mind, finding a way to eliminate the waste of paper and create a mechanism for resources to be shared broadly was key. The goal was to have all sources placed online in order to eliminate waste and allow easy access. Evidence behind the significance for the resource library was reflected in three of the ten Motivations of Employee Engagement by Brandon Gaille. The three motivators are improving skills, allowing input, and keeping standards high (Gaille 7). These are incorporated into the library by allowing users to improve their skills through literature resources, having contribution privileges through personal submissions, and keeping standards high by obtaining an opportunity to continuously improve their skills and knowledge.

Method/Approach: This resource library was built through interviews and research. While interviewing all 10 of the Senior Leaders, inputs and visions were received for this library. This researcher also conducted online research to expand the offerings beyond those recommended by the Senior Leaders. There are a total of 19 topics present in the library. Topic examples are Leadership, Technology, Motivation and Engagement, Management and Execution and Crucial Conversations. Each topic has three PDF documents in each file; books PDF, articles PDF, and combined videos and quotes PDF. This researcher calculated that there are a combined total of 277 books, articles, videos, and quotes in the library. It is imperative for this library to be easy to navigate to ensure maximum utilization. Communication was sent out on how to navigate and locate the tab on the Intranet. The resources will be filtered through CSH's Internal Communication Specialist. Every CSH employee has access to the Intranet but the Leadership Resource Library is geared to the 120-person management team. Training was offered during the July 27th Senior Leadership meeting and July's Quarterly Operating Review.

Results: The Leadership Resource Library was launched on July 26th, 2016. Eight Senior Leaders completed a five-question survey. The results exhibited that 7 people strongly agree that the library is easy to navigate, 7 strongly agree that it is visually appealing, 8 strongly agree the topics are comprehensive, 6 strongly believe the resources will help job performance, and 6 will strongly recommend the resources to their staff. All other responses fell in the agree category. This information will be used to make improvements in order to maximize its utility for leaders.

Conclusion: The CSH Internal Communication Specialist is working with the Intranet vendor to create a mechanism for tracking traffic to the Leadership Resource Library in order to measure utilization. This measurement will allow for modification of offerings based on user activity and preference. CSH plans to perform this evaluation at the end of the calendar year.

Internship Abstract

Name: Dhruv Sandilya

Title: Summer Support Presentation on Success Factors: Session Assistant Intern

Preceptors: Direct Supervisor: Gillian Flowers, Clinical Practice Supervisor
Project Supervisor: Erin Murray, Practice Leader

Agency: Memorial Sloan Kettering Cancer Center

Purpose: To convey specifically how MSKCC's key success factors: People and Self, have impacted my group's experiences with patients/staff and how these factors may contribute to furthering our careers, along with providing excellent hospital care for all patients.

Significance: According to the American Cancer Society, in 2016 - 1,685,210 new cancer cases and 595,690 cancer deaths are projected to occur in the United States. Due to the growing number of cancer patients in the USA there will be a need for many facilities available to treat these patients. As best practice shows, an efficient hospital staff and excellent patient care are essential for providing a safe and comfortable environment for cancer patients. As an employee, focusing on others, along with oneself would aid in patient care and for more efficient work interactions. MSKCC has outlined 4 universal success factors that all employees must strive to accomplish which are People, Self, Results, and Thought. These key success factors are proven to optimize hospital environments by MSKCC.

Method/Approach: This project will be presented in a Prezi Presentation format, which will be presented orally as a group to the Executives and Supervisors of MSKCC. Throughout the summer (add dates) from May/June to August 2016, group members convened biweekly and shared work experiences pertaining to the key success factors (People and Self). After collaborating and archiving experiences, each group member will separate their most relevant story to a single success factor. Once each member has matched with their relevant success factor, each group member will create drafts listing the skills, characteristics, examples, and challenges that are associated with their chosen success factor. Once all drafts are submitted, all members will work democratically to summarize all the material.

Results: The aspects pertaining to People and Self were very closely related. Both were highly concentrated on the ideas of teamwork and adaptability, essentially being able to work under high-pressure situations and maintaining composure in all instances. However, when looking at each case individually, the groups found that both success factors were enforced in different environments. Success with People had all factors implemented when working with patients, doctors, nurses, and technicians. While success with Self was enforced internally and emotionally, it was essential for being able to communicate effectively with others.

Conclusion: Both People and Self are essential success factors that must be understood in order to excel in a hospital workplace environment. Working to improve Self will in turn carry over into how one works with People. It is noted that each intern's patient interactions, team interactions, and overall internship experiences were entirely subjective and personal to each group member. Other strategies and ideas may prove to lead employees to success as well. Further discussion and examination of other strategies should be explored such as researching if a universal factor might be implemented to link all 4 existing success factors together.

Internship Abstract

Title: Analysis on the Impact of Bill S685 on Facilities in Monmouth County

Name: Cayla Sekuler

Preceptors: Lizbeth Davies, Field Organizer

Agency: Pallone for Congress

Purpose: To analyze the impact Bill S685 has on nursing home residents and their right to vote and to make recommendations based on the data collected.

Significance: Every person in the United States has the right to vote and should be able to easily cast their ballot. Bill S685 passed in New Jersey in August 2015 limits the number of people a “messenger” can assist to three. This specifically affects nursing homes because residents cannot get to the polls to vote. Nursing home employees typically assist residents and send out their mail in ballots. One individual will only be able to send in three mail in ballots, making the process more lengthy and will need to be delegated to various employees. Many nursing home residents might become disenfranchised this coming November because of the significant reduction of mail in ballots that one person can send to the county.

Method/Approach: Interviews were conducted with five different nursing homes throughout Monmouth County. Most were with an employee in recreation departments as many take on this task. The data was compiled and compared to evaluate differences in nursing homes’ policies and procedures. Data collected includes number of residents in each nursing home, the estimated number of registered voters, how many voters typically vote by mail, policies and procedures regarding voting and applying for mail in ballots, and their knowledge of Bill S685.

Results: The number of long-term residents per home averaged around 100 people and the number of registered voters varied between thirty and fifty throughout each building. Sixty percent of nursing homes were not aware of Bill S685 and the implications it will have on their facility. They were not informed of the changes by any governing body. All nursing home employees claim to ask every resident prior to the election season if they wish to register to vote. They then ask all registered voters if they would like to vote by mail as elections approach. Only one nursing home has had issues with the number of bearers permitted when a ballot was not counted.

Conclusions: Facilities in Monmouth County have not been well informed on how to handle the changes in voting procedures. Communication is not very strong between nursing homes and government. Education and assistance from government officials on the proper way to adapt to the change would be helpful. Vocalization of this issue from nursing homes would be a sufficient way to gain attention for the issues the law might cause. A standardized system of how to register voters in facilities would be efficient. After the November election, a follow-up interview with each nursing home would be effective in seeing the deep impacts the law might have.

Internship Abstract

Title: Strategic Planning in an Academic Institution
Name: Kareem Shama
Preceptors: Linda Tanzer, Chief Administrative Officer
Agency: Cancer Institute of New Jersey

Purpose: To analyze how the deployment of a strategic planning tracking software in an academic institution can be beneficial and propose practices to ensure the institution stays on track.

Significance: While every five years a new strategic plan is written and implemented at CINJ, monitoring had been very dependent on leadership manually performing this task in a non-uniform method that would be synthesized annually. Envisio is a web-based software that tracks the strategic plan and shows progress on a user-friendly interface. The implementation of a monitoring system should help to reduce man-hours and uniformize reporting.

Method/Approach: Expert interviews with 16 clients were used, following a script and consisting of a brief demonstration of Envisio to see why people were not reporting and utilizing the software and to also request updates on the relevant aspects of the plan under their purview. The script was pretested with a coworker and two managers. Based on the pretest, revisions were made to the script and the demonstration, after which the interviews proceeded. A qualitative analysis was performed based on the reactions and feedback given. Recommendations based on the analysis and supported by evidence based research were given.

Results: While the initial deployment was successful, with 85% of leadership on board, it was found that most individuals do not report due to viewing the software as a hindrance to their daily tasks, not being entirely familiar with the interface, or not having enough time. While most reactions were neutral there were a significant few who viewed the software as an “extreme necessity” while others viewed it as an “unnecessary distraction” and “a potential waste of time”. Along with these issues, the fact that the initial deployment was well after the strategic plan had been implemented further deterred leadership from utilizing the software. From this data, it is evident that part of the issue with Envisio is leadership engagement, thus research into this topic is being done in order to propose solutions to the problems mentioned and encourage more use of Envisio so that the organization may stay on track.

Conclusion: From within Envisio, monitoring activity can be tracked. All those who were interviewed prior will need to be re-interviewed and new data will be compared to old data to see if the staff improve in the completion of their goals, objectives, and strategies with Envisio as opposed to before when leadership had to manually perform this task in a non-uniform method.

Internship Abstract

Title: Financial Benefits of Leading with Safety

Name: Evelyn Soto

Preceptors: Christine Stanis, Safety Specialist & Beth Hurley, VP of Safety and Health

Agency: Covanta

Purpose: To show how Company XYZ has had financial benefits by implementing a behavioral safety model.

Significance: Leaders perform essential functions in organizations. The quality and actions of leadership have widespread consequences for an organization's safety culture and its performance. Addressing health and safety should not be seen as a regulatory burden; it offers significant opportunities. Benefits can include:

- Reduced costs
- Reduced risks
- Fewer accidents
- Increased productivity, because employees are healthier, happier and better motivated.

Method/Approach: Data regarding workers compensation is collected from all 40 Company XYZ facilities, from 2006 to 2015. During this time period a rigorous company - wide safety campaign to improve our overall occupational health. To analyze the movement of trends regarding the costs allocated towards workers compensation, data is compared throughout this time period. This data includes the claim count, paid costs to workers, reserved costs, incurred costs, projected ultimate and totality of all costs throughout that timeframe. In 2010 Company XYZ implemented safety improvement initiatives called STEP-UP (Safety Today and Every day is Paramount—Unleash the Power) and STEP-UP Reinforcement. The STEP-UP expectation of a “double-zero tolerance safety norm” set the goal for eliminating unsafe behaviors and unsafe conditions.

Results: After the implementation of the STEP-UP program in 2010, the company saw a decline in smaller injuries. As well as a decline in Employee OSHA Recordable. When catastrophic injuries are taken out of the data there a steady decline in said smaller injuries can be seen. Workers compensation is monetarily affected by the seriousness of the claims although there is a decline in the actual claims. In 2006 the workers comp claims were 167 as opposed to 2015 there were 101. A decrease of 40.12%.

Conclusion: The benefits of leading companies with a strong safety culture is undeniable. An organization that excels in workplace safety and health also excels in other business performance indicators such as quality, productivity and profitability. With safety performance becoming increasingly valuable as a competitive differentiator, there are strong business incentives to seek safer tools, equipment and processes, and more effective training and management practices.

Internship Abstract

Title: Develop Middlesex County Water Resources Association Annual Report Poster

Name: Yue Sun

Preceptors: Mirah Becker, PP, Director of Comprehensive Planning

Agency: Middlesex County Office of Planning

Purpose: To develop public outreach material for the Middlesex County Water Resources Association

Significance: Public information and outreach is a vital component of a successful county initiative. Public education outreach gaps were identified. A report was written for the Water Resources Association (WRA) that highlighted its accomplishments, including maps and concise descriptions of projects in a poster form to inform the public of this important resource. The WRA provides critical input into the future sewer lines for proposed development projects and oversees the development of a plan that ensured there is enough capacity at our treatment plants. However, none of this good work has been turned into public outreach materials, so that county residents can learn about this productive and important voice. This is the first time Middlesex County has a poster that shows the public what the WRA has done in the past 12 months to improve water quality. This will be mailed out to the resident of Middlesex County and put on the County website and serve as a model for the materials that are created in the future.

Method/Approach: A creative method for sharing the report was conceived. The process of creating the report is separated into two parts. The first part was creating a document that based on research on wastewater treatment, collecting project related photographs, summarizing and analyzing the previous meeting minutes. This document paints a picture of the accomplishments of this organization over a 12-month period. The second part was to put the document that was created onto an 11 by 17 size paper and make an infographic. By using colors and graphics to design the layout and make it readable to the public, the infographic makes it easier for people to understand something that is highly technical to them and turns it into a readable and a user-friendly poster that is attractive for people to read.

Results: After receiving some suggestions from the staff, several amendments have been made to create a well-laid out and beautiful designed poster.

Conclusion: Before the poster is formally published, some staff members in Middlesex County have seen the poster and given some feedback on the poster. First, this poster is clear and concise, with interpretations for most of the terminologies, breaking professional knowledge into something easy to understand, so that it encourages the public to read it like a book more than a report. The poster's design is attractive and the way it uses color and pictures to enhance the story was appreciated by the users. The County is happy with the product and will expand the use of posters to other topics to help the public better appreciate their government. The County is asking if Office of Planning can do this Poster every year in the future, and not only in wastewater management but for other major initiatives that the County is involved with.

Internship Abstract

Title: Assessing Physician Office Assistant's Workload

Name: Humna Syed

Preceptors: Bennett Charles Stein

Agency: Memorial Sloan Kettering Cancer Center

Purpose: To implement and judge Physician Office Assistant's workload by assessing the phone volume within the Bone Marrow Transplant Service.

Significance: There are about 20 Physician Office Assistant's within the Bone Marrow Transplant Service. Each POA is responsible for contacting, and communicating vital information to patients regarding their cancer statuses and procedures. One can better assess the POA workload by tracking the amount of calls per each physician that are coming through the office and comparing those results with the outpatient volume per each physician. The significance of this project will determine high volume offices and assist in pairing certain offices together to ease the workload of POA's.

Method/Approach: Currently in the Department of Medicine, an "Outpatient Activity Report" determines workload, this report tallies the number of visits each provider sees each month. After utilizing this data one can then pair physician offices together and determine which are our higher volume offices. What this report lacks is a link to phone volume. This project will showcase the monthly phone volume, by analyzing the data and comparing it to the outpatient activity report to determine a correlation between phone volume, and patient volume to more accurately assess the workload of the POA's. Keeping track of 8 physician's phone lines by tallying the incoming calls per day for each physician will help cluster all the data. Then, one can compare the amount of calls to the amount of patients seen per month to analyze which POA's office has a higher volume and to accurately recommend which offices should be paired together.

Outcomes: After comparing the phone volume vs. the outpatient volume per month, based off of this analysis, one can better recommend potential changes to the offices that are currently paired to better distribute the workload amongst the Bone Marrow Transplant Service within MSKCC.

Evaluation: After gathering all the data from the outpatient activity report and comparing it to the phone volume for each doctor, results show that the physician who sees the least patients receives the most phone calls and the physician who sees the most patients ranks in third for the highest phone volume office. Office 1 contains Physician A and Physician B. Office 2 contains Physician C, Physician D, and Physician E. Office 3 contains Physician F, and Physician G. Office 4 contains Physician H. Office 1 received thrice as much phone calls as the amount of patients they see per month. Office 2 is known as the most highest phone volume for Physicians C, D, & E compared to any other offices. Physician C received 6 times the amount of patients seen per month. Physician D received about 11 times the amount of phone calls compared to the amount of patients seen. Physician E received 22 times the amount of phone calls compared to the amount of patients she sees. For Office 3, Physician F received about 4 times the amount of phone calls compared to the amount of patients seen per month, and Physician G received is twice as many phone calls compared to the amount of patients seen. For Office 4, Physician H received 4 times the amount of patient phone calls than patients seen per month. After analyzing this data, one can conclude that Office 2 has the most dramatic increase of phone volume than any other offices. To make POA workload easier one can recommended to split Office 1 and Office 2. Physician A should be paired with Physician D since Physician A's phone volume is not as busy. Physician B should be paired with Physician H since they both have equal amount of phone volume and patient volume. Physician C and E should be two separate offices since they still have highest phone volume and patient volume.

Internship Abstract

Title: Identifying the Utilization Trends for Medical Services in Zip Code 07206

Name: Andres Umaña

Preceptors: Joseph McTernan, DHSc, MBA, FACHE Senior Director Community and Clinical Services

Agency: Trinitas Regional Medical Center, Elizabeth, NJ

Purpose: To evaluate and outline areas of improvement, awareness, and prevention for disease status and treatments by identifying vulnerable populations in both the community and Trinitas Regional Medical Center.

Significance: The Elizabethport community (Zip Code 07206) is an area spanning 1.6 square miles, which houses approximately 26,000 residents. There has been a high medical service utilization rate in this community, which is mostly distributed between the minorities of the population, the African American and Caucasian populations. Improving treatment outcomes and preventing disease by identifying high-risk populations would prevent future medical visits and improve the overall health standing of this community. The disease with the highest prevalence, which causes a large percentage of hospital visits, is Chronic Obstructive Pulmonary Disease, COPD. Targeting and eliminating the risk factors for COPD, as well as improving treatment for the disease would improve patient health and lessen the number of hospital visits.

Method/Approach: A retrospective review was conducted of both Inpatient Admission records and Emergency Department records using a 2015-2016 dataset collected by the hospital. This data was analyzed by taking into account demographic factors, local services, and condition information in order to demarcate areas within the population that may require more medical intervention, both preventative and therapeutic. Nursing homes, residences, and assisted-living facilities were identified in high prevalence areas in order to better analyze population demographics from the dataset.

Outcomes: Analysis of the research concluded that a large portion of hospital visits are due to COPD and related illnesses. With regards to the information, 21% of Inpatient Admissions and 34% of Emergency Room visits were related to COPD respectively. Smoking is the largest risk factor for COPD and although TRMC is currently partnered NJCHOICES, a Smoking Cessation Program, more potential partnerships have been identified in hopes of becoming affiliated with the hospital.

Evaluation: Secondary research has demonstrated that about 70% people who are currently addicted to smoking want to quit their addiction (CDC,2010). Hospital records and demographic research have shown that a large portion of the population is below poverty level, which the World Health Organization has linked with higher tobacco usage. Currently, Trinitas does not offer an extensive smoking cessation program but with more comprehensive treatment and prevention strategies using state-funded and private programs, the risk of harm from COPD may be diminished. With better addiction treatment and counseling services, the APA estimates up to a 24% higher smoking quit rate.

Internship Abstract

Title: Systematizing an Office for the Inclusion of Employees with Autism

Name: Jessica Uscamayta

Preceptors: Molly Ola Pinney, Founder/ CEO

Agency: Global Autism Project, Brooklyn, NY

Purpose: The purpose of this project is to observe how a systemized office helps employees with autism perform tasks that are supervised at a minimum and structured to provide clarity in objectives so as to promote future success when asked to do the task again.

Significance: Huffington Post (2016) estimates a combined 90% rate of unemployment and underemployment for young people with ASD in the U.S. Without these individuals in the workplace, our society will not receive any impact in our awareness, education systems, and mindset. In terms of each individual affected, people with autism would continue to struggle with social interactions and be further isolated from society.

Method/Approach: A system has been implemented at The Global Autism Project. This system includes an organized set of binders that are assigned for each R.A.I.S.E. (Real, Advancement, Independent, Social Skills and Empowerment) employee, administrative documents, and process documents (PD). Through each R.A.I.S.E. employee's binder we are able to keep track of their hours worked, daily tasks, points earned and mastering of office processes. Data were collected from the 3 employees on the R.A.I.S.E. team through observation and then gathered on a Master Data Collection spreadsheet which documented the progress each employee has made on each PD. There is a total of 10 PDs implemented in the office for the R.A.I.S.E. team and each vary on the amount of steps required to complete them.

Results: Employee 1 was able to master 50% of the PDs. Employee 2 was able to master 10% of the PDs. Employee 3 was able to master 0% of the PDs. PD 1 had the following mastery rate for each employee respectively, [90%, 0%, 0%]. PD 2 had a mastery rate of, [100%, 83%, 33%]. PD 3 had a mastery rate of, [80%, 29%, 29%]. PD 4 had a mastery rate of, [8%, 0%, 0%]. PD 5 had a mastery rate of [100%, 0%, 0%]. PD 6 had a mastery rate of, [100%, 0%, 0%]. PD 7 had a mastery rate of, [100%, 0%, 0%]. PD 8 had a mastery rate of, [38%, 25%, 6%]. PD 9 had a mastery rate of, [100%, 100%, 80%]. PD 10 had a mastery rate of, [46%, 0%, 0%].

Conclusion: Overall, mastery rates vary for each PD perhaps due to the different types of processes involved in the office. A process pertaining to excel spreadsheet input (PD 3) can have higher mastery rates (80%) for one employee while having low to zero mastery rates (29%) from another. What this master data collection shows is the different skillsets that each employee with autism has to contribute, which every office must work to use as well as influence so as to promote new skills. Low mastery rates were seen probably due to the small frame of time for which the PDs were implemented and data was collected. With a repetitive nature, such a system can assist in further monitoring of mastered processes.

Internship Abstract

Title: Exposure to New Foods Assessment

Name: Ishita Vohra

Preceptors: Cricket Azima, Founder and Big Cheese of The Creative Kitchen
Katie Auerbach, General Kitchen Aide + Event Emulsifier

Agency: The Creative Kitchen

Purpose: To educate children and their families about healthy eating through classes that helps them prepare healthier food options

Significance: Each year, kids watch an average of over ten food-related ads every day (nearly 4,000/year). Nearly 98 percent of food advertisements viewed by children are for products that are high in fat, sugar or sodium. Therefore, attracts the kids because of the amount of exposure. In fact, there are almost three times as many obese kids ages 6 to 19 as there were 30 years ago, according to the U.S. Centers for Disease Control and Prevention (CDC). According to EUFIC, parents may see better results from offering a variety of foods starting at a young age and repeating exposure to foods even if the child does not like them at first. This evidence indicates the importance of exposing kids to healthier food options.

Method/Approach: A traditional assessment was completed over the past two months for 110 kids, aged between 2 to 6 years. All of the children were evaluated throughout summer if they will eat certain vegetables or not. Products such as green peppers and tomato were recorded. The results were addressed with figuring out how many kids liked which product before the classes had begun, during and after. Additionally, kiwi was introduced in the beginning and only once during the end of the summer classes. Teaching children how to cook not only educates them about healthful foods, but also allows them to expand their palates and incorporate more fruits and vegetables into their diets.

Results: Of the sample size, (n=110), 20 kids (18%) liked the green pepper, 17 kids (15%) liked the tomato, and only 11 kids (10%) liked the kiwi in the beginning of the summer. The goal was to have children adapt to vegetables and fruits through various recipes throughout the summer classes. In the middle of the summer classes, 36 kids (33%) liked the green pepper, 32 (20%) liked the tomato. Finally, out of 110 kids, by the end of these classes, 67 (61%) liked the green pepper, 56 (51%) liked the tomato and 17 (15%) enjoyed the kiwi.

Conclusion: More than half of the children liked green peppers as well as tomato towards the end of the program. Whereas, the interest in kiwi only went up from 10% to 15%, gaining only 5 percent of interest. In order to enhance the initial behavior of food acceptance by children, exposure of the foods with fun and educational activities can be useful.

Internship Abstract

Title: Human Papillomavirus Infection Rates and Vaccination Education

Name: Adrienne Williams

Preceptors: Dr. Jeffrey Hofman

Agency: University Medical Center of Princeton at Plainsboro

Purpose: To analyze HPV rates in a community and educate patients on the benefits of receiving the HPV vaccination.

Significance: HPV infects 14 million new patients every year making it the most common sexually transmitted infection. Both men and women are capable of getting HPV through oral, anal, and vaginal sexual contact (CDC). Although many cases of HPV do not show symptoms and can be lived with comfortably, there is a decent percentage of patients who contract cancer or genital warts. With 26,900 people getting cancer every year from HPV, prevention against the infection becomes important. Educating patients on the vaccinations that prevent the high-risk HPV strains and providing information on how to effectively treat HPV will limit the amount of new cases of HPV appearing in the community.

Method/Approach: Triennial pap smears are recommended upon turning 21, but patients start the routine as young as 18. Pap smears can be done annually if health problems prove it necessary. Recognition of those who have HPV will be assessed through the records of pap smear test results which take between 7-10 days to get back. There will be two different method approaches; Encouraging annual patients to become vaccinated for HPV because of the risks and health issues, and continuing triennial pap smears to stay on top of possible health conditions.

Results: The sample size of patients since the beginning of the internship (n=184) showed 121 women (66%) had normal pap smear results, 26 women (14%) had abnormal pap smears due to infection, dysplasia, atypia and endometrial problems and 18 women (10%) had contracted HPV. The last 19 women (10%) visited with other gynecologic problems such as bacterial vaginosis and yeast infection, but they were either not due for a pap smear, or they had not had a pap smear the previous year. Those 18 patients who had HPV could have contracted the infection in the past, but the results only appeared on the current pap smear. Of the 10% of HPV infected patients, 8.8% were above the age of 26 which is the last vaccinateable age for brand names like Gardasil.

Conclusion: One tenth (10%) of the full sample size of female patients (n=184) showed HPV on the pap smear performed during their visit. Constant pap smear reminders during consults and yearly reminder postcards are given to continuously alert patients of the importance of receiving their annual. The HPV fact sheets, Gardasil pamphlets, along with telephone counseling enhance adherence to continuing regular appointments. Triennial pap smears and HPV education consults will continue to ensure improvement in women's health.

Internship Abstract

Title: Youth Leadership Development
Name: YeanYean Wong
Preceptors: Project Supervisor: Karen Winlund, Youth Services
Agency: American Red Cross, New Jersey Region

Purpose: To assist youth to develop valuable skills in effective communication, leadership development service learning, project planning, diversity awareness and emergency preparedness.

Significance: The American Red Cross (“ARC”) has nearly 330,000 volunteers in 2015. In July 2016, about 16,000 youth volunteered with ARC. Among other states, New Jersey has about 16% of youth volunteers in FY2016. Youth development programs have been identified as key resources in promoting positive youth development (Learner, Almerigi, Theokas 2005). ARC acknowledged the importance of promoting youth volunteers as an organizational resource. ARC, through its youth programs, encourage youth to uphold the fundamental principles of ARC. Through active engagement, youth reported becoming dynamic for self-actualization and social responsibility. Having effective communication and leadership skills are essential for youth becoming more empowered in meeting community and national challenges through youth services and volunteer services.

Method/Approach: Secondary data research on historical data of youth volunteering was conducted through several online websites such as Google Scholar, Bureau of Labor Statistics, and all ARC official links. Also, interviews were conducted with several ARC’s key informant officers. The summary reports of active volunteers, Red Cross Club Demographic for New Jersey region in July 2016, and Corporate Annual Statistics FY2015 and FY2016, were retrieved and exported from ARC’s internal report spreadsheet. However, only active members were included and captured in ARC Volunteer Connection.

Results: Historically, across the country, the youth volunteering rate has doubled from 13.4% to 28.4% between 1989 and 2005. Also, the percentage of youth volunteer who served through youth service organization has increased from 15.1% in 1989 to 25.2% in 2015. ARC National Youth Council 2015 statistics show that, 25% of ARC volunteers are youth or young adults, aged 24 or younger. During year 2016, youth volunteers contributed 232,841 hours in ARC. As of July 13, 2016, ARC has 836 active youth volunteers and 72 active Red Cross Clubs in New Jersey. 332 youth volunteers are reported with no information provided for demographic analysis.

Conclusion: The youth development programs designed to increase exposure of youth to ARC. The limitation of ARC’s Volunteer Connection system should be addressed in order to capture more specific and meaningful data in future. Also, in order to support more effective impact evaluations, and enhance the quality of youth development programs, ARC should create a database of tools and instruments, and develop guidelines to help youth programs to build more rigorous evidence in assessing the outcome of the programs.

Internship Abstract

Title: Educating Mothers on Prevention of Premature Birth
Name: Nora Yosry
Preceptors: Dr. Hany El-Slamony, Assistant Director of Maternal and Child Health
Agency: The World Health Organization

Purpose: To assess the understanding of mothers concerning premature infants and to educate them on how to prevent premature births.

Significance: The issue of preterm births in Egypt is one that is of high concern. In 2010, there were 136,900 preterm births in Egypt and by 2015, this number had decreased to 123,131 (The World Health Organization 2015). Although the number of preterm births decreased in this five year period, the incidence rate of preterm births in the country is still high in certain regions. In 2010, there were 8100 deaths due to complications during preterm births (The World Health Organization 2010). With the population of Egypt being 91 million, it is difficult to look at numbers compared to the population. However, when one focuses on certain regions that are poorer, the rates are much higher. The three areas we focused on were Batn El Baqar, Ezbet El Hagana, and Ezbet Khairallah where there is lack of sanitation, and lack of access to many essential resources as well as healthcare. This issue is very important because it is crucial that these areas are educated on the preventative ways in which they can reduce the numbers of preterm births and therefore improve the region's overall health.

Method/Approach: My method of educating mothers on how to prevent premature births is a day event in which pregnant mothers are brought to attend. The event includes speaking with the mothers and getting an idea about where they stand concerning prenatal care and the risk factors for preterm births. Then a presentation will be given that discusses the modifiable risk factors for premature births, which include lack of prenatal care, smoking, drinking alcohol, low maternal weight, infection and many more. The first step in this project was to research the areas in Egypt that are most affected by preterm births. After finding the top three regions in Upper Egypt with the highest number of preterm births, ten pregnant mothers were randomly chosen from each region to attend. Then I began to work on the presentation and included the negative outcomes of premature birth, the ways it can be prevented, including changes in environment and lifestyle, good quality prenatal care and maternal care and more. Two guest speakers from The Ministry of Health were contacted to attend the event and discussed with the women the ways in which they can utilize family planning services to their benefit and the specific places to receive high quality healthcare at an affordable price.

Results: The mothers that attended the event gave a lot of positive feedback and stated that they gained a great amount of knowledge from the guest speakers and from the presentation. Many of them were not aware of where to go to receive affordable prenatal care prior to the event. Two weeks after the event, employees from The Ministry of Health followed up with the mothers that had been invited and found that 21 women had already visited one of the hospitals or clinics we had advised them to go to for check-ups during their pregnancies. Seven mothers reported that they began to change lifestyle habits that could affect their pregnancies, such as their diet or taking certain medications and three mothers reported that they contacted family planning services.

Conclusions: Overall, the event proved to be very successful and will most likely reoccur in other areas around the region that are in need of health education and promotion. Many of the mothers that attended the event had little to no health education and this is a huge risk factor in maternal care. This event showed that education is the best way to promote primary prevention and reduce the risk of disease. 56

Internship Abstract

Title: Summer Camps Kids Healthy Habits Evaluation
Name: Nicole Youmans
Preceptors: Emma Lopez, Health Educator
Agency: Vineland City Health Department

Purpose: To reduce childhood obesity and promote healthy eating amongst children of low SES in the city of Vineland through education and fitness.

Significance: In the past 30 years, the number of obese children in the United States has doubled. According to the CDC, in 2012, more than a third of the number of children are either obese or overweight. Obesity is treatable and can be prevented if children are taught proper nutrition and other strategies to avoid obesity. The city of Vineland has more than the national average, with 44% of its children ages 3-19 being overweight (D'Amico, 1). Minority populations are the greatest at risk and Vineland has a large Hispanic population. Hispanic male children that are 9 years of age are the fastest growing group that is obese. Lessons in nutrition will help test the importance of educating this group to stress the importance of early education regarding health.

Method/Approach: A three-week teaching program with children ages 6-12 was conducted at the Gloria M. Sabater summer camp. The program curriculum would focus on choosing low fats milk and water over sugary drinks, eating proper portions of fruits and vegetables, and eating healthier options over fast foods. Each lesson the children were to take part in a pre/post test and additional activities. The pretests and posttests would assess whether there is an increase in knowledge and understanding about the importance of healthy eating and fitness.

Results: Due to the small sample size of (n=29) students, the results are preliminary. Of the twenty-nine students only, 14 (48%) of the students participated in taking the seven-question pre/post evaluation. The scores on the pretest were as followed, 1 (7%) scored two points, 8 students (57%) 3 (21%) scored three points, 2 (14%) scored 6 points. The posttests results were as followed, 1 (7%) scored one point, 1 (7%) scored 2 points, 5 (36%) scored 3 point, 3 students (21%) scored 4 points, 3 (21%) students scored (5 points) and 1 student (7%) scored 7 points.

Conclusion: There was not enough information to find a significant change in the children's knowledge of the importance of eating healthy due to the short time frame of the program. Issues in the program occurred due to the age difference in each group of children, and the lack of cooperation. Implementing a program with younger children is a challenge due to the difficulty in maintaining their attention.

Internship Abstract

Title: Digital Health Formula - Combining Technology & Public Health
Name: Naba Zamir
Preceptors: Maureen Koval, Lead Analyst and Project Supervisor
Agency: Johnson & Johnson Consumer Inc.

Purpose: To project manage and assess the delivery of the digital health campaigns for Johnson's Baby in regards to behavioral health, as well as Listerine in regards to oral care and oral disease.

Significance: As society shifts towards a more digital and media centered approach, various aspects of health education and delivery enter this medium. Johnson & Johnson is taking a lead in this area through health campaigns in their digital space. There are about 3.42 billion users on active Internet users, which is about 46% of the global population, and over 3.5 billion users who are active mobile users, which is about 51% of the global population. For J&J as a healthcare company, this medium is critical to be in touch with our consumers, and to ensure health education is provided through a popular means. Through this, digital health is promoted through our sites as billions of our consumers can access this information and learn more about means to improving their health status.

Method/Approach: A scrum master manages the brand team as well as the development team, gathering data metrics from tools such as Adobe Analytics, Cardinal Path, and data visualization on Tableau. Standards exist which evaluate the effectiveness of a campaign, and the outcomes are measured through analytics, many times specific to the various Quarters [Q1, Q2, Q3, Q4]. Responsibilities included gathering all assets, creating the project in our JIRA user storyboard, defining requirements, delegating responsibilities, and ensuring a timely launch. Duties involve third party partners who may be involved in these digital initiatives, as well as facilitating communication between the various teams to ensure that workflow is optimal, and smooth. A large aspect of this project was to evaluate these behavioral and oral campaigns and measure their success from a consumer standpoint.

Results: The results of these health campaigns showed a significant response in the digital health space. As a result of the Johnson's Baby campaigns, there was an increase to the site visit by +60% compared to the Q2 average. Consumer sentiment demonstrated more positive than negative feedback on social media, by a 7:3 ratio. Compared to annual metrics, Johnson's Baby health campaigns have been seeing +30% popularity than this time last year. Listerine's oral health campaigns have demonstrated fast responses just weeks after campaign launches, with thousands of views in the matter of a few weeks, resulting in an increase close to 10% for their campaign and page views.

Conclusions: Digital Health at Johnson & Johnson is motivated by data-driven change. It is a result of seeing metrics, numbers, and consumer sentiment to point out how we move forward promoting health campaigns, and the impact they can have on a global scale. The difference these campaigns can have on behavior and oral health are credible and make a difference, demonstrated by the positive trends.