



**RUTGERS**

Edward J. Bloustein School  
of Planning and Public Policy

# Fall 2017 Abstract Book



## Internship Abstract

**Title:** Healthier Food Options for Trenton Population

**Name:** Abayomi Asokeji

**Preceptors:** Darrin W. Anderson, Sr., PhD, MS  
Assistant Supervisor: Michelle Kennedy, MPH, MCHES

**Agency:** New Jersey Partnership for Healthy Kids (NJPHK)

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**Purpose:** Identifying strategies to assist with healthy eating and providing information about Greenwood Farmers Market in underserved populations

**Significance:** Statistically, Trenton has fundamentally higher obesity, hypertension, and diabetes rates than Mercer County ("Do you live..", 2014). In 2013, the Robert Wood Foundation reported to New Jersey activity that there were just 3 supermarkets situated in the Trenton area ordering this region as a food desert. Today NJPHK, has made more than 200 ecological and policy changes have been actualized to help advance a superior personal satisfaction through good dieting and physical action in various nearby New Jersey neighborhoods. Markets create a community gathering place that educates the public about health and nutrition while supporting regional agriculture.

**Method/Approach:** Three distinctive informational devices were utilized to manage this internship study. The focus was for the market collection operation; we used the existing pay per sale (PPS) market records, known as market management spreadsheets. Also, U.S. census data and InfoUSA business location information were explored to affirm the selected markets' socioeconomics. Market administration spreadsheets supplied information such as the aggregate number of sellers and their ethnic groups, net market deals, deals from food subsidy coupons WIC Farmers' Market Nutrition Program (FMNP) and Supplemental Nutrition Assistance Program (SNAP), and the quantities of nearby organizations and the yearly number of customers.

**Outcomes/Results:** Reviews brought about two developing patterns, one being that the cost is not a hindrance. Among the results, nearly 62% of Greenwood customers in Trenton trusted that the market would have lower costs than the supermarket. Also, we found out that informing the public is vital as the farmer market is a seasonal set up and has restricted hours. The main two reasons given by non-shoppers were that 54 % of respondents claimed they were uninformed of hours, and 46% were unaware of location Among farmer's market customers in our study, 41% found out about the market by word of mouth, and 23% by driving or strolling past.

**Evaluation/Conclusion:** In spite of the majority of the advantages of farmer's markets, we perceive that difficulties still exist for market coordinators. It is important that the market concentrate on efforts to draw-in neighborhood groups, particularly teaching shoppers on the acknowledgment of SNAP and Women, Infants, and Children (WIC) benefits.

## Internship Abstract

**Title:** Evaluating Information Tools for Service Provision for the Illiterate Client

**Name:** Abigail Carroll

**Preceptors:** Dabney Miller, Associate Director

**Agency:** The Women's Law Project

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**Purpose:** To assess the web resources of The Women's Law Project on their accessibility to the low-literate population, and to assess the needs of the WLP clientele by manning the hotline.

**Significance:** One of the main purposes of the Women's Law Project's Hotline is to prepare pro se litigants to represent themselves in family court, a frightening process for many. Some estimates put the percentage of these people who cannot afford an attorney or access a pro bono attorney at around 80% in Philadelphia Domestic Relations Court. This unrepresented population is disproportionately likely to lack basic literacy skills (some estimates say that as many as  $\frac{2}{3}$  of adults in Philadelphia do), and so reading documents such as court forms, and even informational resources created by Bar Associations and nonprofits such as the Women's Law Project, is often an additional barrier to the courts system.

**Method/Approach:** Learn about the function and structure of the WLP hotline program. What do women ask for when they call? What do they receive? What are their complaints? Study the efforts of legal aid nonprofits and other community organizations to find effective methods of giving legal information to low-literacy populations. Video materials are especially useful for educating the illiterate population, as is straightforward web design that is accessible on mobile devices. Several nonprofits in Philadelphia are already making great strides in this area.

**Outcomes/Results:** The callers accessing The Women's Law Project consistently expressed frustration with the lack of available legal information. These women had been failed not only by the courts system, but often by many nonprofits who could not get the information to these women successfully. Many had trouble using our website. Links often malfunctioned, and the site is really designed with a potential donor or voter in mind - it highlights the litigation and policy work that WLP does.

**Evaluation/Conclusion:** The fact that the WLP callers are always remote from us means that the ability to give them information, orally over the phone as directions to online materials, is critical. I recommend giving the hotline its own website, making it mobile friendly, and designing it with a low-literate client in mind. WLP has agreed to take me on next semester to work on this.

**Sources:**

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<https://sharelawvideo.org>

<http://digitalcommons.law.seattleu.edu/cgi/viewcontent.cgi?article=1679&context=sjsj>

<http://www.phila.gov/experiencePhila/pdfs/Poverty%20Reduction%20Economic%20Development%20Project.pdf>

## Internship Abstract

**Title:** How the “Thoughtful Send Off” Impacts the Patient Experience and Perception of Memorial Sloan Kettering Cancer Center

**Name:** Monisha Aghazadeh-Alavi

**Preceptors:** Shana Ellsbury, Clinical Practice Supervisor

**Agency:** Memorial Sloan Kettering Cancer Center

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**Purpose:** To determine how the “thoughtful send off” component of check-out impacts the patient’s experience and perception of Memorial Sloan Kettering Cancer Center.

**Significance:** The discovery and treatment of cancer can disrupt a patient’s life significantly. Patients often go back and forth between follow up visits with their doctors, lab work, scans, tests, and treatments. Their treatments can often lead to a variety of uncomfortable and even debilitating side effects. Because of this, at Memorial Sloan Kettering Cancer Center there is an increased emphasis placed on the idea of letting the patient control their life, instead of the cancer.

**Approach:** The “thoughtful send-off” component of the patient care experience allows for the patient to maintain control over their plan of care. This part of the patient experience revolves around scheduling patients for upcoming appointments. By receiving orders from clinicians in a timely manner and allowing patients to schedule in-person, they are able to dictate their preferences in scheduling and maintain a balance between daily life and treatments. In having discussions with patients, scheduling to their preferences and building relationships during the process, we are able to provide a “thoughtful send-off” at the completion of each visit.

**Best Practices:** A new approach, known as mobile check-outs, is currently being piloted at the 64th Street location. With mobile check-outs, Session Assistants now approach and sit with patients in both the waiting room and treatment suites to provide a more tailored and improved scheduling experience. Patients have also been asked to fill out satisfaction surveys regarding this pilot in which they have provided positive feedback about their experiences.

**Lessons Learned:** I have learned that it is better to schedule in person and in real time with patients, emphasizing their preferences to give them the opportunity to take control of their environment. By focusing on giving patient the utmost “thoughtful send off”, I have learned that elevating patient experience influences how patients receive care. In addition, I have realized that delivering a great thoughtful send off increases efficiency by reducing the number of phone calls and messages left for patients regarding appointments. Being efficient at work not only increases team productivity, but it also affects wait times for patients throughout their entire visit. In learning about a patient’s preference, whether it’s a simple time or location adjustment, it shows that employees truly care for their patients. Thus, when patients feel heard, the team can get a little closer to fulfilling its goal of providing exceptional patient care.

## Internship Abstract

**Title:** Prophylactic Application of Soft Silicone Multi-layered Foam Dressing in Trauma and Critically Ill Patients: a Quality Improvement Project

**Name:** Marina Andriyakhova

**Preceptors:** Project Supervisor: Kathleen Glaza, MSN, RN, ACNS-BC

**Agency:** Munson Medical Center, Traverse City, Michigan

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**Purpose:** To reduce the number of hospital-acquired pressure ulcers (HAPUs) using prophylactic foam dressing in trauma and critically ill patients.

**Significance:** Pressure ulcers (PUs) are a challenging health problem. The cost associated with PU treatment is high, and institutions are looking at prevention strategies. PUs is a “nurse sensitive” quality issue, reimbursement for treatment is often denied from insurance companies. According to the Clinical Practice Guideline, published in 2014 by the National Pressure Ulcer Advisory Panel, European Pressure Ulcer Advisory Panel and Pan Pacific Pressure Injury Alliance, it is recommended to apply prophylactic dressings to bony prominences in anatomical areas that are frequently subjected to friction and shear.

**Method/Approach:** A cohort study is launched on 3 critical care units with high incidence of PUs. Patients at risk are identified using inclusion/exclusion criteria, and prophylactic foam dressing is applied on sacral and heel areas. There is education for nursing staff associated with the trial, as well as weekly rounding to assure quality of the prophylactic dressing application and documentation.

**Outcomes/Results:** The total cohort size for the first 2 months of the study (n=80) yielded 5 PUs between the 3 critical care units. In comparison with the same time interval in 2016 (September, 26 - November 26), the number of HAPUs did not decrease. Nursing knowledge and skills in the heel and sacral foam dressing application and documentation have improved since the start of the study.

**Evaluation/Conclusion:** Multiple PU prevention strategies are being utilized, and there is need for extensive nursing education. Quality skin committee developed a plan of action to educate, audit and share best practices with nursing staff. The prophylactic dressing study will continue till April 26th 2018, streamlined with other ongoing quality improvement strategies in HAPU prevention.

## Internship Abstract

**Name:** Anthony Ashnault  
**Title:** Parker Health and Wellness Center Exercise Evaluation Survey  
**Preceptors:** Chief Operating Officer: Curt Evans, Director of Professional Education: Lisa Slater  
**Agency:** Francis E. Parker Memorial Home, Parker at Pavilion

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**Purpose:** To analyze survey results on the psychological and physical effects of exercise among the elders in the Parker Wellness Center population.

**Significance:** America's population is seeing a huge shift towards an older demographic. One of the biggest concerns for seniors injuring themselves is from falling and not having the balance to catch themselves. Out of our population of 65 years and older, 20 percent have at least one fall a year. And, at least 50 percent of individuals over the age of 80 years old will have annual falls. This is a high number that is even more common in a nursing home, assisted living, and adult day care environment. Problems with falls include fractures, back problems, and negative psychosocial consequences. Negative psychosocial consequences include a decline in the amount individuals physically exercise, the fear of falling, and a reduced quality of life.

**Method/Approach:** Data were retrieved through a survey on how exercising can help these physical and psychological issues. Individuals in Parker's Assisted Living program and Nursing Home program often struggle with dementia, Alzheimer's, and/or diseases that affect their minds. The health and wellness center at Parker provides programs to help these individuals with exercise such as aerobic, swimming, chair classes, and strength exercises. The complete sample size (n=15) participants reflects Parker's residents, adult-day clients, and community members. The population of the wellness center averages 24 residents daily, 14 Adult-Day participants daily, and 44 community members daily, reaching a total of 82 individuals as the total population (N). The study population was 18.29 percent of the total.

**Outcomes/Results:** Thirteen participants (86.67%) exercised 3-4 times per week. The preferred exercise was the Nustep machine; 8 participants (53.33%) and the classes such as chair yoga with 7 participants (46.67%). One patient (6.67%) reported a 1 (poor) rating, 6 participants (40%) reported a 3 (good) rating, 5 participants (33.33%) reported a 4 (very good) rating, and 3 participants reported a 5 (excellent) rating on terms of confidence of their balance. Two separate questions on the satisfaction and enjoyment both averaged a 4.53 rating which is between very good and excellent. When asked why exercising was important to the individuals, 15 participants (100%) exercised for their health, 9 participants (60%) did it for social reasons, 7 participants (46.67%) exercised to stay busy, and 7 participants (46.67%) exercised to maintain and improve balance.

**Evaluation/Conclusion:** The lowest average score on the questions was a 3.60 rating on the confidence in balance. On terms of balance being the biggest worry, most participants come into starting to exercise with low abilities in their balance and gave feedback that their balance has either maintained or strengthened throughout the program. The participants are coming in happy and leaving happier due to the satisfaction scores with the staff, the mood of participants, and the enjoyment all averaging over a 4 rating from the time they starting attending. These results are significant in that Parker participants are satisfied with the service in the health and wellness center.

## Internship Abstract

**Title:** Support Groups Within the Transgender Youth Community.

**Name:** Esther K. Asumadu

**Preceptors:** Gloria Bachmann, Director of Women's Health Institute, MD

**Agency:** Women's Health Institute

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**Purpose:** To analyze the impact of gender identity support groups within the transgender community.

**Significance:** An estimated 0.6% (about 1.4 million) adults in the United States identify as transgender. In addition, younger adults (0.7% of adults between the ages of 18-24) are more likely than older adults to identify as transgender. Even though more people find it comfortable to come out, 60% reported being verbally harassed; 29% reported being physically harassed; and 15% reported being physically assaulted. Peer support groups are effective methods for addressing a myriad of conditions. It also creates opportunities for youth to form instrumental relationships in their lives. Since majority of transgender individuals indicate self-identification with the opposite sex during early childhood, there is a need to bring awareness of support groups at an earlier stage of their transition.

**Method/Approach:** An extensive literature review of 30 peer reviewed journal articles published within the last 10 years were used to identify the importance of gender identity and support groups within the transgender community. These articles were found using American Journal of Public Health, Ebscohost, Jstor, ScienceDirect and Google Scholar. Keywords used included, transgender youth, health care, gender identity and support groups. Excel was used to merge findings within 30 states on the access of support groups/Gay-Straight Alliance within the transgender student community.

**Outcomes/Results:** Thirty out of fifty states indicated that there is access to Gay-Straight Alliance/similar clubs/support groups in schools. Fifty-three percent of American schools have access to these programs. Sixty percent of the studies indicated that schools with access to support groups and Gay-Straight Alliance saw a significant lower number of harassment and victimization within the transgender community of students. Seventy-three percent of the studies indicated that suicide attempts dropped in households with parental support. Ninety-seven percent of the studies indicated that a transgender student could identify at least one supportive educator.

**Conclusion:** Although there have been efforts to help make schools more supportive and safer for sexual minority youth (1) there is limited research on transgender support services, (2) transgender youths are an underrepresented group in research, (3) transgender students that attended schools with support groups were seen to have better health than those who attended schools without those programs.

## Internship Abstract

**Title:** Ethnographic Assessment of Nurses in Geriatric Patient Care

**Name:** Victoria A. Belizario

**Preceptors:** Direct Supervisor: Claudia Douglas, DNP, RN, CNNe, APN.C, Administrative Director

**Agency:** Hackensack University Medical Center - Hackensack Meridian *Health*

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**Purpose:** To evaluate how nurses spend their time and quantify the amount of time spent in direct, non-direct, and non-value added care during their working shift.

**Significance:** Insufficient time spent at the bedside is one of the most important issues affecting medical care as it compromises patient safety, patient satisfaction and quality of care (1). Nurses play a critical role in patient care, yet nurses are spending an increased amount of time away from their patients due to heavy workload (2, 3). A greater RN presence at the bedside is associated with fewer adverse patient quality outcomes, such as patient falls, central line-associated bloodstream infections (CLABSI) and pressure ulcers (3). In order to propose strategies to improve the quality of delivered care, this project observed how nurses spend their time during their working shift.

**Method/Approach:** This assessment involved two geriatric units within a large medical center in northern New Jersey. Four nurses were observed for a total of 64 hours. Data was collected using an ethnographic approach, specifically by shadowing and observing each nurse individually for 16 hours over two consecutive days. Direct care is patient care delivered at the bedside. Non-direct care was defined as patient care delivered away from the patient. Non-value added care was defined as “waste” or any non-work-related activity.

**Outcomes/Results:** Of the total 64 hours observed, direct care represented a small proportion with only 19 hours, 45 minutes and 15 seconds (30.9%). The majority of this time was dedicated to medication administration (41.1%). Non-direct care was representative of 35 hours, 59 minutes and 15 seconds (56.2%), with documentation representing the most (48.4%) in this category. Non-value added care represented the least of total time spent with 8 hours, 25 minutes and 30 seconds (12.9%). Personal activities represented the majority (71%) among all non-value added care activities.

**Evaluation/Conclusion:** The nurses spent more than half of their time in non-direct care (56.2%) and only one-third of their time in direct care (30.9%). Non-value added care constituted a meaningful portion (12.9%) which demonstrates the need for a more efficient workflow of nurses. Two limitations are the inclusion of two nurses-in-training and equipment operating at delayed speeds. A more productive unit design, increased supply of computers and scanners, and disbursement of telephones to nurses-in-training would minimize the amount time spent in non-direct care and non-value added care.

[https://docs.google.com/document/d/1MCRENK4h6qUWwc86OY\\_98G5-qMoTaPXftZ1ArHvvvA0/edit?usp=sharing](https://docs.google.com/document/d/1MCRENK4h6qUWwc86OY_98G5-qMoTaPXftZ1ArHvvvA0/edit?usp=sharing)



## Internship Abstract

**Title:** Optometry Exam Analyzer  
**Name:** Danielle Bocchino  
**Preceptors:** Dr. Beegle & Dr. Mark Anthony Stevenson  
**Agency:** Lens Crafters of Eatontown & Amboy Eye Center

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**Purpose:** To improve the rate of patients returning annually for examinations, by teaching them why it is important.

**Significance:** It is important for patients to receive eye exams every single year. Many people do not see this exam to be important; however it can determine diabetes, glaucoma, high blood pressure, high cholesterol, cancers, tumors, and many more issues. It also can provide better vision for people who may be unaware that their vision is impaired by prescribing glasses and/or contact lenses. Skipping eye exams can be fatal. Currently, a nation-wide survey was taken and showed that only a small minority of those most at risk get the yearly eye exams that can help detect the early signs of vision loss, and prevent progression of eye diseases. “Fully 86 percent of those who already have an eye disease, do not get routine exams.” The survey was commissioned by Lighthouse International, the world-renowned nonprofit organization in New York that seeks to prevent vision loss. When doctors view eyes, they are able to see many things that we cannot. Eye exams are not important for vision, however all around health as well. More than 38 million Americans over age 40 currently have low vision, an age-related eye disease, or are blind—this is expected to increase to 50 million by 2020. By 2020, an estimated 3.9 million adults over 40 will have low vision. Glaucoma in the over 40 group is expected to be 3.36 million by 2020

**Method/Approach:** At Amboy Eye Center, as well as Lens Crafters of Eatontown, over 200 eye exams were assisted. Before the manual examination, computerized tests are done. Through assisting, machinery, cases, and knowledge was gained. At the end of the internship, various posters and brochures were made to keep for the patients to read. The posters informed how exams will be done, what each machine does, and reasons to return. The purpose of this project is to educate patients on what the exams are, and what each machine does. We want to educate them on reasons to return the following year.

**Outcomes/Results:** During 2012, 43.8% of the US adult population received an eye exam—a total of over 105.4 million exams generating \$5.26 billion in dollar revenue. The number of exams administered by independent ECP locations rose by 2.4% over the past year and by 12% over the past four years. Fully 86 percent of those who already have an eye disease do not get routine exams, the telephone survey of 1,004 adults revealed. The purpose is to get patients to receive eye exams, and to return each year annually. This will raise the rate of U.S. citizens receiving eye exams

**Conclusion:** Surveys will be left out for patients to access their satisfaction, and to whether or not they will be returning annually. Also, the rate of patients receiving eye exams will be significantly higher. Preceptors will perform process evaluations, as well as validity in the posters and brochures.

Citation: Eye Exam Incidences Increasing Among U.S Population. (2013, May 28). Retrieved November 17, 2017, from <http://west.visionexpo.com/Press/Vision-Voice-Newsletter/Eye-Exam-Incidences-Increasing-Among-US-Population/>

## Internship Abstract

**Title:** Pediatric Surgery Child Friendly Office Assessment

**Name:** Rosemarie Brigande

**Preceptors:** Tuesday Cirillo, Registered Nurse

**Agency:** Saint Peter's University Hospital

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**Purpose:** To assess the Saint Peter's Pediatric Clinic and encourage new and innovative ways to create a child friendly office for a more efficient workplace.

**Significance:** When a pediatric patient walks into the Saint Peter's Pediatric Clinic they are greeted by depressing walls, furniture, and a waiting room with no windows. This terrible first impression adds to the fear of doctors that most children already have. A study done by medical professionals at the University of Sao Paulo at Ribeirao Preto College of Nursing found that "when there is an opportunity for games [in the waiting room], the negative factors of inactivity are mitigated and positive changes occur ... such as decreased anxiety, nervousness, tiredness, agitation and impatience, demonstration of joy, tranquility and good mood ... It increases communication, they talk more, they feel more secure, there's greater confidence" ("Playing in The Waiting Room", 2011). The professionals in the research found that these tactics enhance the quality of their own work and make for more successful visits and consultations (2011). This makes their care superior to doctors who do not have child friendly offices.

**Approach:** Simple interviews were conducted with 322 patients and their parents. The children were asked about their age, favorite hobbies, and where they go to school. The children were then presented with a list of options on colorful paper that they ranked from most important to least important with the help of their parents. The options were coloring sheets, iPads, stickers, movies, board games, toys, stuffed animals, and marker boards. Parents of newborns were, also, included in the questioning. The parents were then asked about their opinions on wall paintings and wall stickers. Patients who visited for a second or third time were not asked to participate in the assessment again.

**Results:** The iPad came in as the most important for the pediatric patients with 86% of the pediatric patients listening it as their first choice. Movies came in as the second most important then toys, board games, marker boards, coloring books, stickers, and stuffed animals. 100% of parents agreed that there should be something child friendly painted on the walls. 61% agreed that it should be something neutral and not specific to any TV show or movie so all children could relate. 39% thought it should be popular cartoons on TV.

**Conclusion:** In conclusion, 100% of the staff and patients agreed that the office should be made more child friendly. An iPad, simple toys like blocks and legos, and wall stickers are items that will make a tremendous improvement in the clinic. All items can be easily wiped down every day to prevent illnesses from spreading. These items will make the child more comfortable which allows for the care team to be even more successful than they already are.

## Internship Abstract

**Title:** Improving seal management system and normalizing application process

**Name:** Anan Chen

**Preceptors:** Haili Chen, Director of Chief Executive's Office

**Agency:** GF Securities Co., LTD.

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**Purpose:** To establish a unified and standardized rule for better use of official seals, preventing abuse of privacy rights.

**Significance:**

GF Securities is one of the first, full-service investment banks in China. The Company operates 264 brokerage branches, providing extensive national coverage to 31 provinces, cities, and autonomous regions throughout China. The seal which represents company is very important, because it validates all kinds of documents once it is stamped. Generally, different seals have different levels of authority. Most are used to stamp the contracts, letter of commitments, letter of indemnity and other significant documents. So it is very necessary to a build strict and complete system for managing these seals to restrict power.

**Method/Approach:**

Huge amounts of data in the electronic seal server system was filed and classified into different branches to deal with historical problems. An excel sheet was made to see how many people in branches used the wrong seal to chop documents. In addition, every procedure of document processing was checked. Managers in branches would get a phone call from headquarters once the staff in their branch was found that he/she didn't follow the chop rules and filled the process form incompletely.

**Outcomes/Results:**

After checking 2,000 various procedures of document processing which had problems and 158 phone calls later, a final report came out, showing the real situation that the number people and how people in branches use the seal in an informal and inconsistent way. A new rule was made by Chief Executive Office to provide standards for using the seal. This new official document was sent to 264 brokerage branches for implementation.

**Evaluation/Conclusion:**

After the improvement, staff who are responsible for chopping documents followed the new rules and have a better understanding of the use of different seals. According to the new rule, they have to fill the form and complete the application procedure once they are finished chopping. In this way, the Chief Executive Office is able to supervise the use of companies' seals and manage branches effectively. People will pay more attention to the use of the seals. Last but not least, it is less likely for staff to make error, avoiding unnecessary loss.

## Internship Abstract

**Title:** Visual Checklists for Child Passenger Safety Discharge Protocol

**Name:** Juliana Conway

**Preceptors:** Diana Starace, Injury Prevention Coordinator

**Agency:** Robert Wood Johnson University Hospital (RWJUH)

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**Purpose:** To create an educational tool for the child passenger safety (CPS) discharge protocol for pediatric patients and families at Bristol-Myers Squibb Children's Hospital (BMSCH).

**Significance:** Based on data collected from January 2014 to August 2017 through the RWJ Trauma registry, only 30% of pediatric patients involved in a motor vehicle crashes (MVC) were restrained. According to the Center for Disease Control, MVC are the leading cause of unintentional deaths for children in the United States (2015). Fortunately, correctly using a car seat can “reduce the risk of death by as much as 71 percent” (Safe Kids Worldwide, 2014).

**Methods:** After receiving the data from the RWJ trauma registry, modified formulas were devised and executed in Microsoft Excel to aggregate the data based on age, month of injury, restraint status, and injury type. This cumulative data was then used to correlate restraint status with age and common injuries. Analysis of this data suggests a higher rate of concussions, cranial fractures, and loss of consciousness among those who were not restrained as compared to their restrained counterparts. Based on the severity and frequency of injuries, it was determined that an educational intervention was needed. The most common CPS misuses were identified using Safe Kids Worldwide organization, then a visual checklist was constructed based on this information. Finally, the graphic design program, Canva, was used to create the final visual checklists.

**Outcomes:** After reviewing pediatric registry data for trauma from RWJUH (n=264), only 78 (30%) patients were recorded as restrained. Further analysis showed no single age group was more or less likely to be restrained. Based on information from Safe Kids Worldwide, the most concerning injuries involved the brain and spine, because they would cause irreversible damage. If a patient is not restrained, he is more likely to have a concussion (60%), cranial fractures (89%), loss of consciousness (68%), and head injuries (69%) than his restrained counterpart. These results prompted the necessity of an intervention. A revised child passenger safety protocol is being implemented throughout BMSCH and the visual checklists will be one educational tool for the parents.

**Evaluation:** Overall, these checklists will be a future component of the CPS discharge protocol. They should help to educate parents and allow children to leave the hospital safer than they arrived. One limitation of the data is that any passenger that was not confirmed to be restrained was stated as “not restrained.” This may affect the data's accuracy. The project will be deemed successful if at least 90% of BMSCH patients receive these visual checklists as part of their CPS educational materials and resources.

## Internship Abstract

**Title:** Social Security Trust Funds  
**Name:** Joseph Curran  
**Preceptors:** Ann M. Hill  
**Agency:** Edward J. Bloustein School of Planning and Public Policy

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**Purpose:** To analyze the future of Social Security Trust funds and propose a policy to supplement the Trust funds.

**Significance:** Social Security, our nation's most important welfare program, is in danger of failing. This program mainly assists the elderly by using federal income taxes to supplement income loss after retirement. Social Security started running a deficit in 2010, and if nothing is changed, it will continue to run a deficit until its failure. Social Security has a trust fund that has collected unused tax revenue from previous years before 2010. Unfortunately, we have had to use the tax revenue in this trust fund to supplement other programs of the Federal Government. The trust fund has given the U.S. Treasury about 2.8 trillion dollars in previous years. Eventually, the trust fund will need to collect this tax revenue in order to maintain the social security program. The problem lies with the U.S. Treasury's lack of tax revenue to repay the trust fund's money used on federal programs.

**Method/Approach:** A review and analysis of the future of the Social Security Trust Fund was undertaken using multiple online government resources, along with other private studies and research on the Social Security trust fund. The data and research will be analyzed in order to examine the issue facing the future of the Social Security trust fund. Then, the data and research will be used to guide a policy recommendation for the future of Social Security and its trust fund.

**Outcomes/Results:** The results of this analysis are that the Social Security Trust Fund will be unable to collect its owed tax revenue from the U.S. Treasury. The U.S. Treasury will be unable to return the 2.8 trillion dollars in tax revenue to the Social Security Trust Fund. According to the research and data, without the return of this tax revenue or the restructure of the Social Security, the program will continue to run a deficit until its failure. Either way, the data supports the outcomes of our country decreasing Social Security payouts and/or increasing the countries debt.

**Evaluation/Conclusion:** The research and data analyzed in this project have revealed only a few options for the success of the Social Security program without its Trust fund. One option is to increase the country's debt in order to refund the Social Security Trust fund. Another is to cut Social Security spending which will decrease Social Security payouts. The policy recommendation that can be made after this analysis is to sell bonds, which will raise the country's debt in order to sustain the program until we can privatize Social Security. The privatization of Social Security for future generations will allow for the country to step away from the unsustainable practices that rely on maintaining a near perfect worker to beneficiary ratio.

## Internship Abstract

**Title:** Metric Analysis on Apple Blossom Way Neighborhood (Resident Unit) Staff

**Name:** Marquel Davis

**Preceptors:** Lisa Slater, Director of Professional Education (MSN, RN)

**Agency:** Francis E Parker Memorial Home

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**Purpose:** To compare and contrast metric analysis of two surveys assessing stress and development (empowerment). To evaluate the positive and/or negative changes based on previous data collection.

**Significance:** Research indicates an inverse relationship between stress and job satisfaction, as stress goes up, job satisfaction falls. As a result, this increased stress commonly leads to decreased job satisfaction and decreased quality of life. This could potentially contribute to care partners leaving the profession and as an end consequence, account for the current direct healthcare workers' shortage. Parker's goal is to empower staff and to develop a self-directed work team. Parker has developed a coaching team on Apple Blossom Way, conducting a pilot project to educate staff to make decisions on their own as a team without involving administrative staff. Research indicates, "with self-managed teams, employees have more job satisfaction because they are directly involved in the day to day running of a company and are more independent" (Burns). Research also indicates that "Self-directed work teams have a wide range of skills because of the diverse backgrounds of individual members. This helps teams to develop innovative products and services and to take a creative approach to problem-solving" (Burns).

**Method/Approach:** Sixteen Apple Blossom Way neighborhood (resident unit) staff were to participate in the study. Anonymous surveys were given to staff between October 31 to November 3, 2017. Staff were put into different categories based on their positions: Nurses (N=5), CNAs + Neighborhood Assistant (NA) (N=9), Housekeepers (N=2). In regards to the development survey, there was a scale given from 1 to 5, 1= strongly disagree, 2 = disagree, 3 neutral, 4 = agree, and 5 = strongly agree. In regards to the stress survey, there was a scale from 1 to 7, 1 = Not stressful to 7 = very stressful was used.

**Outcomes/Results:** Based on the development (empowerment) survey, out of all Nurses, the average was 3.7, CNA's + NA (3.7), and Housekeeping (4.4). In regards to the stress survey. CNA's + NA had an average score of 3.3 which is more than the average score from previous data collection (2.7). Housekeeping (4.3) which is a slightly lower average than previous data collection (4.8). Nurses (4.3), although one nurse did not participate in this survey, have a higher average score than previous data collection (3.67).

**Evaluation/Conclusion:** Based on previous and new data collection, in regards to the development (empowerment) survey, housekeeping (4.4) continues to score higher followed by CNA's + NA and Nurses who had the same average score of 3.7 out of 5. In regards to the stress survey, based on new data collection, CNAs + NA and Nurses stress has increased. Housekeeping is the only group that demonstrate a decrease in stress.

## Internship Abstract

**Title:** RWJMS General Internal Medicine Patient Satisfaction Assessment

**Name:** Rishi Desai

**Preceptors:** Dr. Michael Steinberg, Chief of Internal Medicine at RWJMS

**Agency:** Rutgers Robert Wood Johnson Medical School - Division of General Internal Medicine

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**Purpose:** To analyze patient satisfaction and practice efficiency parameters in order to assess healthcare delivery gaps within the RWJMS General Internal Medicine Practice.

**Significance:** Patient satisfaction and practice efficiency directly affects patient retention and recently has been linked to reimbursement from health insurance companies. Al-Abri and Al-Balushi (2014) state that patient satisfaction surveys serve as “established yardsticks” for healthcare quality improvement plans. This study serves to identify pressing concerns of patients in hopes of improving the quality of care that is provided at the General Internal Medicine practice at Robert Wood Johnson University Hospital.

**Method/Approach:** A convenience sample of patients was surveyed to analyze efficiency and patient satisfaction within the General Internal Medicine (GIM) practice. A pre-visit and post-visit instrument was developed and administered to patients over a three week period. The survey instruments utilized a scale of excellent, good, fair and poor to judge patient satisfaction parameters. Patients were also asked to rate their overall experience on a scale of 1 to 10 (1=Poor, 10=Excellent). The data collected was compiled into an excel spreadsheet and analyzed to determine frequencies, distributions and correlations.

**Outcomes/Results:** Of the patients in the pre-visit survey (n=20), 75% were women, 55% were ages 40-64. Sixteen patients (80%) had heard about the practice’s online patient portal and eleven patients were signed up for the portal (55%). Of the patients in post-visit survey (n=20), 65% of patients were women, 95% were above the age of 40. Regarding patient appointment wait-times, 5 patients (25%) were seen on time or early, 9 patients (45%) waited 5-10 minutes, 6 patients (30%) waited more than 11 minutes. Nineteen patients (95%) said they would recommend the General Internal Medicine practice to their family and friends. When asked to give the practice an overall experience rating on a scale of ten, 17 patients (85%) gave the practice a 9 or 10 rating, while 3 patients (15%) gave a rating of 7 or 8.

**Evaluation/Conclusion:** Although 80% of patients had heard about the GIM patient portal, only 55% of patients had signed up for it. In the post survey findings, a majority of patients (70%) had to wait less than ten minutes to be called for their appointment, but 15% of patients waited over 30 minutes. 95% of patients would recommend the GIM practice to loved ones and 85% of patients gave the practice an overall rating of nine or ten. The GIM practice had excellent scores across all of the patient satisfaction parameters. The survey was limited by not matching all patients’ pre/post data and that the sample size was relatively small. Because surveys were administered in close proximity to the front desk staff, patients may have felt inclined to give positive reviews. Ongoing patient surveys are essential to evaluate and maintain both a high quality of patient care and a high level of patient satisfaction.

## Internship Abstract

**Title:** Company Culture Construction and Relationship at Work Assessment

**Name:** Xuerong Ding

**Preceptors:** Chuangkun Lai, Chief Human Resource Manager

**Agency:** Neon Electronic (Int'l) Ltd.

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**Purpose:** To establish, organize and promote employee working environment, and adjust employment relationship in staffing program.

**Significance:** Like many other manufacturing companies in the Pearl River Delta economic zone (PRD), China, Neon Electronic (Int'l) Ltd. is now facing a labor shortage and must satisfy current employees needs or risk losing them. Because the national government increased the minimum wage standard across the country, the income gap between the coastal regions and interior areas has been gradually narrowed. Therefore many migrant skilled workers decided to work back home instead of continuing stay in PRD. Thus, in order to attract more talented potential candidates and retain current employees in manufacturing industry, Neon Electronic (Int'l) Ltd. Human Resource Department is now creating a friendly working environment by meeting employees physiological, safety and belonging needs in staffing strategy system.

**Method/Approach:** First, the HR department discussed the plan about how to improve the working environment in the company during weekly meetings with other departments. Second, a survey among all of the employees was conducted to figure out their needs and concerns. Third, according to the result of the survey, the HR department selected some most typical constructive proposals to promote the working environment and meet employee's needs, such as enhance employees fire safety training, improving the library and some other entertainment facilities. Finally, the HR department adopted face-to-face communication with each employee to help them to achieve their career goals. Additionally, job promotion information was shared and provided across all levels of employees. Finally, bonuses and profit sharing were offered as incentives to motivate employees to work better.

**Outcomes/Results:** Questionnaires and feedback given by employees were collected and, according to the results, more than 85% of the employees are satisfied with the newly implemented improvements. Moreover, team cohesiveness and identity have been improved as well. During this period, the company performance and productivity also was increased. An increase of more than 20% in job application forms was also found.

**Evaluation/Conclusion:** According to the questionnaire, the working environment satisfaction rate and job application rate shows that more than .85 employees feel strongly that the improvements were positive and the current employees will recommend the company to bring in more skilled people.



## Internship Abstract

**Title:** Household Survey in Shenzhen

**Name:** Zhiqian Fang

**Preceptors:** Direct Supervisor: Hangyin Wang, Investigator  
Project Supervisor: Hui Tian, Investigate Commander

**Agency:** The Development and Reform Bureau of Shenzhen Longhua District

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**Purpose:** To conduct an economic assessment of the residents of Longhua District to inform policy decisions at local and city levels.

**Significance:** The cost of living in China, especially in the big cities like Shenzhen, is growing radically. Many people suffer under a low living standard. The abnormal rising price in the housing market, the instability of food prices and the now falling GDP index reflect the problems of China's economy. The government is trying to control the food and the housing prices in order to protect people's standard of living. Therefore, an economic assessment is the significant first step for the government to make proper decisions.

**Method/Approach:** The household survey, with sample rotating every 3 to 5 years, is the first-hand data that show the current living standard in the country. There are 6 steps in sample rotation. First, building sample frame. The sample frame is based on the database of 1% sample population survey. Second, using random and systematic sampling to select the local level units. Third, using systematic sampling in the sample survey residence community and in each local level units. Fourth, randomly determining a starting points (room number) in the sample community and using systematic sampling to select the sample families in each sample communities. Fifth, remove or replace the empty homes and rejecters in the sample. Last, managing the sample dynamically.

**Outcomes/Results:** Sorted the samples on community level into urban, urban-rural, and rural groups. We divided the large community with more than 2000 families into 2 sample groups with about 1000 families each. We combined the adjacent small communities and built into new communities no less than 80 families. We uploaded the data about the redistributed communities on the national statistics system and got the sample communities. We distributed the sample communities to 6 local committees and collected the basic information about the families in the sample communities.

**Evaluation/Conclusion:** We determined the samples for the future 3 years household survey in Longhua District, which is the first step for the successful household survey. The household survey is a long-term process. As Shenzhen is a city with high migration rate, it is really hard to keep the sample replacement rate under 10% in long run. Therefore, it is important to choose the right sample which can be tracked for such a long period. The limitation of the survey involves the lack of knowledge about data collection by investigators in local communities. Some of them are new to the household survey which might affect our final outcome. Also, as our sample size is large, it is hard to guarantee the accuracy of the data.

## Internship Abstract

**Title:** Appraising the real estate and replanning the use of land  
**Name:** Xuehao Gao  
**Preceptors:** Direct Supervisor: Huan Wang, Deputy General Manager  
**Agency:** Shaanxi Jianye Real Estate Appraisal Ltd.

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**Purpose:** To appraise the value of real estate in Xi'an, Shaanxi, China for the government or property developers to replan the use of the land.

**Significance:** The population in China has increased dramatically over the past half century, but the available land property is less and less. Clearly, the old-standard housing planning system is not suitable for the current housing demand. As a result, the Chinese government has started to replan the use of land in recent years. Dismantling old buildings and removing the residents in those houses are normal methods for the government. During the process of replanning of real estate appraisal, the approach for identifying the value of the house becomes a critical procedure for both government and residents since the value will determine the costs to the government and how much compensation could be received by residents.

**Method/Approach:** (1) Collect transaction examples ; (2) Choose the comparable examples; (3) Establish benchmarks ; (4) Transaction correction ; (5) Market condition adjustment ; (6) Real estate situation adjustment ; (7) Calculate the comparative value

**Outcomes/Results:** On July 25, 2017, the value of the appraisal object is 583,900 RMB (about 88000 dollars).

**Evaluation/Conclusion:** This outcome provides a reference price for both government and the owner of the house, so they could negotiate basing on this price. Of course, dismantling and removing are huge project for citizens and this individual appraisal case is not enough for the whole project, but the project is indispensable and plays an important role in the process of replanning the city.

## Internship Abstract

**Title:** The Effects of the Transitioning Charitable Funding Environment on Nonprofit Culture

**Name:** Chloe Gonzales

**Preceptors:** Denise Zimmer, CEO

**Agency:** Be The Good LLC

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**Purpose:** To analyze the transitioning nonprofit funding environment and the obstacles hindering nonprofits from securing private funding.

**Significance:** Following the recent economic crisis, 47 percent of nonprofits reported cuts in federal government funding, 43 percent in state funding, and 39 percent in local funding. Amongst all types of nonprofits, health and human service groups were most affected by these reductions. In lieu of government aid, private giving significantly increased by 20.9 percent between 2009 and 2016. The transition of financial support from the government to private sector has had major changes on the nonprofit funding environment, and nonprofits must progress simultaneously to be successful in securing grants and addressing emerging global health issues.

**Method/Approach:** An observational study was conducted to analyze the funding environment of a small nonprofit startup (subject) and to identify key developmental obstacles hindering it from winning grant awards. Access to the subject's project management and team communication software, legal documents, and virtual team meetings were essential resources in this study. Additional research was conducted of active grants relevant to the subject's mission, goals, and geographical area to further analyze the subject's specific funding environment. These findings were then compared to the results of a literature review. First, a case study documented the change in funding methods of four large private funders post the 2008 economic crisis. Second, a case study followed thirteen nonprofits to identify obstacles faced by young nonprofits, and key developments of successful nonprofits.

**Outcomes/Results:** Both subject specific observations and case study findings suggest that private funders are more likely to support nonprofits with established capacity, actively engaging in capacity building, or demonstrating measurable outcomes. All four funders who changed their funding methods to place a higher value on capacity building reported a substantial improvement in intended social impact. All thirteen nonprofits who engaged in capacity building reported increased efficiency in delivering their mission. Major obstacles hindering both the subject and the nonprofits in the case studies from capacity building are (a) culture of valuing services over organizational tactics, (b) little to no perceived need to develop capacity, and (c) lack of existing literature examining capacity building in the nonprofit sector.

**Evaluation/Conclusion:** Capacity Building plays an increasingly valued role in the new wave of private charitable giving. Although research demonstrates that capacity building is an efficient means of organizing successful nonprofits to combat emerging global health issues, the sample sizes in the case studies were too small to conclude concrete evidence.

## Internship Abstract

**Title:** Promotion Plan of General Health Service for Elders

**Name:** Yanjie Guo

**Preceptors:** Wenyan Chen, General Manager

**Agency:** Guangzhou Jiangyi Eldercare Services Co., Ltd.

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**Purpose:** Incorporate new efficiency and improvement practices for managers to improve productivity and relationships among key stakeholders.

**Significance:** A promotional plan aimed at improving the general health services for elders was investigated. Based on opportunities, people will finally get a chance to be leaders of small groups or run an office, or even run an organization. There are lots of theories about management were assessed for application to management program. Experience-based project and record of building a managing system insist of efficiency and improvement practices will help understanding the use of some basic tools of leadership and self -management.

### **Method/Approach:**

- a. Period Plan A designed work plan for a period, like a week or month, will help members of group to find their ways to follow when a clear direction is necessary. Setting up short-term goals leads to easy-access achievement which motivates members of group keep their enthusiasm.
- b. Quadrantal Law To manage time use, by setting the deadline and keeping enough space for emergency, the Covey Quadrant system allocates work time following theories of “importance” and “emergency”. In addition, time allocation is not just about ourselves, also part of leadership managing. Rotation When a flexible and basic mechanism is built, chances of taking charge will be a perfect platform for employees to learn something and show their ability on work. Who deserves a higher position, responsibility and skills will be good standards showed in their processes of running leadership.

### **Outcomes/Results:**

Monthly plan will be set up at the start of every month, which will also separate into four weekly goals. People take their own responsibility every week, try their best on what they can do and corporate together to handle tough challenges. A clear path shows up in the process, leading every employee clearly knows what they can do to push forward the company.

### **Evaluation/Conclusion:**

With the reforming project, significant improvement appears in the efficiency and organization. Completion increases from 80% to 95% when everyone has a direction to follow; deadline will no longer be a threat but a reinforcement to encourage staff focusing on their jobs. We held a presenting conclusion at the end of the project, every member of the office shared their feeling about the project. Based on these presentations, one thing we all agree is that the project builds a platform for everyone to learn new skills and improve themselves after graduation from school.

## Internship Abstract

**Title:** Basic Disaster Response Crisis Counselor (DRCC) Training Series in Middlesex County

**Name:** Jodie D. Intili

**Preceptor:** Penny Grande, Middlesex County Mental Health Administrator

**Agency:** The Middlesex County Office of Human Services

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**Purpose:** To host the complete basic Disaster Response Crisis Counselor (DRCC) training series in Middlesex County and to increase the total number of certified DRCCs within Middlesex County.

**Significance:** With the aftermath of the 9/11 terror attacks, professionals with the New Jersey Division of Mental Health and Addiction Services (NJ DMHAS) learned that having licensed professionals from the field was not sufficient in responding to disasters. It became apparent that training and certifying crisis responders with skills specific to psychological first aid, disaster and trauma counseling, as well as cultural issues was crucial as victims, their families, and responders had suffered unintended harm. DRCCs must also be trained in Incident Command System and National Incident Management System, which came out of a directive issued by former President George W. Bush and an Executive Order signed by former Governor Codey. This is important for coordination at all levels of government and private industry in the creation and maintenance of order rather than unintentionally causing more chaos, fear or confusion. Additionally, having a large network of DRCCs is especially beneficial in times when multiple disasters occur simultaneously, or within a short period of time as has been the case during the recent hurricane season, mass shootings, and terror attack. DRCCs are often deployed in teams of 2; a large network of volunteers makes way for multiple teams to be deployed at once and also gives volunteers the opportunity to decline deployment for other obligations.

**Approach:** Collaboration with the Disaster & Terrorism Branch of the NJ Division of Mental Health & Addiction Services (DMHAS) as well as the East Jersey Old Town Village to coordinate times and dates for the basic DRCC training sessions, followed by hosting the 4 trainings sessions. Distribute of questionnaire to assess Middlesex County affiliation and identify persons who've completed the online training. Analyzing the results for effectiveness.

**Outcomes:** The number of certified DRCCs who are affiliated with Middlesex County is likely to increase as an outcome of the County held trainings. While the results from the questionnaire will disclose the actual data, it is projected that a larger percentage of attendees were affiliates of other NJ counties over those who live or work in Middlesex. In total, 5 people attended the complete Basic Training Series and 42 people attended at least 1 of the 4 sessions. Several people who attended less than all 4 sessions have taken others at different locations, with the class(es) attended finishing up the series.

**Evaluation:** Hosting this series in Middlesex County was effective in that it is likely to lead to an increase in certified DRCCs in New Jersey, the larger goal of the program. It is projected that an increase of County DRCCs will be approximately 8 - 10 volunteers. Two limitations impacted promotion and tracking. The final version of the materials were not approved and received until the week of the first session, limiting promotion. This was due to Middlesex County's new branding process that required multiple reviews and approvals. Secondly, the trainings were open to all NJ counties without a method in place to track county affiliation upon registration. As registration was maintained by the NJ DMHAS, post-training questionnaires were required at the conclusion of the December 6th training to determine county Middlesex County affiliation.

## Internship Abstract

**Title:** Health Education: Obesity and Cardiovascular Diseases Prevention in High School students

**Name:** Jennyca Jerome

**Preceptors:** Karen Johnson-LaRussa RN, BS, MA  
Public Health Nurse/Community Health Educator

**Agency:** East Orange Health Department, East Orange, New Jersey

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**Purpose:** Health Education is a very important part of Public Health. The purpose of this evaluation to demonstrate how impactful Health Education can be in preventing Obesity and Cardiovascular Diseases in High School Students.

**Significance:** According to the New Jersey Department of Health, 10% of New Jersey children aged 10-17 are obese; 9% of New Jersey high school students are obese and 14 % are overweight. The CDC states that Obesity in children and adolescents is associated with morbidity such as mental health and psychological issues, asthma, obstructive sleep apnea, orthopedic problems, and adverse cardiovascular and metabolic outcomes. Obesity rates are more prevalent in minority population such as African Americans. East Orange's demographic is made of 88% blacks; therefore that population is more likely to be impacted by obesity and the side effects that come with it.

**Method/Approach:** Student knowledge about Obesity and Cardiovascular Diseases was tested by administering a pre and post-test assessment consisting of 16 multiple-choice questions. The questionnaire tested the students' knowledge on healthy choices and behaviors. 22 students who returned the consent form that was given to them by the Cicely Tyson High School nurse were selected to participate in the evaluation (n=22). The group is compiled of 10 males and 12 females; 19 Blacks and 3 Hispanics of 14-17 years old. The students were given a pretest a day prior to the presentation, and they were given a posttest immediately after the presentation to determine the changes in knowledge among the students. An interactive presentation on healthy living and healthy food choices was delivered both with handouts and slide show. The presentation contained information about healthy eating; healthy lifestyles choices and community resources. The approach for the presentation was purposely made to be fun and interactive in order to keep the students engaged.

**Outcomes/Results:** Of the students who participated in the presentation, (n=22). 16 (73%) passed the pretest and 6(27%) did not pass the test. After the presentation, everyone passed the posttest (100%) with a score of 80% or higher. The students needed an 80% in order to pass the test. Students were also asked to provide oral feedback about the way the presentation was conducted and everyone enjoyed the presentation.

**Evaluation/Conclusion:** In conclusion, the High School students of East Orange who participated in the evaluation had an overall increase in knowledge about Obesity and Cardiovascular diseases based on the posttest results. The posttest results indicated that the students were able to learn and obtain information about making better health choices and behavior. Every student passed the posttest; therefore it can be assumed that Health Education can help educate students about healthy behaviors and healthy choices.

## Internship Abstract

**Title:** Assessment of Johnson & Johnson Global Services Energy Space Utilization

**Name:** Catharine Kelly

**Preceptors:** Direct Supervisor & Project Supervisor: Brian Kern, Wellness Professional

**Agency:** HealthFitness Corporation at Johnson & Johnson Raritan Campus

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**Purpose:** To collect and analyze data on utilization of the fitness room, called the Energy Space, in the Johnson & Johnson Global Services building at the Raritan site.

**Significance:** Over 30% of American workers are overweight or obese. Body Mass Index (BMI) reduction by .15 in one year for overweight employees is strongly associated with participation in workplace weight control programs. Although 31% of the Raritan Johnson & Johnson Global Services workforce has joined the Energy Space, only about 14% of these employees, or 4% of the eligible population, utilize this fitness room at least 3 times a quarter. This data supports the notion that employees are aware fitness amenities exist, but do not utilize them.

**Method/Approach:** The 3rd quarter report was assessed for total, active (3+ times/quarter) and frequent (12+ times/quarter) utilization of the fitness room. A survey was completed on October 13th by 35 employees to collect qualitative data on feelings toward the Energy Space. Qualitative data was evaluated to determine appropriate action to address employees' concerns and interests. Cables were installed in the room to display videos from an employee's phone or laptop on the large screen TV. An open house was held on October 31st to demonstrate how an unlimited amount of workouts, i.e. yoga and HIIT, can be accessed at any time for any length of time, providing personalized opportunity for employees to be physically active.

**Outcomes/Results:** The Energy Space had 72 registered members (n=72) in the 3rd quarter. Of these employees, 10 (14%) used the room actively, and 1 (1.3%) used it frequently. Moreover, almost three-quarters of the surveyed employees were already registered for the Energy Space (n=35, 72%). Moreover, 27 employees (78%) reported they would use an on-site fitness room at least 3 times per month (actively). In actuality, only 5 of them (14%) use it actively and 17 (49%) do not use it at all. Twenty-two employees (69%) like the convenience of the room; 12 (38%) reported not enough time to work out. Eleven employees (31%) reported interest in short but high intensity workouts, and 8 (23%) reported interest in yoga. Of the nine employees who attended the open house, 2 (22%) were members of the fitness room, 7 (78%) joined, and 1 (11%) employee referred a friend.

**Evaluation/Conclusion:** Of the employees who took the survey, 26 were registered for the fitness room and/or claimed they would use it in their workplace actively. However, only 5 registered employees (n=35 (criteria: took survey, registered, and answered they'd use it  $\geq 3$ x/quarter, 14%) actually used the workplace fitness room actively. It can be concluded that perceived intended use of the room is significantly less than actual use. Further analysis would be helpful to determine why this misperception exists. The open house, which promoted workout personalization, raised membership by 8 members (11%), indicating that personalized program implementation and target marketing will be beneficial for increasing actual use.

## Internship Abstract

**Title:** Forms of Treatment in Physical Therapy

**Name:** Tamanna Khan

**Preceptors:** Brian Borer, Supervisor of RWJBH Sports Physical Therapy of Hillsborough, NJ  
Project Supervisor: Megan Varela, DPT

**Agency:** Robert Wood Johnson Barnabas Health

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**Purpose:** To analyze patients' primary aide in recovery from injuries in physical therapy. A survey will determine patient's preference from one of the three major forms of treatment used at the clinic.

**Significance:** At Robert Wood Johnson Barnabas Health Sports Physical Therapy, soft tissue mobilization is a critical part of each patient 30 or 60-minute session. Modalities and exercises are secondary but play just as an important role to help with recovery. Surveys will determine the preference of patients between the three forms of treatment and their effectiveness throughout their recovery. The clinic provides care to all age cohorts, so the survey will further determine if some forms of treatment are preferred by one age group over the other.

**Method:** During the first couple weeks, patients will be observed throughout their sessions. Observing the patients will help in learning about the different kinds of injuries and conditions that are common for the therapists to see in the clinic. Also, there will be a focus on what forms of treatment are being used by physical therapists on a daily basis for patients. Age cohorts, area of injury, cause of injury, and length of treatment will be factors in determining the best choice of treatment for patients. The three forms of treatment are soft tissue mobilization, modalities, and exercises.

**Outcomes/results:** Of the sample size (n=22), 8 patients' (36%) chose soft tissue mobilization, and 7 patients' (32%) chose exercise as the treatment that has helped them the most throughout recovery. 7 patients (32%) chose both exercise and soft tissue mobilization as their preferred form of treatment. The hypothesis of younger age groups choosing exercise over soft tissue mobilization proved to be incorrect, the age cohort of <25 had 2 more patients (25%) choose soft tissue mobilization as their form of treatment compared to the ages 41-60.

**Evaluation/Conclusion:** The survey was further analyzed by viewing types of injuries patients are being treated for. It was broken down into the two most common categories which are sports and post-operation. 44% of sports related injury patients preferred manual therapy, 22% chose exercise and 33% chose both. The trend is quite similar for the postoperative patients. On the contrary, 67% of the patients who were being treated for other injuries preferred exercises are their primary aide in recovery. 17% chose soft tissue mobilization and the rest of the 17% chose both. This survey was based on the patient's thoughts and assessment regarding their recovery. The physical therapists determine what is the best forms of treatment that suits a patient's injury and body. It is common for patients to choose manual therapy over other forms of treatment because it relaxes the muscles that allow for easier movements during exercises and utilization of modalities.



## Internship Abstract

**Title:** Over-the-Counter Medicine Safety for Tweens Knowledge Assessment

**Name:** Fairouz Khondker

**Preceptor:** Direct Supervisor: Diana Starace, Injury Prevention Program Coordinator

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

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**Purpose:** To increase knowledge of over-the-counter (OTC) medicine safety for sixth-graders at Lincoln Annex School in New Brunswick through a series of evidence-based educational lessons and activities.

**Significance:** Kids are starting to self-medicate with OTC medicine as early as 11 years old, according to Scholastic research. While OTC medicine is safe if used for the correct reasons and if taken at the recommended doses, incorrect use of these drugs can have detrimental effects. According to Scholastic, OTC medicine errors and misuse result in over 10,000 Emergency Department visits for kids younger than 18 each year, yet only 54% of children know OTC can be dangerous if misused. Therefore, it is necessary to increase children's knowledge about OTC medicine safety starting at a young age.

**Methods:** Scholastic's evidence-based education program was used to teach and assess the knowledge of 104 sixth-graders at Lincoln Annex over a series of four weekly lessons. Prior to the first lesson, students were given pre-assessments to provide a baseline measurement of OTC medicine knowledge. Additionally, a Home Medication Safety Assessment was sent home with students to measure how proactive parents were about following safe medicine practices in their homes. A series of lessons was then conducted each week to educate students about various aspects of OTC medicine, including storage, responsible use and safe dosing. In the last week, students were given a post-assessment to assess if a change in knowledge occurred.

**Results:** Of the sample size (n=104), the pre-assessment indicated that only 52% of the students had the correct overall information and understanding needed to make safe choices about medicine. Fifty-two percent of the students believed that children could take OTC medicine without a parent's permission if they carefully read the label. Additionally, only 48.52% of students stated that the local poison center is a good place to call if someone has taken too much medicine. The post-evaluation showed an increase in knowledge of OTC medicine safety. Sixty-four percent of the students had the correct information and understanding needed to make safe choices about medicine overall. Specifically, 77% of students stated that the local poison center is a good place to call in the case of medicine misuse. Data from the pre-program Home Medication Safety Assessments revealed that 64% of parents did not lock away the medicine in their homes. Additionally, only 29% of parents knew the poison center phone number.

**Evaluation:** Overall, OTC medicine safety knowledge increased 23% over the course of four educational lessons based on pre-assessment and post-assessment data. While the majority of the students were engaged, limitations did exist as this program was not part of the school curriculum. Thus, by not having grades assigned by teachers, many students did not take the program seriously. The involvement of parents and families in the conversation about OTC medicine is also very important. To address this, take home resources and materials were distributed to the students.

## Internship Abstract

**Title:** Assessing Heart Transplant Education and Health Services Awareness

**Name:** Rohan Kulkarni

**Preceptors:** Direct Supervisor: Lottie Kwarteng, MSW, LCSW, Care Coordinator

**Agency:** Newark Beth Israel Medical Center - RWJBH

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**Purpose:** To assess and educate heart disease patients' knowledge on treatment options and health services in Newark.

**Significance:** Chronic diseases affect the health care of patients to a significant degree. Patients only recall about 20% of information discussed and forget about 40% to 80% of their medical encounters (Richard, 2016). Only 21% of the population in Newark has Medicare (datausa, 2015). New Jersey as a state saw 25.8% of deaths in 2015 due to heart disease (NJSHAD, 2015). We see how important it is to educate people about their health.

**Method/Approach:** A pre-approved questionnaire was given to various patients attending the clinic for advanced heart care/transplant services. Patients waiting in the clinic were given three documents, a pre/post questionnaire, a heart health informational flyer, and a Newark health resources flyer, all given in English and Spanish. After the pre-test they were also asked about healthcare resources in Newark. The patients read the two flyers and were given the post-test.

**Outcomes/Results:** Twenty patients were surveyed for the study. Forty percent of patients knew nothing at all about heart transplant, while forty percent of patients knew a lot about other heart treatments/self-care. Thirty-five percent of patients knew nothing about other health resources. After intervention, forty-five percent of patients said they learned a lot about heart transplant, while fifty percent of patients said they learned some things about other treatments. Fifty percent of patients said they learned a lot about other health resources in Newark. Seventy percent of patients said they would use this information outside of the hospital, with one-hundred percent comprehension of the information.

**Evaluation/Conclusion:** The study determined that a majority of patients are unaware about certain aspects of their health and would benefit from educational interventions. Most patients within the clinic are receptive to education initiatives that can benefit them in some way. Compliance for the project was not an issue. Limitations included length of the study and scope of the study. More in-depth patient follow up and continued education should be done to see the effects for more patients. Finally, including the entire hospital can improve outcomes for patients in the future.

**Citations:** [https://docs.google.com/document/d/1DCNKjN\\_MeSYT9yIEAEpH-L0oe1fo71xO6FrTEoq2Qvw/edit](https://docs.google.com/document/d/1DCNKjN_MeSYT9yIEAEpH-L0oe1fo71xO6FrTEoq2Qvw/edit)

## Internship Abstract

**Title:** Federally Qualified Health Center Integrated Health Care Needs Assessment

**Name:** Toni Kutne

**Preceptors:** Project Supervisor: Marwa Chebli, Training and Communications Coordinator

**Agency:** New Jersey Primary Care Association

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**Purpose:** To research and analyze New Jersey substance abuse and mental health data, to identify a need for expansion of integrated healthcare at New Jersey Federally Qualified Health Centers.

**Significance:** Integrated healthcare will better coordinate mental health, substance abuse, and primary care services in order to produce best outcomes while remaining a cost-effective solution. People with a mental illness die earlier than the general population and have more co-occurring health conditions. The New Jersey Primary Care Association represents the 23 Community Health Centers and 129 satellite community-based ambulatory healthcare facilities throughout the state of New Jersey that work to ensure that everyone has access to affordable, high quality healthcare. However, our FQHCs currently do not provide coverage for some crucial integrated health care services, such as group therapy.

**Method/Approach:** An intensive research analysis was completed in order to identify a need for expansion of integrated healthcare services for New Jersey FQHCs. Research data was compiled regarding integrated healthcare and the services currently provided at New Jersey FQHCs. Next, yearly Substance Abuse Overviews produced by the New Jersey Department of Human Services, Division of Mental Health and Addiction Services were analyzed via Microsoft Excel.

**Outcomes/Results:** The New Jersey Department of Human services reported the following admissions: in 2014—65,553 admissions, in 2015—69,477 admissions, and most recently in 2016 there were 76,509 treatment admissions. Of those admitted for substance abuse in 2016, 54% (41,131) reported Medicaid as their health insurance carrier and 35% (27,045) reported having no insurance. Additionally of those admitted in 2016, 59% (43,984) were reported to have a mental illness/ co-occurring disorder. In 2015, 54% (36,604) were reported to have a mental illness/ co-occurring disorder.

**Evaluation/Conclusion:** The number of treatment admissions for substance abuse have continued to increase since 2014. The vulnerable populations who are primarily facing this issue are those who carry Medicaid health insurance or no health insurance—populations that are frequent visitors of New Jersey FQHCs. Integrated healthcare could pose as a solution for substance abuse issues in New Jersey for the vulnerable populations. Expansion of integrated healthcare at New Jersey FQHCs will also result in a decrease in inpatient costs, ER costs, and total medical costs.

[https://docs.google.com/a/scarletmail.rutgers.edu/document/d/1rUIRTxBpcajU2ZZbnYebi7R\\_a-kqbMXCfpsE31PFQYY/edit?usp=sharing](https://docs.google.com/a/scarletmail.rutgers.edu/document/d/1rUIRTxBpcajU2ZZbnYebi7R_a-kqbMXCfpsE31PFQYY/edit?usp=sharing)

## Internship Abstract

**Title:** Contamination Risk Reduction in Pharmaceutical Production

**Name:** Sam Kuttappassery

**Preceptors:** Direct Supervisor: Suja Alum, Pharmacist in Charge

**Agency:** Imprimis Pharmaceuticals

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**Purpose:** To reduce the risk of contamination in drugs by reducing the number of particles in the air and eliminating as many contamination sources as possible.

**Significance:** Each year, thousands of batches of drugs go to waste because of contamination during the process of manufacturing. One major contributor to this is mold and other living organisms that may lead to a batch rejection. Imprimis holds itself to a high standard of product quality, and works to reduce the risk of contamination in all products. Humans are the most contaminating factor in the facility, which is why there are highly regulated gowning procedures before entering the clean rooms. Sterile techs are required to wear hoods, masks, doubles gloves, and boots over shoe covers as part of protocol. This project is significant because it is a means of reducing the risk of contamination in this facility.

### **Method/Approach:**

The microbiology department keeps track of the different kinds of organisms that are surviving in the clean facility and the number of particles that are flowing through the air in ISO 7 and ISO 8 areas. Readings were taken in an ISO 8 room and compared with an ISO class 7 clean room. I got information regarding the particles and potential contaminating sources in the certain areas of the facility. Then, the changes implemented by management were measured, and the effects of the changes were measured.

### **Outcomes/Results:**

The primary count of colony forming units, or CFUs, was 34 in this particular ISO 8 room. This is relatively high for a room so close to the clean room. This might be because of the particular layout of the building, which is not ideal for such a situation. However, the CFU count within the clean room itself was 0, which is a good sign. After recent samples, it was found that the count reduced to 27. After a second count, the number decreased slightly to 24. While there was a reduction, a correlation cannot be established without further research into the consistency of this drop in CFUs and long-term study.

### **Evaluation/Conclusion:**

From the results from the microbiology department, it is clear that reduction in the moisture levels of the facility as well as the elimination of traces of cardboard have much to do with the presence of mold in the facility. This is not new knowledge, as moisture is directly correlated to mold growth. There are many little changes that can be made to reduce these two factors throughout the facility. While these changes are trivial individually, together, they make a great difference and contribute to reducing contamination in the compound that is being delivered to patients.

## Internship Abstract

**Title:** Marketing Research in Asia Pacific region

**Name:** Xiaotong Lin

**Preceptors:** Preet Shah, Chief Executive officer

**Agency:** Molkem Chemicals Pvt Ltd

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**Purpose:** To achieve better cooperation and improve relationships with potential suppliers and clients in Asia Pacific.

**Significance:** CPhI is an established pharmaceutical exhibition firm with over 26 years' experience of bringing together the movers and shakers in pharma. It seeks international partners and wants to build up long-term relationships with them. Based on the event, a person with language advantages could help Molken Chemicals, an Indian company, have a more efficient and effective communication with Chinese companies, regarding products, government import/export policies and so on. Further, the data base about pharmaceutical companies in Asia Pacific region also needs to be updated and improved since the information is quite old and incomplete.

**Method/Approach:** First of all, the CPhI exhibition 2017 was attended with the CEO that held in Shanghai to meet different potential suppliers and clients. The exhibition lasted for 5 days. Before the exhibition, the main responsibility is marketing research on the exhibitors and collecting the detailed information about them. During the exhibition, the daily work included attending scheduled meetings, visiting other booths and approaching new companies. After the exhibition, the following work should be finished in India. The whole process includes Communicating with potential suppliers and clients in Asia Pacific region that met during exhibition by Email or phone call, negotiating the prices as well as confirming the related product certifications and government policies.

**Outcomes/Results:**

- 1) Met at least 30 companies from 11 countries during the exhibition.
- 2) New product list of over 40 companies in Asia Pacific region was built up.
- 3) Organized the policies and regulations of each continent for 8 different kinds of medicines.
- 4) Half companies met during exhibition are in the process of forming partnerships and 3 companies achieved the corporation with company.

**Evaluation/Conclusion:**

At the end of the internship, with mutual effort, 4 new contracts were finished with companies in Asia-Pacific region and 3 more companies are still in process. Detailed information about over 100 companies are collected and organized. It is significant to learn how to do the marketing research systematically based on different resources. Further, a high-quality project needs high efficient teamwork, especially the clear job description and separate responsibility.

## Internship Abstract

**Title:** A Mentoring Tutorial System to Promote the Young Qualified Technicians' Career Path

**Name:** Siyao Liu

**Preceptors:** Dongyou Xiao, Director of the Executive Office Department

**Agency:** Changjiang Geotechnical Engineering Corporation

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**Purpose:** To develop a mentoring system for qualified young technicians to foster faster career promotions.

**Significance:** Every year, approximately 15 university graduates are hired as new employees. These new employees come from first-class universities in China. However, a retention rate of less than 50% after five-year-work exists. In other words, it is hard for the company to maintain talented employees, which can be the Achilles Heel for the development of the company. The main reason why new employees choose to leave is that they feel that they are lacking opportunities for career growth and development.

**Method/Approach:** 1) Observe and record the original method that the company has been using for a long time, including visiting actual construction sites. 2) Interact with target group and preceptor: Preceptor provided the basic HR strategy/ information to organize interviews with targeted qualified young technicians 3) Present and apply a new mentor system 4) Observe, record and get feedback.

**Outcomes/Results:** The outcome focused on the first period where the main problem was found. Experienced technicians and young technicians are lacking communications, and the system had limitations for the qualified young technicians to get more experience that would lead to more career growth. In the second period, having experienced technicians mentor newer employees which improves the acceptance of long term work commitments. As the outcome of the feedback, this mentor system gave new employees more chances to communicate and cooperate. Experienced technicians can also learn new knowledge from young technicians. A win-win situation resulted.

**Evaluation/Conclusion:** In a situation that lack of communication and generation gap existed. Steps were taken to improve relationships and people began to get used to the system. Qualified technicians used their latest knowledge to help mentors, mentors were willing to guide new employees in the construction site. The efficiency of the project and the research improved. More communications happen among employees and cross fertilization resulted. Finally, qualified young technicians became faithful and confident about the company and their career.

## Internship Abstract

**Title:** Rodent Control and Prevention

**Name:** Anna Markarova

**Preceptors:** Direct Supervisor: Robert Roe, Health Officer  
Project Supervisors: Peter Dillon, Registered Environmental Health Specialist  
Candice Davenport, Public Health Nurse

**Agency:** Maplewood Health Department

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**Purpose:** To identify rates and risk factors of rodent infestation and develop prevention materials

**Significance:** Leptospirosis is a rat-borne disease that can be transmitted through rat urine. Case fatality for pulmonary hemorrhage related to Leptospirosis is 10%, and 70% for acute kidney injury. Leptospirosis is one of CDC's top ten re-emerging diseases to watch- making it important to control and prevent from infecting the population at various times. In the last 8 months, Leptospirosis has made an appearance in New Jersey with several cases of dog fatalities. The Maplewood Health Department monitors rodent infestation and extermination through frequent observational studies.

**Method/Approach:** An observational study was completed to assess evidence of rodent infestation in affected neighborhoods. Resident complaints were investigated. If evidence of rodent infestation was present, the tenants of the home were notified on resolutions and preventive measures. Inspections of surrounding homes were conducted to guarantee all risk factors were being addressed. Re-inspections were conducted of homes with rodent infestation to analyze success in rodent control. Areas with consistent infestation were baited and closely monitored.

**Outcomes/Results:** The total number of rat complaints for this project were 76 residences. Of the 76 residences, 13 residences (17%) had one or more complaints after initial inspection and guidance. The remaining 63 residences (83%) had no recurring rat sightings after initial inspection. Of the 17% of residences that had recurring rat sightings, 8 residences were baited. Re-inspection of bait boxes showed 100% bait consumption, resulting in replenishment of bait. There have been no recurring complaints post bait consumption.

**Evaluation/Conclusion:** More than half (n=63, 83%) of the total number of rat complaints (n=76) had no recurring evidence of rodent infestation. Inspections, active involvement with the community, educational literature distribution, and distribution of bait boxes will serve as effective strategies to (a) mitigate rodent infestation in susceptible neighborhoods and (b) prevent future infestation from reoccurring. Ongoing monitoring of susceptible neighborhoods and consistent education to the community will be undertaken to ensure continued improvement from here on out.

## Internship Abstract

**Title:** Promoting Health and Wellness at Rutgers University

**Name:** Maria Martinez

**Preceptors:** Francesca M. Maresca, Director of H.O.P.E.

**Agency:** Health Outreach, Promotion & Education

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**Purpose:** To collect data on students' understanding of health and wellness and their opinion in relation to Rutgers' efforts to promote a health-conscious campus.

**Significance:** In order to best assist the students at Rutgers University, it is necessary to understand their particular health needs. Developing specific programs that target these areas can have a positive effect on their overall college experience. Students' feedback can be used when evaluating existing policies and programs as they directly affect the students. Having an open dialog with students is an effective way of incorporating them in the planning process.

**Method/Approach:** Focus groups were conducted in order to obtain information on student's general understanding of health and wellness and their health-related needs. A total of 4 focus groups were conducted, each comprising of 6 students. The students that were asked to participate in the focus groups varied in academic level as well as major they were pursuing. The questions asked related to their emotional, social, spiritual and academic wellbeing. The students were also asked about their use of health services on campus, and their use of communal spaces as these are directly correlated to their wellbeing. At the end, the students provided feedback on Rutgers' efforts to create a health-conscious campus and made suggestions based on their college experience.

**Outcomes/Results:** During the focus groups, when asked to define health, students defined it as a combination of mental, physical and spiritual wellbeing. When asked how the environment they were in promoted health and wellness the students highlighted the efforts made by the school, the cultural centers, and the residence life. All of the participants felt they were part of a community at Rutgers, but wished they had more time for their extracurricular activities. Poor time management and inability to cope with stress were among student's main concerns. Mental health was also highlighted throughout the focus groups. The students agreed there is a need for more programs centered around mental health, body image, and stress management.

**Evaluation/Conclusion:** The focus groups gave students the opportunity to voice their opinions regarding Rutgers' efforts to promote health and wellness. Although the sample size was small, and not representative of the entire population at Rutgers, it is important to highlight the students had similar responses to the questions asked. There was a general consensus regarding the need for mental health-related programs. More focus groups need to be conducted in order to gain a better understanding of student's needs. These responses will help the members of the Health and Wellness Initiatives Committee highlights specific areas in order to best assist the students at Rutgers University.



## Internship Abstract

**Title:** Municipal Software Upgrade and Implementation

**Name:** Leah Martins-Krasner

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

**Agency:** City of Rahway City Hall

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**Purpose:** To analyze and research existing municipal software for implementation at The City Hall of Rahway that will improve internal processes and facilitate more efficient services.

**Significance:** Within the City of Rahway, and indeed in many other large municipalities across the country, there is a crucial need for a municipal software that handles the city's primary needs efficiently and tactfully. The current software being utilized in Rahway is not serving the municipality to its fullest potential -- tools and capabilities are underdeveloped leaving many tasks unfinished. In addition, various departments are left out of using the software decreasing efficiency and wasting resources. The interaction between departments on current software does not allow for inter-department projects which is imperative to the municipal activity. Lastly, the government is interested in creating a public platform to increase civic engagement, which the current software does not support. Researching and implementing a new vendor will expose Rahway to new software possibilities and improve daily activity.

**Method/Approach:** In order to gauge the needs of the municipalities as a whole, research was collected in regards to what the current software is providing and any pitfalls associated with it. Potential vendors were then analyzed and demonstrated, providing data on the current status of municipal software on the market, and possibilities for Rahway. From the vendors, three finalists were chosen for further review by daily end users to provide feedback on their interface, user friendliness, and capabilities. All three were then sent to the Business Administrator for budgetary considerations and potential request for proposals.

**Outcomes/Results:** After data was collected from Rahway's current software vendor and other potential vendors, it was synthesized into a table for further analysis. The most important features assessed for each vendor were: administrative considerations, implementation considerations, interface, and GIS mapping capabilities. Those categories were then further broken down into subcategories based on Rahway's software needs. These subcategories provided a detailed look at each software's capabilities in comparison to each other.

**Evaluation/Conclusion:** Using the table, higher level decisions makers can compare and contrast each vendor in consideration for changing Rahway's municipal management software. While the table is tailored to Rahway's needs and considerations, the categories are comparable to many cities across New Jersey. If circulated, the table can provide a brief introduction to the vendors assessed and present a basic evaluation process for municipalities considering management software.

## Internship Abstract

**Title:** Assessment of Play Interaction in Child Life Specialty

**Name:** Sara Pagano

**Preceptors:** Melissa Leiby, Certified Child Life Specialist

**Agency:** RWJBarnabas Health

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**Purpose:** To assess how play therapy among hospitalized children and adolescents effects anxiety about an upcoming procedure.

**Significance:** Hospitalization is known to increase levels of anxiety in children. The therapeutic approach of play therapy has shown to reduce levels of anxiety. As Robert Wood Johnson's Child Life department uses this primary method of therapy, the department was interested in finding out how their approach of play therapy was affecting children and adolescents in regards to their anxiety levels.

**Method/Approach:** Between September 6th 2017 and November 17th 2017, I conducted play sessions with 102 children and adolescents. Each session lasted 45 minutes to one hour with an individual patient. During this time I would engage the child in interactive activities, including board games, card games, and crafts. A pre-play survey was given to the child before starting the activity, where they were asked to rate their feelings about seeing the doctor from 1-5, whereas 1 is very nervous and 5 is very comfortable. The same survey was given after the activity was over. Pre- and post-play ratings were compared by running a paired sample t-test in Excel.

**Outcomes/Results:** After running a paired samples t-test, the t-statistic came out to 12.41, whereas the critical two-tailed t statistic was 1.98. As 12.41 is greater than 1.98, my findings show that there was a statistically significant increase in ratings from the pre-play to post-play survey results. In addition, the Pearson correlation was .61, meaning the strength of this relationship is .61 on a scale from 0-1.

**Evaluation/Conclusion:** The results show that play therapy is an effective means of lowering anxiety levels in children at RWJBarnabas Health, specifically interacting with the Child Life department and the activities they offer. From the pre-play survey to post-play survey the results were statistically significant in showing an increase in rating, meaning the child was more comfortable. This relationship was only moderately strong at .61 correlation. If I could have done something differently among this assessment, I would have liked to conduct the same activity with each child, however it would be difficult as each child has varying preferences.

## Internship Abstract

**Title:** Exit Interview Survey Turnover Assessment

**Name:** Miranda Passin

**Preceptors:** Direct Supervisor: Kristine Negron, Shore Physician Group Generalist  
Project Supervisor: Cindy Miller, Director of Network Development

**Agency:** Shore Physicians Group

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**Purpose:** To determine the significant causes of the high rate of employee turnover at Shore Physicians Group.

**Significance:** Employee turnover in the healthcare field costs a total of \$4.1 billion a year, with an average employee turnover cost of \$3,500 per employee (Edwards, 2005). These costs do not account for increased healthcare costs because of lower quality care for consumers. This signifies the necessity to analyze employee turnover at Shore Physicians Group since 118 employees have left in the last 5 years, to prevent excessive expenditure and reduce poor quality of care for patients.

**Method/Approach:** An employee exit interview survey was created using accredited questions from the U.S. Department of Health and Human Services. This survey was created using SurveyMonkey.com and sent out via email to 78 former employees who left the company. The survey was anonymous to ensure the most honest and accurate responses. The responses were collected and analyzed to identify the main causes of employee turnover.

**Outcomes/Results:** Of the sample size cohort (n=13), compensation, secured more favorable position, and dissatisfaction with job were the top reasons given for leaving the organization. Compensation had a weighted score of 2.85, far leading the other reasons, while secured more favorable position had a score of 1.85 and dissatisfaction with job had a score of 1.83.

**Evaluation/Conclusion:** The majority of respondents said that compensation was a factor in their decision to leave Shore Physicians Group. Of the sample, 50% of respondents were not satisfied with pay and benefits at Shore Physicians Group. When asked what could have made their experience with Shore Physicians Group better, 54% of respondents said higher pay. Due to the low response rate, conclusions are limited, but in the responses that were received, compensation was the most noted reason for leaving the organization. This suggests that research should be done to examine if a higher average pay rate would lead to a lower turnover rate at Shore Physicians Group. To gain a better response rate in the future, exit interviews will be required prior to willful termination.

## Internship Abstract

**Title:** Measuring the Success of the Safety Ambassador Program

**Name:** Darren Prado

**Preceptors:** Diana Starace, Injury Prevention Coordinator  
Babajide Okesola, Safety Ambassador Program Coordinator

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

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**Purpose:** To protect kids in Middlesex County from unintentional childhood injuries by educating both high school and elementary school students on four major risk areas: fall prevention, pedestrian safety, safety in and around cars, and wheeled sports safety.

**Significance:** Unintentional injuries are the leading cause of death in children and teenagers in the United States. In 2015, the CDC reported that approximately 3,000 yearly childhood deaths are a result of unintentional injuries. Additionally, unintentional injuries for children aged twelve and younger account for more than 300,000 hospital admissions yearly. Childhood injury is both preventable and predictable if children are provided with safety education. In a study conducted to assess the effectiveness of pedestrian safety education, it was concluded that this intervention can result in improvement in children's knowledge and can change observed road crossing behavior (Duperrex, 2012).

**Methods:** The Safety Ambassador Program works with 23 high schools and 30 elementary schools to educate children and teens about safety. On October 10<sup>th</sup>, high school students from each participating school were given the role of Safety Ambassador during the 10th Annual Safety Summit. At the beginning of the Summit, students were administered a pre-test to assess their knowledge. During the Summit, Safety Ambassadors are then taught about the four major risk areas as well as presentation skills. A post-test was then given to the high school students in order to measure knowledge acquisition.

**Outcomes:** Results from the pre-test and post-test was averaged based on a total of 172 respondents. Each test consisted of 16 identical questions (12 knowledge-based and 4 behavioral questions). One of the major questions the high schoolers were asked was, "when we talk about crash dynamics, we describe three (3) collisions in a crash. They are?" Of all three possible answers, the correct answer was "vehicle, human, internal organs". During the pre-test, only 43.18% of the respondents answered the question correctly. However, data collected from the post-test showed that 93.43% of respondents answered this question correctly.

**Evaluation:** Although the example provided is just one of 16 total questions administered during the tests, it exemplifies how effective the Safety Summit can be in educating Middlesex County high schoolers on the key injury prevention messages and safety risk areas. When comparing the results of the pre-test with the post-test, there is a significant increase in the percentage of correct answers for all knowledge-based questions. If these high school students are fully-equipped with this knowledge, they will be able to successfully increase safety awareness and knowledge within the elementary school population in Middlesex County, New Jersey.

## Internship Abstract

**Title:** The Optimization of Database Within the Administrative Office

**Name:** Jun Qian

**Preceptors:** Feng Ouyang, Manager of the Secretary Office

**Agency:** China CITIC Bank Credit Card Center

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**Purpose:** To optimize the management of official files and improve the efficiency of daily operation.

**Significance:** Currently, the administrative office is using a shared drive to store and share working documents without uniform standards of naming and categorization, which leads to inefficient documents searching and problems finding files. With increasing amounts of information generated, it is essential to design a framework to categorize and manage the documents based on the need of daily work as well as providing a convenient way to search for files.

**Method/Approach:** Various documents were identified by consulting staff of different positions. Existing files in the shared drive were also reviewed. In addition, Colleagues of other departments were consulted to draw on their experience of managing files. Lastly, a ledger was designed using Excel, containing categories like date, functions, type of documents, name, and file number. A specific employee was assigned to manage the shared drive.

**Outcomes/Results:**

Proposed a protocol of file management, including numbering methods of folders and the introduction of ledger filling. Existing files and folders were sorted and renamed, information about each folder were recorded in the ledger and everyone can easily find what they want by searching the name of files, associated events or date of activities.

**Evaluation/Conclusion:**

After the improvement, the shared drive of administrative office is more organized. A month after the improvement project, a small survey was distributed online to every member of the office concerning their feeling about the shared drive. The feedback of these surveys indicate that more than 80% of staffs consider the improvement as beneficial. And about 75% of them agree that the protocol of file management provide a clear guidance on how to manage the shared drive and how to obtain the files they need.

## Internship Abstract

**Title:** Obstacles Encountered during the Transgender Transition

**Name:** Darrian Reyes

**Preceptors:** Direct & Project Supervisor: Gloria Bachmann, MD MSS, Interim Chair, OB/GYN

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

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**Purpose:** To analyze obstacles disproportionately faced by the transgender community.

**Significance:** Approximately 20% of adolescents have been diagnosed with a mental disorder. LGBTQ youth are at an increased risk, and transgender individuals have reported higher rates of substance use, depression, anxiety, and somatization. Discrimination and social stigma have been positively correlated with increased prevalence of mental disorders within the transgender community. The Transgender Health Initiative was made to encompass all aspects of life-span care for transgender and gender fluid individuals. A holistic approach toward combating transgender youth obstacles includes addressing the high mental health statistics within this population.

**Method/Approach:** A literature review of 50 peer reviewed journal articles published within the last 10 years were used to identify general obstacles encountered by transgender individuals. Articles were found using search engines, including the American Journal of Public Health, the National Center for Biotechnology, ScienceDirect, and Google Scholar. Findings were assessed to determine risk factors for transgenders with mental disorders. After analyzing risk factors, further research was conducted to investigate existing barriers in healthcare and preventative methods to reduce the prevalence of mental disorders within this population.

**Outcomes/Results:** High levels of psychological distress and mental disorders, including depression, anxiety, somatization, and substance abuse, were found in transgender youths. Twenty-six studies listed barriers for transgender youth specifically. The most important were 1) health care barriers (85%) 2) lack of familial support (77%) 3) social stigma and rejection (75%) and 4) physical and psychological abuse and violence (65%). Amongst nine studies, suicide attempts were frequent and consistently higher than in the cisgender population. Each study found over 30% of transgender participants reported an attempt. Health care barriers were found to primarily result from the lack of training for physicians and staff. Medical students only receive a median of five hours of LGBTQIA+ health education over the four years of medical school.

**Evaluation/Conclusion:** Research findings indicate the transgender community to be an underserved group in the medical field. Medical schools do not stress the importance of human sexuality and stigma against transgenders exists throughout the general public. Effective measures to reduce the prevalence of mental disorders include: 1) the addition of transgender care to medical school curriculum, 2) increased access to mental health services, and 3) guidance for the families and friends of transgender patients.

## Internship Abstract

**Title:** Local vs. General Anesthesia on Pediatric Dental Patients

**Name:** Rose M. Rodriguez

**Preceptors:** Meetu Soni, DMD, Board Certified Pediatric Dentist

**Agency:** Livingston Surgery Center (LSC)/ The Smile Express PA

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**Purpose:** To educate apprehensive parents on the outstanding benefits of performing full mouth rehabilitation on pediatric patients under general anesthesia in the operating room as opposed to local anesthesia and IV sedation in office.

**Significance:** Anesthesia is utilized by physicians to ease patients of pain by temporarily blocking nerve impulses. Access to the latest technology allows highly trained professionals to administer and manage the anesthetics in a controlled environment. Local anesthesia offers a temporary numbing sensation for minuscule procedures. For extensive dental needs, like those presented at the Middlesex county dental office, general anesthesia saves time for the parents and physician, as it allows all required treatment to be completed in one visit. It also helps with behavior management for very young patients as it is more traumatizing for the child to visit the dental office numerous times. Apprehensive parents were reassured of the safety measures taken during the procedure to monitor the breathing, heart rate/rhythm, body temperature, blood pressure and blood oxygen levels.

**Methods:** Upon diagnosis, step-by-step instructions on scheduling appointments with the child's PCP (Primary Care Physician), scheduling transportation (if needed), and post-surgery oral care are addressed to the parents both in writing and verbally. All their concerns and questions were answered by the OR coordinator, the treating dentist and the anesthesiologist prior to the procedure. A follow-up appointment is recommended for further assessment. Observing numerous surgeries aided in providing parents with a better insight on the surgical procedure and seeing a familiar face before surgery gives parents a comforting feeling about their child's safety.

**Results:** Since June 2017, the beginning of the internship, 200 surgeries were scheduled and 180 of those were successfully performed. Majority of the cancellations were due to lack of medical clearance form from the PCP on time. This could be attributed to the delay in making an appointment. After September 2017, the dental office added a new member to the surgical team who reached out to parents and helped schedule appointments with the PCPs, in a timely manner, to be medically cleared for surgery. With the additional help, less than 15% of the scheduled surgeries were canceled. This showed major improvement and success in patient care and treatment while undergoing general anesthesia.

**Evaluation:** Holding an internship that had two roles, provided clear insight into treatment performed with local anesthesia in office and performed under general anesthesia at the surgery center. Patients with extensive dental needs and uncooperative behavior in the dental chair were advised to schedule an appointment for complete oral rehabilitation under general anesthesia. Dr. Meetu Soni continues to treat patients using this method.

## Internship Abstract

**Title:** Americanism Scholarship and Youth Activities Promotion

**Name:** Carolyn Rovito

**Preceptors:** Jan West, District Two Auxiliary President

**Agency:** Veterans of Foreign Wars Auxiliary, Department of New Jersey, District Two

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**Purpose:** To promote patriotism and educational opportunities for the youth through scholarship awards for participation in essay contests.

**Significance:** A strong sense of patriotism amongst youth is a priority of the VFW, communities, and schools in America. During the early establishment of public education, Thomas Jefferson highlights “that talented youth could be found amongst the poor, and if separated from their families and educated properly, they could become patriotic leaders (Fuhrman, S., & Lazerson 2005).” The Voice of Democracy (VOD) and Patriot’s Pen (PP) Essay Contests annually award students with scholarships totaling over \$180,000. The Princeton Review’s 2017 College Hopes and Worries Survey reports that out of the 10,519 students apply for college along with parents of applicants surveyed expressed that 98% of participants felt that financial aid would be necessary to complete their college education.

**Method/Approach:** The VOD contest was conducted through Ridgefield Park High School for students grades’ nine through twelve. The PP contest was distributed in the Little Ferry School District for grades six through eight. Signs were posted in local libraries and social media sites to attract eligible community members. The essay theme is selected by the national organization. The entries are evaluated based on knowledge of theme, theme development, and clarity of ideas. The national guidelines allow one entry for every 15 students who participate to advance to the district level for judging and then progress to the state and national levels upon selection for the opportunity to be awarded; up to \$5,000 for the Patriot’s Pen contest or up to \$30,000 for the national contest in addition to scholarship monies are that awarded at the post, county, and state levels.

**Outcomes/Results:** The VOD contest in 2017 resulted in 11 entries selected from 58 essays written in the 10th grade class. The PP had 70 6th grade entries, 75 7th grade entries and 71 8th grade entries. There were no entries received from the library or social media postings. Three winners are selected from the VOD contest entries and awards totaled of \$300 at the post level. The PP contest selected three essays from each grade level awarding over \$500 to winners at the post level.

**Evaluation/Conclusion:** The VOD contest entries increased this year in the 10th grade entries last year’s post level competition, however, the 9th, 11th, and 12th grade have no entries in either year. The PP contest entries increased in the eighth grade the 6th grade results remained consistent with last year’s entries; while the 7th grades entries decreased at the post level. The continued participation by the two school districts’ demonstrates the support of these programs. There was an inability to engage the community through social media and library postings.



## Internship Abstract

**Title:** Middlesex County, New Jersey Wastewater Management Plan

**Name:** Runmin Chen

**Preceptors:** Mirah. A. Becker

**Agency:** Middlesex County Planning Board

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**Purpose:** To analyze the annual wastewater management situation in Middlesex County, NJ by using Geographic Information System and statistical tools to predict development over the next 10 years.

**Significance:** Wastewater management has been a significant issue in United States. In 2014 the famous wastewater crisis in Flint Michigan has taught citizens the importance of managing waste water properly. Due to insufficient water treatment, over 100,000 residents were potentially exposed to high levels of lead in the drinking water. Considering such urgent situations, a comprehensive wastewater management plan is necessary to map out and keep track of the development of wastewater management facilities.

**Method/Approach:** The entire wastewater management plan will be based on a regulation framework and GIS maps. The plan was divided into describing the jurisdiction boundaries of different wastewater management area by municipalities and counties, presenting all the existing and future wastewater management service infrastructure. Detailed location maps are used to demonstrate the current situation of each feature.

**Outcomes/Results:** Until now, 3 general wastewater management maps were produced. Map 1 was the Jurisdictional Boundaries Map, representing the jurisdictional boundary of wastewater management area in Middlesex County. Map 2 was the Existing Wastewater Facilities & Served Areas Map. This map was used to present out all the currently existing wastewater management infrastructure in the county. Map 3 was the Future Wastewater Service Area Map. This map pointed out the future planned wastewater service infrastructure, such as new pump stations and new wastewater discharge locations.

**Evaluation/Conclusion:**

All the updates and new amendments towards the wastewater management plan maps are created based on the latest Satellite Raster image in 2016. The wastewater management itself was updated on a ten year basis. From the 2008 version WMP, In accordance with the regulatory requirement 20,552 acres were removed from the previously approved sewer service area of Middlesex County. Additionally, acres were removed based on local planning objectives. Also, 4,063 acres that were not part of the previously approved sewer service area in Middlesex County have been added based on local planning objectives and satisfaction of an environmental sensitivity assessment.

## Internship Abstract

**Title:** The Unique Characteristics that Present in Adolescents with Polycystic Ovarian Syndrome (PCOS)

**Name:** Adrienne Sherman

**Preceptors:** Charletta Ayers, MD, MPH / Research Supervisor: Chi-Wei Lu, PhD

**Agency:** Robert Wood Johnson Medical School Women's Health Institute (WHI)

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**Purpose:** To initiate a study to identify differences in characteristics unique to adolescents with PCOS, pubertal adolescents without PCOS, and adults with PCOS in order to allow earlier diagnosis and treatment, thus limiting the lifelong effects that PCOS can trigger.

**Significance:** Polycystic Ovarian Syndrome (PCOS) is among the most common endocrine and reproductive disorders in adolescent and adult females, affecting 10% of females 15-44 years old. While onset is during puberty, it is often not recognized or addressed until adulthood. This delay in diagnosis and treatment of PCOS is problematic since the syndrome has serious life-long comorbidities, such as cardiovascular disease, infertility, diabetes, hypertension, recurrent spontaneous abortion, and endometrial carcinoma. While there are several clear diagnostic criteria established for adults with PCOS, diagnosis among adolescents is increasingly difficult. The difficulty in diagnosing PCOS in adolescents stems from the overlapping nature of PCOS symptoms and natural pubertal changes. This problem is compounded by the application of adult diagnostic criteria to the adolescent population.

**Methods:** A literature review was conducted to look at reported differences and similarities of characteristics in the three subgroups. The literature review allowed for the identification of potential differences between the three subgroups, which was used to identify the study populations and form the hypotheses. Subsequently, a survey was formalized in order to further establish differences among the three subgroups of interest.

**Outcomes:** The literature review found suggestive differences between the subgroups of interest, namely the presence of hirsutism and alopecia, and the severity of acne. Similarities were identified among adolescents regardless of PCOS diagnosis, such as irregularity of periods, weight gain, and acne. These potential differences were then used to formalize a survey, the study protocol, and consent materials, and submit these for IRB approval in order to conduct a study with higher statistical power.

**Conclusion:** Given the outcome of the literature review, it was determined that there are differences between the subgroups, which demonstrates the significance of the proposed study. These differences were portrayed in the IRB application and the submitted survey. Upon receiving IRB approval, the research team will begin to enroll participants for the study and administer the survey to eligible participants. The research team will then be able to analyze the results through statistical analyses in order to compare and contrast characteristics of the three subgroups.

## Internship Abstract

**Title:** College Expansion Project

**Name:** Samuel St. Juste

**Preceptors:** Ross Yellin

**Agency:** Disability Allies

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**Purpose:** To market Disability Allies at different colleges around Middlesex county to recruit as many people as possible that are interested in supporting disabled individuals.

**Significance:** One in six children between the ages of three and seventeen have one or more developmental disabilities. These disabilities include cerebral palsy, hearing loss, intellectual disability, and visual impairment. Diagnoses of autism spectrum disorder has increased from 0.67% in the year 2000 to 1.47% in 2012.

**Method/Approach:** A direct marketing campaign was implemented between September 2, 2017 and November 17, 2017, which consisted of conversing with several students and recruiting qualified individuals. Different settings included classrooms career fairs, and information sessions which the company utilized to market to a broad range of students.

**Outcomes/Results:** Since the project began the company increased 132% with an additional 25 families totaling 58 altogether. Originally there were 30 employees, with an average of 3 employee hires per month. The goal of the project was to onboard at least 5 qualified employees per month. The average for hired employees remained the same until the college expansion project increased the hiring rate to 133%, averaging 7 employees per month.

**Evaluation/Conclusion:** One of the biggest drawbacks was not getting the opportunity to present to students in classrooms. Due to presenting in one class only, the marketing pool temporarily switched from classrooms to student clubs and organizations. Out of 30 students in a class, 10% were hired for employment. Two Rutgers organizations with up to 30 students have agreed to provide volunteer services for the company.

[https://docs.google.com/document/d/1AIIsuJTNI0xdz2zxxH8vBhALjzcnlnRKV\\_C5jaIofLQ/edit](https://docs.google.com/document/d/1AIIsuJTNI0xdz2zxxH8vBhALjzcnlnRKV_C5jaIofLQ/edit)

## Internship Abstract

**Title:** The Effect of Optimism and Positive Thinking as a Protective Strategy Against Postpartum Depression

**Name:** Miguel Strunk

**Preceptors:** Gloria A. Bachmann, Percy Yeung

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

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**Purpose:** To identify ways in which optimism and social support can act as preventative measures for postpartum depression in pregnant women.

**Significance:** Transitioning into motherhood can render women more vulnerable to anxiety and depressive symptoms. Postpartum Depression (PPD) impacts between an average of 10% to 26% of women worldwide and up to 40% of women in developing countries. A history of mental illness, socioeconomic status, race, ethnicity, marital status, and social support can be predisposing factors. Depressive outlooks have adverse physical effects on infants negatively affecting their cognitive, behavioral, and academic performance, including prenatal health problems for the mother such as preterm births, preeclampsia, and poor nutrition; as well as their children in terms of lower cognitive ability, mental illness, mood disorders, and lower interaction and creativity, affecting their relationships. This review evaluated whether optimistic practices during pregnancy may decrease the risk of postpartum depression and how social support affects women's mental health.

**Method/Approach:** Literature Review completed using search engines to find scholarly articles, and journals through Ebscohost, PubMed, PsycINFO, and Medline produced 27 articles cross referencing specific words; positive psychology, optimism, depression, anxiety, mental illness, PPD, ethnokinship, technocentric, coping mechanisms, social support, antenatal, postnatal, as well as any use of Edinburgh Postnatal Depression Scale. Data throughout the articles were compiled via literature reviews or questionnaires distributed among groups of pregnant women.

**Results:** The most helpful articles being from ncbi.nlm.nih.gov such as "Predicting Postpartum depression in new mothers: the role of optimism and stress frequency during pregnancy" reported women who exhibit optimism, and display no previous history of mental illness, in the antepartum period, appear to be at a decreased risk of postpartum depression. Preliminary research shows positive outlook going into pregnancy coupled with continuous social support systems, specifically familial, function as the most effective preventative measure of PPD. Implemented positive psychological practices recommended by physicians may be beneficial in combating PPD.

**Conclusion:** Optimism, which can be enhanced through education and personal practice, may play a role in contributing to an overall healthy pregnancy and combat the postpartum experience. Clinicians should consider teaching pregnant women the benefits of optimism beforehand. This can result in positive outcomes not only for women faced with the possibility of postpartum depression, but also for their babies, families, and relationships all together.

## Internship Abstract

**Title:** Investigating the Association between Gastrointestinal Issues and Autism

**Name:** Brittney Suchan

**Preceptors:** Shannon Mulvihill, Executive Director, RN  
Sheri Marino, Pediatric Health Advisor, MA, CCC-SLP

**Agency:** Focus for Health

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**Purpose:** To explore the association between gastrointestinal issues and autism, identify the factors that may cause gastrointestinal issues in a child, and examine how these factors may be contributing to the increase in the incidence of autism.

**Significance:** The rise of autism in America is a major public health problem. Autism studies in 1980 found the prevalence of autism in America to be 1 in 10,000. However, the CDC reports that current prevalence of autism is 1 in 68. Broader definitions of autism and improved diagnostic methods alone cannot account for such a substantial rise in the prevalence of autism, so other factors must be considered. It is imperative that risk factors for autism are identified to prevent further increases in the rate of autism.

**Method/Approach:** Online research was conducted to evaluate the connection between gastrointestinal issues and autism. The research involved study overview and literature review.

**Outcomes/Results:** Researchers have found that children with autism are 6 to 8 times more likely to have gastrointestinal issues than their non-autistic counterparts. Studies have found that 70% of autistic individuals suffer from gastrointestinal issues, making them one of the most common medical conditions associated with autism. Furthermore, researchers report that autistic like behaviors such as hyperactivity, social withdrawal, and irritability are more prevalent among individuals with severe gastrointestinal issues. Gastrointestinal issues have been linked to poor diet, infections, antibiotic use, and C-section births. Each of these factors can impact the functioning capacity of the gastrointestinal tract by affecting its physical structure or altering the population of the microbiome.

**Evaluation/Conclusion:** The reviewed studies indicate that there is a strong association between gastrointestinal issues and autism. The gastrointestinal tract is connected to the central nervous system by millions of neurons, and communicates with the brain bi-directionally to influence behavior, mood, and various biological processes. It also houses a complex community of microorganisms which aid in metabolism, vitamin production, and immunity, and homeostasis regulation. Therefore, issues with the gastrointestinal tract can have a large scale impact on an individual's health. The poor diets of children, the increasing trend of elective C-sections, and the excessive antibiotic use that is characteristic of America may be contributing to the gastrointestinal issues in children. Therefore, these factors may be contributing to the rise of autism in America. This project calls for further research to identify the link between gastrointestinal issues and autism.

## Internship Abstract

**Title:** Mental Health Awareness Through the Live Well Vivir Bien Mobile Application

**Name:** Shannon Sy

**Preceptor:** Direct Supervisor: Manuel Castaneda, Director of Community Health

**Agency:** New Brunswick Tomorrow, Live Well Vivir Bien Campaign

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**Purpose:** To determine the need for adding a mental health component to the Live Well Vivir Bien New Brunswick (LWVBNB) mobile application and propose interactive content to improve overall wellbeing.

**Significance:** According to the New Brunswick 2016 Community Survey conducted by Eagleton Institute of Politics, 28% of residents reported someone in their household frequently feeling down, depressed, or hopeless. Due to limited mental health resources, only 8.1% of Middlesex County residents seek services for emotional and mental health problems (Chakravarty, et al.). This data demonstrates the potential need for mechanisms that allow individuals to recognize their individual mental health and become encouraged to explore services that are available. The National Institute of Mental Health recognizes that mobile applications benefit the public by increasing access to support and understanding of mental wellbeing. Mobile applications like the LWVBNB have the potential to change how mental health is approached.

**Methods:** To assess whether or not a mechanism on mental health is of interest to New Brunswick residents, a survey was created. Before the survey was implemented, a basic evaluation of the community's knowledge on mental health was done through informal conversations. The 10-question multiple choice survey assesses the awareness and access to mental health resources, as well as the willingness and comfortability of residents to use such services. The survey was administered in English and Spanish, accounting for New Brunswick's large number of native Spanish speakers.

**Results:** A total of 60 individuals were surveyed (42 females/18 males). Over 50% recognized mental health as a challenge in their community. On a 5-point scale, with 5 being the most comfortable and 1 being the least comfortable, 88% of females and 83% of males rated a 3 or higher when speaking on their mental health needs. Only 52% of females and 39% of males knew where to go for services that address mental health issues. This demonstrates the need for improving access and awareness to resources. When asked if residents would like to see more mental health resources in a mobile application, 88% of females and 61% of males answered yes. Of those who answered yes, 58% selected meditation, breathing, and calming exercises as contents they would be interested in.

**Conclusion/Recommendations:** Incorporating mental health features on the LWVBNB mobile application encourages understanding of mental health and use of services. Adding meditation, breathing, and calming exercises is relevant to the community's interest and cost effective. Instead of having to develop new features, templates can be drawn from existing mental health applications, making incorporation the only concern. Campaign coordinators of LWVBNB can explore the inclusion of these aforementioned contents on the mobile application as a closer approach to mental health.

## Internship Abstract

**Title:** Emergency Department Communication Push To Talk Solution

**Name:** Meghan Szymansky

**Preceptors:** Direct Supervisor: Jim Schneider, Performance Management Manager

**Agency:** JFK Medical Center, Edison, NJ

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**Purpose:** To implement the push-to-talk solution and aim to improve communication within the ED between the charge nurse and staff members and streamline their workflow.

**Significance:** Due to the recent expansion of the emergency department (ED), the charge nurse (RN) cannot easily locate support staff (PCTs, Ancillaries, Lab, Imaging) when needed to adhere to patient needs. Currently, charge RNs are either shouting out or leaving their desk to search for staff members. As a result of this, many processes are being delayed such as triaging patients, disrupting the overall workflow.

**Method/Approach:** The workflow and communication between the charge RN and PCTs was observed, times were also recorded whenever a PCT needed to be found within the ED.

**Outcomes/Results:** Often times, searching for a PCT would take up so much time, that the charge RN would often carry out the task themselves. The average time spent searching for a PCT was two minutes and thirty seconds. Many PCTs were willing to adopt the phones and learned how to use them quickly and the phones were retuned properly and in a timely manner. When paged, PCTs would quickly report to the charge RN to find out what task needed to be completed. However, when the charge RN would page a PCT to fulfill a task, the entire message would not be received or coming out choppy and even echo. Before using the phone, it would take an hour for the phone to connect to the server, when connected; a loud tone would go off notifying everyone that the phones were active. Whenever the session would expire, it would remove the charge RN off of the server and they would then have to re-join via a different phone.

**Evaluation/Conclusion:** After speaking to the vendor about the issues, it was explained that when the phones are connected to the server, the phones would lose connection to the access points throughout the facility. As a result of this connection loss, messages would be delivered in pieces and often times produce an echo. As an alternative solution to the Cisco phones, we are seeking to implement Motorola radios. The radios do not run on Wifi and will not lose connection to the access, eliminating the poor audio exchange between users, and will ultimately improve communication within the ED and streamline their workflow.

## Internship Abstract

**Title:** Resources Library Building Performance Assessment

**Name:** Xinyi Xu

**Preceptors:** Direct Supervisor: Feng Liu, Manager of Product Innovation Department  
Project Supervisor: Feng Liu, Manager of Product Innovation Department

**Agency:** Shenzhen Institute for Innovative Design

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**Purpose:** To build online industrial design resource library by collecting data that allows staff to conduct necessary research allowing for better access to the critical information, and find potential suppliers.

**Significance:** A resource library is an efficient sharing platform. It offers employees a precise, efficient, and comprehensive online searching strategy. Currently, many companies have their own online resource libraries. As a small startup company, building an online resource library will lay the foundation for the development of the company. Industrial design is an industry that needs continuous learning and creation. A resource library is a useful tool for the employees to stay current in the field and research new opportunities. The company has long-term demand from a big company, and the process of collecting data will help us find the potential suppliers for the demands.

**Method/Approach:** Online searching is the main strategy for building the library. There are several main websites that share all the new technology. The new technology related to industrial design is the target. If a new idea satisfies a requirement, the next step is contacting the supplier. The suppliers would offer more details about their products if they agree to cooperate. Then, the information about the product would be collected into the resource library. In addition, all the information in the library will be organized into different categories for easy searching.

**Outcomes/Results:** The resource library was expanded to include 21 new products, which contain all the detailed information. The suppliers of all the 21 products were willing to cooperate or sell their technology. The design team approved 9 of the products based on the original technology to fit the customer's demand. At the end, the customer accepted 3 products. The resource library also offers ways for employees to identify potential opportunities for the company since it contains all newest technology. Half of the suppliers that were connected were not willing to cooperate. Among all the suppliers that rejected the cooperation, half of them said they have their own marketing channel, where they have already been success.

**Evaluation/Conclusion:** Resource library collects all useful information altogether, which is full of potential opportunities for the company. Gathering all useful information in advance can save time when there are demands from customers. It serves as an effective strategy to enhance initial and long-term development for the company. Online searching is limited to the building of the resource library. Other approaches, like exhibition exploring, are also helping to develop the resource library.