



RUTGERS

Edward J. Bloustein School  
of Planning and Public Policy

# Summer 2022 Abstract Book



Internship Abstracts

Traditional Internships

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## Internship Abstracts

**Title:** Improving Safety Guidelines  
**Name:** Salma Ahmed  
**Preceptors:** Project Supervisor/Manager: Rahman Shafique  
**Agency:** Blue Star Contracting

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**Purpose:** To explore ways to implement safety guidelines and to train workers on work sites.

**Significance:** Over the years workplace injuries and fatalities have significantly increased. Unfortunately, workplace injuries and fatalities continue to occur daily. According to the Occupational Safety and Health Administration (OSHA), there are 12 work-related deaths in the United States per day. (Dennis K. Neitzel, 2019) For example, the top four causes of occupational deaths in the construction sector dubbed the "Fatal Four" are falls struck by an object, electrocutions, and caught in or caught between. Employees falling accounted for approximately 36.5 percent of all workplace fatalities. Employees who have fallen as a result of exposed sides or holes, inadequately designed walking or working surfaces, or workers who have gone from ladders are examples of these. Struck by an object about 10.1 percent of deaths were attributed to swinging, falling, or misplaced objects (Dennis K. Neitzel, 2019). On construction sites, workers encounter a variety of electrocution hazards, including exposed wire, moist conditions when outlets are exposed, and so on. Caught off guard or Employees caught in or between equipment, gadgets, or instruments that caused death accounted for around 2.5% of all fatalities (Kendall, Jones, 2018). This evidence shows that people need to be more aware of proper safety precautions, aware of their surroundings on the worksite, and proper safety guidelines when using machinery/heavy deputy tools.

**Method/Approach:** A survey was sent out to all employees in the survey there was a total of ten questions and twenty employees filled out the survey. Some questions were: "Do you have access to safety equipment such as hardhats, goggles, knee pads. etc?" "Do you have proper training when it comes to using heavy equipment such as jackhammers, compactors...etc?". "Do you feel safe coming into work?" "Are you briefed or trained on how to practice safety precautions?" For every question, the choices were strongly agreed, somewhat agree, agree, and disagree.

**Outcomes/Results:** The survey showed that 70% answered that they somewhat agree that they have access to safety equipment, 75% have proper training when it comes to using heavy equipment, 85% felt safe coming into work, and 60% are always briefed/trained when starting a new job. From this, the work started the right way by conducting safety training seminars where all employees must attend and participate and each week the company went over valuing safety protocols. It provides each employee a package of safety that contacts safety materials and equipment. Also, a set of new safety guidelines

**Evaluation/Conclusion:** After a couple of weeks of training the same surveys were sent out. The new poll showed that 100% answered that they strongly agree that they have access to safety equipment, 98% strongly agree they have proper training when it comes to using heavy equipment, 100% strongly agree that they feel safe coming into work, and 100% are always briefed/trained when starting a new job. Based on the survey the training and the new set of guidelines provides a safer working environment.

## Internship Abstracts

**Title:** Cultural and Environmental Influences on BMI and Weight-Related Behaviors in Children

**Name:** Zeyneb Aamer

**Preceptors:** Dr. Tammy Chung, Director of Center for Population Behavioral Health

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

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**Purpose:** To evaluate socio-cultural and built environmental contributions to BMI and weight-related risk behaviors among youth in 21 research sites across the United States.

**Significance:** Rates of obesity in the United States have been rapidly increasing since the 1970's (Yu, 2016). To date, childhood obesity (BMI > 30) is the most prevalent chronic disease in the nation, affecting approximately 18.5% of children in the United States (Sanyaolu, 2019). Racial/ethnic minorities are disproportionately impacted by childhood obesity and experience substantial differences in risk factors in contrast with their white counterparts. The reasons for racial/ethnic disparities are complex and multidimensional. Risk may be influenced by socioeconomic conditions, environmental factors, and culture. The Rutgers Institute for Health, Health Care Policy, and Aging Research is a hub for multidisciplinary and translational research focused on improving population health, fostering a research environment that addresses and advances health equity and meaningful health policy. This project aims to identify cultural and environmental influences on BMI various racial/ethnic groups utilizing data from the Adolescent Brain Cognitive Development (ABCD) Study. Cultural and familial values are anticipated to be protective against childhood obesity.

**Method/Approach:** Secondary data analysis was conducted on the ABCD Study data. The sample size comprises 11,880 children aged 9-11. This project employed a cross-sectional design and focused on the initial baseline dataset collected from 2016-2018. For the purpose of this study, culture was measured using the Mexican American Cultural Values Scale. Relative weight status was measured using BMI, derived from height and weight data. Residential history-derived Area Deprivation Index (ADI) scores were used to assess the socio-cultural environment. Data were cleaned and analyzed in R-4.2.1. Preliminary analyses were conducted in the ABCD Data Exploration and Analysis Portal (DEAP), which used a GAMM4 model written in R (Generalized Additive Mixed Models using lme4 an mgcv).

**Outcomes/Results:** Results indicate an association between BMI and ADI. The main effects of ADI and Race were individually significant, but the interaction between ADI and race was not a significant predictor of BMI. Technical difficulties with DEAP delayed the anticipated timeline of the project. Lagging, inconsistency of outputs, and unwarranted errors made the platform incompatible with our research plan. Data analyses must be conducted externally in R, but additional results are to be expected in the coming weeks.

**Evaluation/Conclusion:** Further analyses must be conducted. Additional covariates will be incorporated to better encapsulate the socioeconomic environment. This study intends to assess the relationships between socioeconomic factors, race/ethnicity, culture, and BMI and nutrition. The expected findings are that cultural values serve as a protective factor against childhood obesity indicators, particularly in those who hold strong familial cultural values. If this holds true among especially vulnerable groups, it will identify an area in which resiliency may be promoted to reduce childhood obesity risk.

## Internship Abstracts

**Title:** Advancing an Integrated Communities Self-Assessment and Toolkit for Municipalities

**Name:** Jessica Ahn

**Preceptors:** Diane Riley, Kate Kelly

**Agency:** Supportive Housing Association of NJ

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**Purpose:** To develop an action plan and communications materials to promote an Integrated Communities Project Self-Assessment and Toolkit and to determine potential new funding sources to ensure continuity of the program.

**Significance:** The World Health Organization (2021) has determined that over 1 billion people live with some form of disability with that number dramatically increasing. According to Rutgers, NJAES Office of Research and Analytics (2019), there are over 900,000 adults represented across New Jersey who face barriers to inclusion based on living with a disability and are disproportionately affected by chronic diseases and infections. The Supportive Housing Association of New Jersey has developed a Toolkit for Municipalities, a comprehensive set of resources designed to support municipalities in increasing the capacity of people with disabilities to become completely engaged in their communities. This project will continue the work of promoting the Toolkit, alongside its complementary Self-Assessment for Municipalities, throughout NJ and identifying new municipalities to work with, in addition to identifying funding to sustain the program.

**Method/Approach:** Designed in collaboration with individuals with lived experience, the content for the Integrated Community Program's Toolkit for Municipalities was determined by a self-assessment conducted by eight municipalities in three selected counties, Bergen, Camden, and Ocean, to identify their communities' current successes and opportunities in growing their community integration, involvement and engagement. In order to continue the program, an action plan was developed to promote and fund the self-assessment and toolkit. These steps included: (1) developing a press release, one-page announcement, and leadership talking points, (2) creating a list for dissemination to media outlets, municipalities, and partners, and (3) identifying new sources of potential funding.

**Outcomes/Results:** The one-page announcement, press releases (three: media, municipalities, and partners), and leadership talking points were drafted and edited by July 5, 2022. All three were released on June 6, 2022. The distribution list consisted of: 146 media contacts, 23 municipal contacts, and 41 partners. Of all the contacts that were sent the press release, 32 (22%) of media contacts published in either digital or paper format, 18 (78%) of municipal contacts published on their websites or digital newsletters, and 36 (88%) of partners published on their websites or digital newsletters. 30 new sources for potential funding were identified.

**Evaluation/Conclusion:** The press releases were sent to a total of 210 contacts. Of all the contacts, 86 (41%) published a version of the press release as either a hard copy or digital. The plan to promote the ICP toolkit and self-assessment was moderately successful and will generate awareness for inclusive communities. The identified new funding sources whose priorities line up with the work of the ICP prove funders' potential interest in growing inclusivity awareness.

## Internship Abstracts

**Title:** Community Outreach  
**Name:** Kevin Alvarado  
**Preceptors:** Wafaa Saad, Executive Director  
**Agency:** Woman And Families Ascending Association

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**Purpose:** To execute a community outreach program and assist individuals in our service area with mental health services, counseling, anger management, job referrals, food, shelter, culture sensitivity, and emergency housing.

**Significance:** Homelessness has increased by twenty percent between 2020 and 2021 while unemployment rates surged to thirteen percent (Coleman-Jesen et al., 2020). Food insecurity has also been a major problem for about 13.5 million U.S. households (HUD, 2021). Homelessness, unemployment, and food insecurity all play a major part in the physical and mental health of an individual. In other words, expect to see an increase in poor overall health in communities. It is important to mention the impact that Covid-19 has had. Although Covid-19 has been receding, the damage it has caused everyone financially, physically, and mentally remains. The wound is deep and many communities continue to struggle. Individuals living in New Jersey need to be aware of the resources and services that are available to them. WAFAA is trying to reach health equity and a decline in health disparities by providing equal, healthy, and fair opportunities to all.

**Method/Approach:** To facilitate the organization's goal, WAFAA partnered with the school board and recreation center to help offer resources that are available to the community. The organization visited 10 summer day camps so far. At the camps, the WAFAA organization performed small presentations to inform the children and their families about the services provided. The organization set up a booth where people were allowed to acquire food and educational brochures with WAFAA's contact information. Afterward, the team followed up with possible clients by contacting them through email and phone with the contact information gathered at the camps and other events.

**Outcomes/Results:** The goal of this program was to educate, serve, outreach, and assist communities in Paterson. Through the partnership with the board of education, WAFAA gained a substantial amount of new clients and formed closer relationships with families in Paterson. The organization's client list with only ten camps visited has increased by 20 and will continue to rise in the next few weeks. Housing assistance, food delivery, and counseling have been substantial issues in Paterson, accounting for more than 75% of the organization's cases. Through this outreach program over 100 families have been made aware of WAFAA's services, shown support, and assisted through the organization's client intake application.

**Evaluation/Conclusion:** With the support of donors and intern grant writers, the WAFAA organization will continue to assist individuals in New Jersey and surrounding areas. Community outreach is a critical part of developing a safe and healthy community. WAFAA is seeking to provide equal opportunities to people of all ethnic backgrounds. Miss Wafaa Saad, the founder of the organization, works tirelessly to give back to the community and strengthen families through education, community outreach, and more.

## Internship Abstracts

**Title:** Marketing campaign  
**Name:** Daniel Amaya  
**Preceptors:** Dr. Falon Jimenez Irwin. DPT  
**Agency:** Therapy One - Physical Therapy

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**Purpose:** To create and implement a marketing campaign aimed at increasing patient volume and the practice's social media presence.

**Significance:** Physical therapy practices are a highly competitive area in healthcare. Although the demand is always high, competition is also high due to a saturated market of private practices, especially for a new practice such as Therapy One - Physical Therapy. Gaining a competitive advantage is crucial in ensuring the long-term survival of the practice. The marketing campaign will gain referrals from outside providers and increase the practice's social media presence.

**Method/Approach:** To grow Therapy One's social media presence, weekly Facebook posts with educational material and information about how patients can benefit from physical therapy were created to reach potential new patients online between 6/16/22 and 8/3/22. A provider relations strategy was implemented between 7/8/22 and 7/29/22, which consisted of visiting nearby physicians and medical practices to introduce Therapy One and its services. This step aimed to gain referrals from more physicians, thus, increasing patient volume and building working relations with outside organizations. Facebook insights was used to measure post reach, post engagements, followers, and page likes. Every new patient was tracked and asked who they were referred by to evaluate the success of the provider relations promotion strategy.

**Outcomes/Results:** Thus far, Therapy One's Facebook page has gained a significant number of traction. From 4/5/22 to 5/31/22, the page's reach was 639. In the past 2 months, from 6/6/22 to 7/29/22, Therapy One's Facebook reach was 1916. That is an increase of 199.8%. Engagement on Facebook posts were 123 from 4/5/22 to 5/31/22. A 110.5% increase was achieved when compared with the 259 engagements from 6/6/22 to 7/29/22. Through the social media and provider relations outreach strategies, Therapy One was able to get 11 new patients who heard about the practice online and through their healthcare providers. Both strategies were successful in their goal of increasing patient volume and the practice's social media presence.

**Evaluation/Conclusion:** The growth on social media and patient volume was satisfactory. The creation of social media posts increased Therapy One's social media presence, increasing the practice's exposure. Through the provider relations strategy, Therapy One was able to gain referrals from outside healthcare providers, increasing patient volume and opening doors to creating working relations with a vast number of outside healthcare organizations and providers. After conclusion of the internship, the plan is for the Therapy One team to continue growing their social media presence and their working relationship with outside healthcare providers.

## Internship Abstracts

**Title:** Analysis of New Jersey Medicaid Birthing Individuals Utilization of Breastfeeding Promoting Efforts to Inform Lactation Counseling Services.

**Name:** Rebecca Amoako

**Preceptors:** Direct Supervisor: Karen Enoch; Project Supervisor: Nadia Glenn

**Agency:** New Jersey Division of Medical Assistance and Health Services (DMAHS)

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**Purpose:** Analyze the utilization of a lactation-promoting benefit offered by NJ FamilyCare to estimate the use of lactation counseling services offered in the near future.

**Significance:** Evidence shows human breast milk is the most appropriate and health beneficial food for infants and contains beneficial properties for the breast feeder. Nonetheless, breastfeeding rates in the United States fall short of health authorities recommended levels. NJ FamilyCare (Medicaid) is increasing health care benefits to birthing individuals to support individual breastfeeding goals. Legislation providing coverage for lactation support services passed in 2019 and awaits implementation. Implementation of lactation support services through Medicaid will cover all costs for Medicaid enrollees to meet with lactation professionals individually and/or in a group setting through their providers. These services can help increase breastfeeding initiation, decrease barriers, and encourage individuals' in their nursing journey. This project will analyze the frequency of breast pump requests to identify the number of Medicaid members that may engage with nursing support, specifically, the new benefit of lactation counseling and consulting to aid in the breastfeeding exclusivity and intensity.

**Method/Approach:** The number of births in the state of New Jersey and the amount of births paid for by Medicaid was retrieved from the New Jersey Department of Health's State Health Assessment Data (NJSHAD) System. Breast pumps are provided to individuals that are pregnant or recently gave birth. Medicaid claims data was provided by the Office of Business Intelligence within NJ FamilyCare for the number of breast pumps requested by Medicaid enrollees. Data was from 2018 to 2020 for both sources. Breast pump data was stratified by race and type of pump requested. The total number of births in New Jersey was compared to the number of births paid for by Medicaid. To determine the ratio of Medicaid members that utilized their breastfeeding pump benefit, the number of breast pump requests was compared to the total number of Medicaid births. The average of the members utilizing the service over the three years was compared to the average of birthing individuals that breastfeed in the United States.

**Outcomes/Results:** Among births in New Jersey, in 2018, 30,359 (30.6%) of the 101,172 births were paid by Medicaid; 2019, 29,791(30.0%) of the 99,305; and, 2020, 27,711 (28.3%) of the 97,146 births were paid for by Medicaid. Of the Medicaid covered births, in 2018 NJFamilyCare received 12,429 breast pump requests (40.1% of total Medicaid births); 2019, 12,954 (43.5%); and 2020, 11,797 (42.6%) requests. The average (n=12,393) of total pump requests as compared to the total Medicaid births (n=29,487) accounts for 42.0% of Medicaid members that utilize the breast pump benefit, near the current national rate of 43% of infants being breastfed (at 6 month benchmark).

**Evaluation/Conclusion:** The results of the data analysis indicate that lactation benefits are presently being utilized by at least 40% of post-partum Medicaid members annually. The request for breast pumps can be seen as the potential for Medicaid members to engage and use lactation support services expanded under NJ A5509.

## Internship Abstracts

**Title:** Patient Knowledge, Perception, and Preferences About Surgical Cancer Care

**Name:** Chimaraije Amu-Nnadi

**Preceptors:** Dr. Kristy Broman, MD MPH, Clinical Surgical Oncologist

**Agency:** The University of Alabama at Birmingham

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**Purpose:** To develop and administer a telephone survey to determine people's knowledge, perceptions, and preferences when seeking cancer care for themselves or a loved one and to explore peoples' understanding of cancer center characteristics and services.

**Significance:** Cancer centers are Commission on Cancer (CoC)-accredited healthcare facilities that exclusively focus on specialized cancer research and treatment. Patients seeking treatment at cancer centers have superior surgical outcomes compared to those seeking treatment at non-accredited facilities. The highest level of designation is that of the National Cancer Institute (NCI) Comprehensive Cancer Centers, which deliver a full range of diagnostic testing, treatment, and clinical trials. For example, the O'Neal Comprehensive Cancer Center at the University of Alabama at Birmingham and the Cancer Institute of New Jersey at Rutgers University are NCI-designated Comprehensive Cancer Centers. It is unknown whether patients differentiate cancer centers from non-cancer centers, or how this impacts where patients decide to get cancer care; therefore, this study aims to learn what Alabama residents understand about cancer center designations and the factors that would be important to them in deciding where to seek cancer care.

**Method/Approach:** A random selection of Alabama mobile and home telephone numbers was used to create the phone list. A telephone script and other IRB precautions were strictly abided to gain informed consent before starting the survey. REDCap, a secure online data software, was used to store responses and ensure confidentiality. Participants were instructed that the survey was voluntary, took 15 minutes, and were offered a \$25 visa gift card as a gift incentive. Eligible participants included adults residing in Alabama. Descriptive statistics were planned to analyze the results.

**Outcomes/Results:** In total, 344 people were contacted by telephone and invited to participate in the survey. Calls were made in the daytime, evening, and sometimes on weekends, providing valuable information about optimal times to target specific populations. Many callbacks were made to reschedule the survey to a more convenient time at the participant's request. Four participants agreed to do the survey. Of these four participants, one was complete, and three were incomplete, yielding a less than 1% response rate. 18 (5%) participants declined to take the survey, 96 (28%) did not answer the phone, 165 (48%) participants were unreachable, and 57 (17%) participants were left with voicemails informing them of the survey. The one respondent shared valuable insights, like being unknowing of cancer centers. When looking for cancer care, the respondent preferred a site with diversity, years of experience, and closeness to home, yet when asked, they preferred to travel farther to see a cancer specialist.

**Evaluation/Conclusion:** Further work is needed to determine people's knowledge, perceptions, and preferences when seeking cancer care for themselves or a loved one. The limitation of this study is that the survey response rate is low, and hence results are not generalizable. In the future, the experience gained from the trial and process of conducting the telephone survey will be used to make procedural adjustments including scheduling the best times to call, persuasion techniques, and additional strategies to increase participation to yield a higher response rate.

## Internship Abstracts

**Title:** The importance of the Patient Services Department in the Pharmaceutical sector

**Name:** Sylvia Asikaburu

**Preceptors:** Connie Frangkais - Associate Director

**Agency:** Kyowa Kirin Inc

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**Purpose:** Kyowa Kirin works to clear up misunderstandings and false beliefs regarding the lack of services that pharmaceutical companies provide to the public to assist consumers in affording expensive medicines.

**Significance:** The average cost of a patient's specialty drug is more than \$2,000 per month, according to the Commonwealth Fund (Page 1). According to Evernorth, "Over 2% of the general population in the United States utilizes specialty drugs, accounting for 51% of all pharmacy spending. The high cost of specialized medication is necessary since it directly affects the trajectory of the drug industry" (What is drug trend and how to manage it, pg 1). As a result, it is difficult for those who need to buy specialist prescriptions to do so. The majority of pharmaceutical companies offer programs designed to assist their customers in lowering the cost of their prescription medications and making them more accessible to help battle their diseases. The main objective of Kyowa Kirin's designated Patient Services department is to assist patients with any financial difficulties they may have while using their products. The patient services departments concentrate on offering co-pay assistance programs and any additional funding that customers might require when they utilize the company's products. The program's objective is to reduce the burden of high co-pay so the patient can focus on their disease.

**Method/Approach:** Kyowa Kirin will deploy its Field Sales Representatives also known as Sales Rep's to educate and enlighten medical practices about the firm's financial support programs available. As a result, Kyowa Kirin hopes to see the company's website be used as a valuable tool for spreading awareness among medical facilities and patients about the many forms of support accessible to additional assistance available to afford the products they manufacture. Additionally, the Sales Rep's can provide physicians' offices with free samples of the numerous medicines the company produces. This way, the offices can be aware of the various products the company produces. By doing so, more people can take full use of the help being provided to them by pharmaceutical companies.

**Outcomes/Results:** The company plans to have the sales reps keep an eye on the offices they visit and do a quick survey of how the offices respond so we can see who is more open to information. This way, the company can collect data to find out which regions have difficulty understanding the information they are given about the company's services and find new ways to help them.

**Evaluation/Conclusion:** Since Kyowa Kirin opened its patient services department, the company has been doing well. As a business, one of its main goals is to keep coming up with new ways to educate consumers about its services. As a business, Kyowa Kirin tries to give as much information as possible to help close the gap of the misconception people may have about patient services departments.

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## Internship Abstracts

**Title:** Handwashing Health Education Program for Middlesex County's Youth Population

**Name:** Meghan Bissett

**Preceptor:** Robert LaForgia, MPH

**Agency:** Healthier Middlesex, St. Peter's University Hospital & Robert Wood Johnson University Hospital

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**Purpose:** To increase positive knowledge, attitudes, and behaviors surrounding handwashing through the creation and implementation of a health education program for school-aged children.

**Significance:** Disease transmission is a significant health concern within the school-aged population. Common communicable diseases found in this population include viral gastroenteritis (stomach flu), hand, foot, and mouth disease (HFMD), viral conjunctivitis (pink eye), and ringworm (AAFP, 2020) (CDC, 2020) (CDC, 2021). Childhood illness contributes not only to negative health outcomes of the youth population, but that of their communities as well; infectious disease outbreaks can gain momentum within the confined conditions of educational settings and may spread through families, perpetuating community transmission (Gemmetto, et al., 2014). All—and many more—of the conditions listed can be prevented through proper hand hygiene (CDC, 2022). While the importance of handwashing was highly popularized at the onset of the COVID-19 pandemic (Haston, et al., 2020), Americans reported a 20% decrease in frequent handwashing between March 2020 and September 2021 (American Cleaning Institute, 2021). Handwashing education has proven to be an effective and necessary aspect of child and community wellness protection (CDC, 2022).

**Method:** An evidence-based health education program focused on personal hand hygiene was designed and actualized using the Centers for Disease Control and Prevention handwashing education curriculum. This program was implemented at two summer camps in Middlesex County, NJ. The 59 participants—between the ages of 5 and 13 years old—were selected using convenience sampling, as all participants were campers at one of these two summer camps. The program's presentation contained multiple portions, including lecture/discussion, audience participation, and hands-on application of skills/knowledge with opportunities for participants to self-assess using GlitterBug Potion UV disclosing lotion. The program impact was evaluated using pretesting and post-testing of all participants. Verbal instruction and visual aids were provided before and during the pre- and post-testing to minimize the impact participants' individual reading comprehension and test-taking skills had on gathered data.

**Outcomes:** Pretest and posttest results indicate that the program had a significant impact on the knowledge of participants. The average difference between pretest and posttest scores was +18% (74.24% to 91.86%). Participants aged 6-9 years old were seemingly most impacted, with an average increase between pre- and posttest scores of 20%.

**Evaluation:** While appropriate SMOG readability scores for all materials were determined prior to the program's onset, individual participant reading comprehension skills became a hindering force during facilitation. Some participants required assistance during pre/post-testing. An improved version, with larger text and visual aids, was created for the second session. Overall, participant scores and feedback highlight this program's success in achieving its goals of positively impacting knowledge and attitudes. This program should be reevaluated as the community's perception of hand hygiene evolves.

## Internship Abstracts

**Title:** Hospice Data and Quality Analysis of Advanced Care Planning Program

**Name:** Mattea Boyarsky

**Preceptors:** Direct Supervisor : Nicole Bell, Manager of Risk Adjustment  
Project Supervisor : Vanessa Blaha, Regional Clinical Senior Director

**Agency:** agilon health

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**Purpose:** To analyze and further improve the identification and tracking of patients enrolled in hospice to enhance the reporting and performance of agilon health's practice-based end of life program.

**Significance:** According to the National Hospice and Palliative Care Organization (NHPCO), "1.61 million Medicare beneficiaries who died were enrolled in hospice care for one day or more in 2019" (2021). NHPCO also reports that the average length of stay in hospice was 92.6 days in 2019 (2021). Agilon health's palliative program identifies patients who are approaching the end of life and initiates Advanced Care Planning (ACP). The ACP program ensures that patients receive the right care to decrease unnecessary utilization. For this project, agilon health uses data from EMRs to identify patients who will benefit from the ACP program. To monitor and evaluate the program, agilon health utilizes data trackers. However, there was a gap in tracking hospice patients due to inconsistent documentation in the EMR. This resulted in unavailable patient information. The project includes a collection of hospice patient data, which will improve identification and tracking of patients to understand the overall quality of care.

**Method/Approach:** The first step involved a chart review process in understanding the trends and quality of the ACP and palliative care programs. There was a lot of information missing for 276 patients. It was necessary to manually go into the electronic medical record and find information relating to hospice admission date, discharge date, and decreased date for each patient if listed. After gathering data, the second step allowed the information and patient profiles to be quantified so that it could be loaded into CORE, an integrated platform. With the information in CORE, it was then possible to generate data to more clearly understand the quality and trends of the ACP and palliative care programs.

**Outcomes/Results:** After collecting data, it was determined that 180 of the 276 patients are active and enrolled in the program. Of those patients, 38% have been enrolled for more than 90 days while 62% have been enrolled for less than 90 days. It was determined that 18 patients passed away after 90 days in 2022. This data will help agilon health keep track of patients enrolled in the ACP program. The company will be able to determine the quality of the program by looking at enrollment dates. If a patient has been enrolled for more than 90 days, utilization trends are better meaning decreased total cost of care and more symptom control management. Patients and families ultimately receive high quality care in the ACP program because their healthcare goals will be thoroughly discussed. As patients get closer to the end of life, the ACP program ensures their wishes are fulfilled.

**Evaluation/Conclusion:** To evaluate the project and the ACP program, further collection and analysis of patient data is necessary. One data point to collect is the percentage of avoidable inpatient and ER visits. This gives insight into how much care is being delivered within the program and its quality. Another data point is the percentage of patients that transition from palliative into hospice care. Hospice allows for more care delivered and prolonged deceased dates. Also, a higher median length of stay over the years can determine if the ACP program is beneficial in patients' lives. Overall, the program should be relooked at every quarter of the year to constantly collect and analyze information.

## Internship Abstracts

**Title:** Mental Health Wellness Checks With Kids With Disabilities

**Name:** Valbona Camaj

**Preceptors:** Mita Patel, Program Assistant

**Agency:** New Jersey Elks Developmental Agency- Clifton NJ

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**Purpose:** To evaluate the wellbeing of the students with disabilities at the agency.

**Significance:** More than one in five parents reporting a child with a disability cited ADHD as an underlying condition. Another 19 percent cited that their child had other mental, emotional, or behavioral problems. This evidence indicates that these children with disabilities need to be put into the right programs in order to improve their mental health state. Occupational therapy intervention for children promotes engagement and participation in children's daily life roles. New Jersey Elks Developmental Agency is focused on ensuring that children have someone that they can talk to outside of their family. NJEDDA understands that children with disabilities may have some mental health related issues that are not always addressed and they want to be able to keep their children healthy. The students at NJEDDA need to feel heard and have their feelings validated as that is very crucial to their mental wellbeing as a young child with a disability.

**Method/Approach:** The students were split up into respective groups based on their age. Training included a specific questionnaire for the students in the morning to assess how the prior day was and to set their goals for the day. The scheduled meetings on Zoom were three times a day. Once in the morning with all twenty-three students, the second after lunch, and the third meeting was optional for students that wanted to meet privately. The meeting goals were to give the students a chance to check in on their daily goals and give them an outlet to debrief on the day that they had.

**Outcomes/Results:** Twenty-three children were in the wellness checks on Zoom between May 16, 2022 and August 22, 2022. On June 27, 2022 fourteen students needed to begin personal Zoom calls to discuss more private matters. Of these, six needed parents to get involved. Twenty-one students said that they would like to continue to have someone to talk to that they can trust because it made them feel better. A daily questionnaire was used first thing in the morning with the same questions every day. Those questions included, "What are you feeling right now and why?", "What are your goals for today?", "What will make you happy today?", and "What do you look forward to today?". These questions would create a larger conversation in which the children would express their feelings more thoroughly.

**Evaluation/Conclusion:** In order to promote a healthy environment psychologically for these children, it is beneficial for staff to set time aside for the children to discuss their feelings. About 61% of the children that were in a group Zoom call for wellness checks felt as though they needed personal time to discuss more private matters. Of that 61%, 43% of the students had their parents involved in more serious matters. Ultimately, without giving children an outlet, it is impossible for them to express their feelings and let someone know what might be going on in their lives.

## Internship Abstracts

**Title:** Staff Transparency of Press Ganey Data

**Name:** Ashley Campo

**Preceptors:** Jacqueline Noll, RN, Director of Nursing (ED)

**Agency:** Cape Regional Medical Center (CRMC)- Cape May Court House, NJ

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**Purpose:** To synthesize Press Ganey results and compose an infographic to promote awareness of patient experience data to the emergency room staff.

**Significance:** According to Kardanmonghadam et. al (2015), the emergency department (ED) is one of the important departments of hospitals, and patients' satisfaction with this department significantly affects their overall satisfaction with the hospital. Sayah et. al (2014) found that by targeting ED operations measures, patient satisfaction scores rose from the 12th percentile to the 59th percentile. Patient satisfaction should be constantly considered within the emergency department and staff to ensure quality care is being given to patients. Cape Regional Medical Center is dedicated to providing proper care to ensure patient satisfaction data. Press Ganey results will be transparent to the staff in hopes that awareness will initiate improvement measures that can be assessed. To improve the hospital's rating, it was decided that raising staff awareness of the Press Ganey results and by providing specific feedback on how to improve the low areas would be the first step in improving patient experience.

**Method/Approach:** Press Ganey is an organization that distributes survey questions to patients and compiles comments and feedback for hospitals. Using the previous year's Press Ganey data which demonstrated low patient experience performance, an infographic was developed. The infographic displayed the following: 1) CRMC ranking compared to the national average, 2) CRMC month rankings, 3) positive comments, 4) negative comments, and 5) Press Ganey suggested improvements. The infographic was positioned in the ED break room for easy accessibility to the staff in hopes of encouraging a positive change in work experience to improve patient experience.

**Outcomes/Results:** The outcome of the infographic project was to present Press Ganey data to the staff to increase transparency and awareness in hopes of improving patient satisfaction score. The infographic's success will be determined by the following quarter's data once the poster has been installed. Upon awaiting Press Ganey survey results for the next quarter, improvements in "Top Box Score", percentile, and positive comments as well as a decrease in negative comments will prove that staff awareness of Press Ganey data has a positive impact on patient experience.

**Evaluation/Conclusion:** Ongoing monitoring of the infographic's success can be tracked continuously through the Press Ganey results for each progressing quarter. The infographic was designed to be upgraded effectively to display new Press Ganey results. Feedback from the staff will also acknowledge the staff's opinions of the infographic and determine if its presence is useful to the staff. The outcomes of this infographic project will hopefully lead Cape Regional Health System to a high patient experience standard. This infographic can become an example for other departments of Cape Regional Health System and potentially for other hospitals as well.

## Internship Abstracts

**Title:** Somerset County Community Blood Donation Awareness

**Name:** Irene Chung

**Preceptors:** Pastor Danny Hahn, MDiv

**Agency:** Praise English Ministry

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**Purpose:** To provide awareness and education on the positive impacts of blood donations.

**Significance:** Approximately 29,000 units of red blood cells are needed each day in the United States in order to save lives and improve the health span of patients ailing from any number of a wide range of various health complications and ailments – including but not limited to – injuries, surgeries, childbirth, blood disorders, and cancer treatments (The American National Red Cross, 2022). Furthermore, over the course of the pandemic, blood donations have significantly dropped but also the intention and willingness to donate has plummeted. With over 100 hospitals dispersed across the state, 35 hospitals are pillars of the Central New Jersey community (New Jersey Hospital Association, 2017). Praise English Ministry is working to close the gap, to educate and raise awareness in the community of the necessity of blood donations, as well as encouraging those who are able to donate.

**Method/Approach:** To understand the population of Somerset County, Praise English Ministry has worked with other churches in the community to survey the current state of understanding the need for blood donations. First, an initial survey was taken to gain a baseline understanding. The information was then used to create educational materials to understand the importance for a more effective approach to encourage individuals to volunteer for blood donation drives. Following educational materials being distributed, participants were then asked to retake the same survey to gauge whether there was a negative, positive, or no deviation from the set of responses provided for the initial survey.

**Outcomes/Results:** The five question survey was distributed among a wide range of demographics (three factors: age, gender, and race) and participating demographic groups were selected at random. The ages ranged from 18 (the minimum age of legal consent without the requirement of parental/guardian approval) to 73. The results for race were also diverse, with participants identifying as either Asian American/Pacific Islander (63%), Caucasian/White (26%), African American/Black (7%), or other (4%, racial specification was not required for this category). Volunteers who took the survey identified only as either male (44%) or female (66%), with the most prevalent demographic being Asian-American females between the ages of 23 and 31. Participant results indicating a willingness to donate in the initial survey increased from 42% to 60% following the distribution of educational materials, marking a positive increase of 28%.

**Evaluation/Conclusion:** A total of 250 initial surveys were sent out, and of those 250 initial surveys, 200 were returned and willing to retake the initial survey. The experiment proved successful in both raising overall awareness of the importance of donating blood, as well as increasing the willingness of participants to do so. Participants who showed a willingness to donate blood were then provided with various resources of where they could learn more information and actually donate blood if desired.

## Internship Abstracts

**Title:** Substance Use Prevention and Treatment in Youth

**Name:** Ivy Davis

**Preceptors:** Jewel Savvides, Peer Support Supervisor

**Agency:** Prevention Links - New Brunswick, NJ

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**Purpose:** To decrease substance use dependence in youth aged 13 to 17 and encourage recovery and positive health behaviors through the Alternative Peer Group (APG) model in support groups.

**Significance:** Substance use disorders (SUDs) are a major epidemic in this country, specifically in New Jersey. A 2017 Substance Abuse and Mental Health Services Administration (SAMHSA) report found that 10,000 youth aged 12 to 17 needed SUD treatment but did not get it. Moreover, 60% of high school students in a 2016 survey report a regular use of marijuana, (National Institute of Drug Abuse, 2016). Prevention Links seeks to address the youth through various tools in order to assign them mentors, refer them to more clinical programs, offer counseling and support, as well as engage families in the recovery process. Providing mentoring to youth, arranging biweekly in-person events for substance-free fun, and working with surrounding high schools to recruit students are essential parts of the organization.

**Method/Approach:** Prevention Links receives funding through a grant from the Office of Juvenile Justice and Delinquency Prevention. To treat youth who struggle with substance use disorders, youth are referred to Prevention Links through one of the following strategies—survey referral, probation officer referral, guidance counselor referral, or word of mouth. From there, participants are paired up with a mentor. This mentor calls weekly for a check-in, encourages youth to join the non-mandatory peer support groups, and meets with the youth in person on a biweekly basis. Mentorship is proven to lead to higher educational achievement, increased health and safety, and a promotion of social and emotional development for the mentee, (Jekielek, S.M., et al., 2002). Alongside mentorship, participants in the program attend a peer support group twice a week, which follows evidence-based models. Families are “kept in the loop” of their child’s experience in the program through phone calls, which can be as often as twice a week to once every two weeks. The program lasts for a minimum of 10 weeks. There are currently 20 participants in the program, ages ranging from 13 to 17 years old. At the end of the program, Prevention Links follows the continuum of care; participants continue contact with their mentor and can continue attending biweekly outings.

**Outcomes/Results:** Of the 4 participants who complete the program, or are nearly complete with the program, report a decreased dependence on their substance of choice. Moreover, participants report a stronger relationship with their parent(s)/caregiver.

**Evaluation/Conclusion:** Participants who have completed the program, as well as participants close to completing the program, report decreased use of the substance(s). The Alternative Peer Group Model, which utilizes mentorship, peer support groups, and family support, is effective in (a) reducing substance use disorders and (b) promoting healthy behaviors and relationships. Beyond the participants, the outcome of the program as a whole is to gain 40 more participants in the program. Also, to increase the engagement of family members in their child’s recovery journey through communication with the mentors and positive reporting by the child.

## Internship Abstracts

**Title:** Marketing Campaign  
**Name:** Ashley DeMichele  
**Preceptors:** Dr. Bryan Berger; Wellness Director & Lead Chiropractor  
**Agency:** Innovative Wellness Center

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**Purpose:** To increase new patients and maintain existing patients by implementing creative social media campaigns and other effective marketing plans.

**Significance:** The competition amongst different healthcare facilities is always very high. Marketing allows new patient flow to continuously increase. Although it is important to have a high volume of new patients, it is also important to keep existing patients. Even if the practice is happy with the current patient volume and revenue, effort is still needed to keep recurring patients satisfied with what the practice is offering them. There needs to be ways that this practice stands out from the others that are providing similar services to patients. This project focused on using social media marketing campaigns to increase new patient numbers and maintain existing patients.

**Method/Approach:** Between 6/30/22 and 8/03/22, about 3 posts per day were added on the practice's Facebook accounts (a separate page for nutrition). Posts made on the Facebook account included promotions such as Father's Day specials and early bird promotions to new services the practice was introducing, healthcare tips, and at least one daily inspirational quote. A program named Review Wave was used to communicate with patients, receive their feedback/reviews, and share promotions with them as well. At the end of every work week, a mass email was sent to all patients from the past year either sharing health advice or boosting current specials. Other marketing plans included flyers and posters highlighting topics and services provided at the facility. New patients also received goodie bags with coupons, pamphlets with information on services offered, and objects such as letter-openers, sticky-notes, and cups with Innovative Wellness Center's logo on them.

**Outcomes/Results:** There was an increase in the number of new patients at the facility. In the beginning of June, the average number of new patients was 16 a week in all 5 departments, including chiropractic, physical therapy, acupuncture, massage, and nutrition. After the marketing campaign, this rose to 64 new patients per month. The first week of August produced 22 new patients for a projection of 88 for the month. In this time span, the goal was to see an increase of at least 15%, but that was surpassed with a 37.5% increase. On intake forms, patients were asked how they heard about our practice. Right behind "patient referrals," social media was the second most chosen option by patients.

**Evaluation/Conclusion:** Overall, the practice was highly successful in gaining new patients through social media and marketing tactics. Because of the tools used to promote the facility, the percentage increase was satisfactory. This shows that it is crucial to a healthcare facility to have a presence on social media and to keep up with marketing plans, both to gain new patients as well as keep recurring patients satisfied. Going forward, the practice will continue to use social media and marketing tools because of the successful results.

## Internship Abstracts

**Title:** Application of Inventory and Tracking in Waste Management

**Name:** Zachary Doyno

**Preceptor:** Robert Nitko, Director of Environmental Compliance, CHMM

**Agency:** ACVEnviro

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**Purpose:** To provide the facility, the Environmental Protection Agency, the New Jersey Department of Transportation, the New Jersey Department of Environmental Protection, and the public a complete picture of all hazardous and non-hazardous wastes being processed through the facility.

**Significance:** In 1970, the EPA was founded in response to growing concern and public outcry over air, water, and soil pollution, as well as various environmental disasters, such as the combustion of chemical contaminants on the polluted Cuyahoga River, and an offshore oil rig in California spilling millions of gallons of oil onto its beaches. Call to action was needed, and President Nixon responded with the creation of an environmental council which would eventually become the EPA. Part of the EPA's purpose is to monitor, set, and enforce environmental standards, including waste generation. One of the first such standards and regulations is RCRA, or the Resource Conservation and Recovery Act, which created the framework for the proper management for hazardous and non-hazardous waste (EPA, 2022). RCRA gives the EPA authority to ensure that hazardous waste is safely managed from "cradle-to-grave", meaning the generation, transportation, treatment, and storage and disposal of waste (EPA, 2021). Monitoring inventory and hazardous and non-hazardous waste from cradle-to-grave is an important step to ensuring the agency is compliant with federal and state agencies, and that the public is informed of agency activity.

**Method/Approach:** Using Microsoft Excel, Enviroware, a waste management and tracking software, and a preexisting company framework of how the facility manages inventory, daily inventory reports were generated from June 1st to August 12th of 2022 for the NJDEP. Daily inventory data was extracted from Enviroware and processed via Excel to examine trends in volume, which hazardous and non-hazardous wastes were being processed by the facility, as well as how each individual unit of waste was being processed. Associated with any formally generated waste is a unique ID, typically a combination of a State Code and a random string of numbers. Using this unique ID, the agency and any other interested party is able to track at which point a unit of waste is in the waste management process. Additionally, a TRI (Toxic Release Inventory) report was generated for the year of 2021, which indicates which toxic chemicals or materials were released into the environment by the facility itself via spills, accidents, or any other incidentals in the process of waste management. This was compiled using separate data extracted from Enviroware and processed via Excel to generate a monthly report for the year of 2021. The TRI report is then submitted directly to the EPA.

**Outcomes/Results:** Daily inventory reports were successfully generated from June 1st to August 12th 2022, giving the facility the resource it needs to remain in EPA and NJDEP compliance, as well as track trends in incoming and outgoing waste. The 2021 TRI report was sent to the EPA on time as per EPA compliance.

**Evaluation/Conclusion:** The management of waste is a carefully monitored and regulated process, involving many stakeholders and agencies in the process. Ultimately the harsh scrutiny and regulation is necessary so that the public, the environment, the workers, and our natural resources remain safe.

## Internship Abstracts

**Title:** Work Analysis and Performance Evaluation

**Name:** Xinyu Duan

**Preceptors:** Guifang Yu, Financial Director

**Agency:** Tuoqi Cereal & Oil Trade Co., Ltd.

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**Purpose:** To determine the status and treatment of employees and create a *fair competition* mechanism; improve and maintain the high efficiency of business operations and achieve organizational goals, and develop human resources to add value to human resource capital.

**Significance:** Employee performance evaluation is an important management process, which assumes the functions of management, supervision, guidance, education, motivation, and discipline for an individual employee. The monthly appraisal is combined with the monthly work plan, and the results are linked to individual performance pay. When the appraisal results are distributed in the ratio of 2:7:1, it shows that the company's performance appraisal system is playing a good role and can basically and correctly assess the efficiency and quality of employees' work, and can provide the basis and direction for employees' work improvement and enhancement.

**Method/Approach:** Performance appraisal is carried out by a hierarchical responsibility system, generally by direct superiors to subordinates. Before the 2nd day of each month, each department is responsible for determining the departmental performance target and assessment standard in accordance with the departmental work responsibilities and work indexes and communicating with the Human Resources Department. On the basis of this, the personnel of individual positions communicate with their direct superiors to determine the performance objectives and assessment standards according to their job responsibilities, fill out the Staff Assessment Questionnaire, and submit it to the Human Resources Department for review before the 5th of each month.

**Outcomes/Results:** The performance appraisal results in April were very typical of the tendency to average performance, the ratio of excellent and bad was quite small, and the vast majority of employees were in the excellent grade, reflecting the cautious mentality of each department at the early stage of performance appraisal implementation and the lack of understanding and control of the appraisal standard. Yet, from this July appraisal results, excellent grades accounted for 19.8%, good registered for 72.07% to be improved and poor grades accounted for 8.13%. The awareness of performance appraisal is gradually enhanced by the responsible persons of each department, and the understanding and control ability of appraisal standards are also enhanced. However, the coverage of the current performance appraisal system is still insufficient, and most of the positions not covered are grassroots operational positions, and the efficiency and quality of these positions lack supervision and control at present.

**Evaluation/Conclusion:** The company's performance appraisal management system has been implemented and followed up for three months. At present, on the whole, it is gradually playing a good role, and the assessment environment is gradually optimized, but at the same time, it also reflects that the assessment process is not sound, which leads to the time when the assessment results are exposed without sufficient attention and follow-up solutions. As time advances and performance appraisal supporting measures are constantly updated and improved, the HR department will further play a greater role in improving management and promoting goal achievement. The performance evaluation is reviewed monthly.

## Internship Abstracts

**Title:** Innovating Sample Management System  
**Name:** Sincere Estrada  
**Preceptors:** Augustine Graziano, Supervisor of Cell Lab  
**Agency:** Sampled

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**Purpose:** To devise a sample management system in the Sampled Laboratory that increases sample turnaround time while maintaining quality lab practices.

**Significance:** Sampled serves as the federal biorepository for four NIH institutes and numerous foundations. Sampled facilities were designed to immortalize samples as renewable assets by proper storage. Samples are stored in cryogenic tanks. It is required that these samples are moved in a timely manner so that they do not thaw. In most cases, “thawing takes about one minute for a glass ampoule, and 90 seconds for a plastic vial” (UPenn, 2022). Lab technicians depend on sample management to accurately locate, move, and store samples so that when clients send requests, their inventory is ready for them. Sampled does multiple runs weekly that contain samples in glass ampoules. Glass ampoules must be handled cautiously, “due to the risk of explosive rupture” (Teoh, 2018). Many lines have been backed up due to samples exploding or getting lost in the liquid nitrogen tanks. The sample management department was tasked with the responsibility of fixing said problems to ensure that runs are completed without error.

**Method/Approach:** The sample management team was required to design methods that would work best for their daily tasks. The stem cell department runs lines that contain main samples, test thaws, FACs storage, and extra test thaws. In order to keep all of the samples organized a binder was created for the lab technicians to document each sample line that will be used. Sample location was changed exclusively to Tank 110 (racks 40-54) to make their location easily accessible. Test thaws are placed in rack 54, extra test thaws are placed in rack 47, and FACs storage are placed in rack 52. Sample management began using three cyro Dewar's instead of one, to keep samples in a consistent freezing environment. A document was also created so that the stem cell technicians and sample management crew has access to the location and thaw dates of each sample and can update the document as samples are stored and moved.

**Outcomes/Results:** The new Dewar method has prevented samples from exploding and thawing by effectively keeping each sample at a similar temperature as the tank they were removed from. No samples have exploded since the three-work Dewar system was implemented. The new organization method allows for the sample management team to transfer samples quickly and accurately. Same day turn around results have been achieved through the accuracy that is provided in the new binder, and the Microsoft team's document. There has not been any stem cell backups since the new approach was installed.

**Evaluation/Conclusion:** Documented data shows that all stem cell lines are being completed daily, and are always in proper location before they are pulled for testing. Test thaw samples are the first to be moved, and are always in their permanent location well before their thaw date. Main lines have been accurately documented and properly moved for long term storage. New methodology has met the expectation for organization and time management. Sample management has been able to locate, move, and store these samples days before they are needed, ultimately avoiding backups, broken ampoules, and missing ampoules.

## Internship Abstracts

**Title:** Stop the Bleed Course for the New Brunswick Community

**Name:** Raisa Franco, LPN

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

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

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**Purpose:** To provide the Stop the Bleed Course (STB) to populations at high-risk of observing bleeding emergencies in New Brunswick, empowering residents to respond with life-saving skills.

**Significance:** According to the American College of Surgeons (ACS), bleeding is the #1 cause of preventable death after injury. Of the 60,000 people who die each year due to uncontrolled bleeding emergencies, about 20% of people who have died from traumatic injuries could have survived if someone nearby had been able to stop it. This project will increase community outreach and encourage bystanders to become trained, equipped, and empowered to help in a bleeding emergency until help arrives.

**Method/Approach:** STB was created by the ACS and is taught around the country by certified instructors. The first step was to schedule dates, times, and locations for four classes (1-Middle School, 2-High School, 1-Adult). The in person classes used training materials especially developed to teach bleeding control techniques. An interactive lecture taught the basics of identifying and treating life-threatening bleeding using tourniquets, wound packing and pressure dressings. “Immediate responders,” (i.e., bystanders) are taught to stop potentially fatal bleeding before emergency responders arrive. Video and live demonstrations were utilized along with spontaneous questioning to assess understanding. Hands-on skills training followed the lecture, where students performed the learned techniques. Certified instructors checked for accuracy as participants practiced three different bleeding control methods. Following the didactic and skills training, the group was polled using *Kahoot!* to assess knowledge acquisition, confidence in performing skills, and if the class was helpful.

**Outcomes/Results:** The main objective of this project was to provide the community with the knowledge and skills to empower them to respond during an uncontrolled bleeding emergency. After data collection, 80% of high school students (HSS; n=43) and 100% of adults (n=17) felt that STB provided them with skills and knowledge they had not had before. Eighty-eight percent of HSS and 100% of adults found the training provided them with the necessary skills to save a life. With regard to confidence level, 80% of HSS and 100% of adults believed they could stop uncontrolled bleeding on a victim that sustained a life threatening injury. Upon completing the program, 80% of HSS and 100% of adults believed more lives could be saved in the event of trauma or mass casualty if this training was offered to more people.

**Evaluation/Conclusion:** At the conclusion of the STB program, participants left with greater awareness, knowledge, and skill set to recognize UB emergencies. Their confidence in their ability to implement bleeding control techniques increased. There was a challenge encountered during data collection because the majority of middle school students did not have a personal smartphone to access the assessment, therefore this data was not included. For future studies, a written copy of the STB Post Program Assessment should also be offered. Overall, both populations found this training to be beneficial and empowering, which supports the ultimate goal of the class to lower the prevalence of mortality after traumatic injury due to bleeding.

## Internship Abstracts

**Title:** The Effects of Mental Health Promotion in Community Programs

**Name:** Lauren Freeman

**Preceptor:** Christina Armstrong, Site Director

**Agency:** Greenway Family Success Center

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**Purpose:** To implement beneficial mental health practices such as mindfulness and gratitude during programs and events for the families being served by Greenway Family Success Center.

**Significance:** Nearly one in five Americans (adults and children) are currently suffering from a mental illness (National Institute of Mental Health, 2022). In New Jersey, over 42% of the population reported that they experience anxiety and depression on a day-to-day basis (NAMI, 2022). Greenway Family Success Center provides the residents of Fords, NJ with resources and programs that help to alleviate some stressors and challenges they face in their everyday life. The summer mental health initiative is intended to help the families even more by providing them with basic, science-based tools that both children and adults can use to reduce symptoms of depression and anxiety. These tools consist of knowledge and education about mental health and emotional intelligence, practices such as meditation and gratitude journaling, and also an added element of connecting families with affordable mental health resources such as counselors and social workers in Middlesex County.

**Method/Approach:** A program development, implementation, and evaluation were done at Greenway Family Success Center. The development stage included researching scientific based tools and programs that benefit the mental health of community members of all income levels, races, and ages. Research was then done on what the most efficient way to deliver these tools to the community would be. In various programs, an aspect of mindfulness was included that included a mindfulness activity which was usually a guided meditation. After the meditation was completed, the benefits of mindfulness were then explained and the importance of mental health and self-care were emphasized. A program specifically dedicated to mental health was also then planned and executed. Several different science-based mental health tools were explored as well as practiced during the program. These tools included meditation, journaling, processing feelings, and more. It is important to note that during the program, the information was made to be digestible for both children and adults. At the end of the program, a list of affordable and accessible resources in Middlesex County was provided to community members who attended. These resources were also added to Greenway's community resource master list which will be available to all Greenway staff to refer to when researching mental health resources for a family. Finally, a survey was done after each program or posting to get a grasp of how the community felt about the new initiative and about mental health in general.

**Outcomes/Results:** It is expected to see families' satisfaction rates with the programs at Greenway increase along with their knowledge of mental health practices, however, data for this is not yet available due to the time constraint and challenges associated with gathering information from families.

**Evaluation/Conclusion:** Data is not yet available for review. However, this experience has proved to be very beneficial. Mental health is very often left untreated for many individuals, especially those who face other serious issues such as food insecurity and poverty.

## Internship Abstracts

**Title:** Residual Effects of Slavery on Mental Health for African Americans

**Name:** Sierra Leone Gandy

**Preceptors:** Direct Supervisor: Breanna Brock, Project Supervisor: Dr. Elizabeth Cooner

**Agency:** New Jersey State Policy Lab

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**Purpose:** The goal was to gain an understanding of the mental health outcomes and systematic oppression that African Americans endure due to the residual effects of slavery (RES) and to share these findings with a broader audience

**Significance:** African enslavement has had an enduring effect that has resulted in unequal outcomes for African Americans in such areas as socioeconomics, health status, and mass incarceration. These outcomes for African Americans result in consistent feelings of unsettlement and stress. Raising awareness of how African Americans are treated by society, government, and institutions will provide a deeper understanding of this intergenerational trauma. This literature review examines the relationship between the residual effects of slavery in the United States of America and the mental health outcomes for African Americans.

**Method/Approach:** Rutgers Library and Google Scholars were used to collect a total of 21 articles to identify the topics of mental and societal trauma of slavery that directly impact African Americans mentally and physically. An outline was created with the themes of anti-black racism, the residual effects of slavery (RES), epigenetics, and mental health approaches for this community of people. Then, sub-themes were noted around additional topics with examples to paint a clearer picture as to why the mental health of African Americans is directly affected.

**Outcomes/Results:** A literature review was created for the New Jersey State Policy Lab from the findings of a combination of 21 literature reviews, peer review articles, and book chapters. Of these works of literature, nine focused on the psychological aspects, another nine focused on sociological aspects, and the last three focused on significant historical events that have taken place. The four main themes of my literature review were anti-black racism, the residual effects of slavery, epigenetics, and mental health solutions. The sub-themes focused on the direct impacts on African Americans: resiliency, the African American identity, and the portrayal that society has created for African Americans.

**Evaluation/Conclusion:** A literature review was delivered to the Executive Director of the Policy Lab and the information was presented at a public session. Mental health solutions consist of ensuring both African American and non-African American mental health counselors are aware of the direct impact slavery has on all African Americans. Suggested approaches include 1) applying the multi-phase model of psychotherapy, which addresses systematic racism and social justice issues that directly impact African American communities, and 2) attending marriage and family therapy (MFT). There was a lack of information regarding how to implement and ensure that both African American and non-African American mental health counselors are aware of the residual effects of slavery, so future literature that examines this topic would determine its benefits. Lastly, a draft blog post for the New Jersey State Policy Lab site regarding the residual effects of slavery was drafted for future publication.

## Internship Abstracts

**Title:** Improvement of Call Center Manual to Increase Efficiency of Scheduling Process

**Name:** Jaime Gonzalez

**Preceptors:** Tamara Cachola, Manager at the AMG Call Center

**Agency:** Atlantic Health System - AMG Call Center

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**Purpose:** To improve the manual used by agents for scheduling patient appointments with medical providers so that efficiency is increased and less scheduling errors are made.

**Significance:** When referred to a specialist by a primary care provider, more than half of patients typically have to wait at least four weeks to find an available appointment (Naimer, M.S., Aliarzadeh, B., Bell, C.M. *et al.*, 2022). As written by M. Cho, M. Song, S. Yoo, and H. A. Reijers (2019), wait times for consultations have a strong correlation with patient satisfaction, and the longer the wait to see a specialist the less likely a patient will return to the practice, reducing profits. The AMG Call Center schedules for seventy providers within Atlantic Health System, and works to improve patient satisfaction, patient health, and Atlantic Health System's profits by ensuring efficient and accurate scheduling of patients. The new digital manual will make it easier to navigate provider profiles and instructions and reduce the time constraint on schedulers while talking to patients. This will hopefully reduce call times and scheduling errors at the call center.

**Method/Approach:** To renovate the call center's manual and convert it to digital, there was an evaluation of the original paper manual to decide what information would be needed by schedulers during calls. Every providers' profile varied in data given, with a lack of clarity on what directives should be given to the schedulers making the appointment or to the patients to prepare them for their visit. The previous black and white pages were converted to color to direct the schedulers' eyes to key directions and enhance it aesthetically. Canva was adopted for this project and a custom template was made for the manual through it. Using uniform fonts, colors, and visual elements, all of the providers' profiles were rebuilt and tutorials were updated. Short updates throughout the manual were consolidated into fewer pages and organized. The guide was then sorted with links, menus, and search functions.

**Outcomes/Results:** The manual was thoroughly revised into a 150-page digital edition that was exported in both PDF and website formats. The website was released to schedulers with a search function, sidebar menu, and functioning links in the index to ease navigation through pages. The providers' pages were made uniform for schedulers to read their scheduling instructions, patient directives, and other relevant material such as addresses, contact information, specialties, and EPIC IDs without difficulty. While guides, medical practice specifications, and redundant pages were condensed to reduce the page count and ease movement through the document, additional pages were made with supplemental resources to help ease schedulers' work.

**Evaluation/Conclusion:** The creation of the new digital manual will ease the process of updating provider or practice information in the future and lessen the burden on schedulers to find necessary instructions while speaking to patients. By facilitating the search for vital directives and keeping updates organized within the manual website, the hope over time is to reduce call times and errors.

## Internship Abstracts

**Title:** New Jersey Sexual Transmitted Infections (STIs) Statutes Update.

**Name:** Jacqueline A. Hanley

**Preceptors:** Rosie Driscoll, Deputy Director of Policy and Legislative Services

**Agency:** New Jersey Department of Health

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**Purpose:** To apprise the New Jersey Department of Health on policy priorities for updating New Jersey Sexual Transmitted Infections (STIs) statutes.

**Significance:** New Jersey has some of the highest rates of sexually transmitted infections in the country, ranking 9<sup>th</sup> among 50 states in the number of HIV diagnoses in 2019 (Centers for Disease Control and Prevention, 2019). It is important for the general public especially high-risk groups such as college students or men who have sex with men to take a proactive approach to sexual health by staying informed. Using the right terms to differentiate between an infection and disease is significant. STIs are infections that have not yet developed into diseases, conversely, STDs are diseases that result from STIs thus, all STDs start as infections (“STI vs. STD: Key Differences and Resources for College Students”, 2020). Terms such as “venereal diseases” can mislead people. The term “infection” is often considered more accurate (“STI vs. STD: Key Differences and Resources for College Students”, 2020). Updated New Jersey STI statutes recommendations provided the New Jersey Department of Health with a comprehensive review of current STI statutes that used outdated terminology and provided suggestions for revisions that reflect current medical practices.

**Methodology:** New Jersey STI-related statutes were researched and reviewed to determine if the language used in the past is still medically accurate today. The New Jersey Department of Health’s information on sexually transmitted infections is reviewed to incorporate the contemporary terms used to explain STIs. Public health literature on STIs was utilized to inform recommendations for revision. A comparison with other states was also conducted, particularly Texas and California, on how they phrased their Sexually Transmitted Infections statutes. Current terms have been recommended in all of the New Jersey STIs statutes updates.

**Outcomes:** A final policy memo has been prepared and provided to the Office of Policy and Legislative Services within the Department of Health and senior leadership. The results have yielded resources that created and provided recommendations for future legislation particularly the New Jersey STI statutes. Thus, the New Jersey sexually transmitted infections-related statutes recommendations have been strongly considered for the update to contemporary terms to inform policy and provide concise knowledge to the general public in the state of New Jersey and beyond.

**Evaluation/Conclusion:** The memo has been reviewed by supervising staff and feedback was provided throughout the research process periodically. An in-depth literature review has been conducted and yielded results that indicated terms such as “venereal diseases” to be antiquated. The most accurate term to be used if/when one is infected is “sexually transmitted infections” or STIs and once it develops into a disease then it is a “sexually transmitted disease” or “communicable disease”. This project has apprised the New Jersey Department of Health policymaking in this area.

## Internship Abstracts

**Title:** Social Media Marketing with Uplift Food

**Name:** Dina Haouari

**Preceptors:** Morgan Savy - Head of Nutrition Marketing and Wellness Sales Channels

**Agency:** Uplift Food

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**Purpose:** To create Instagram posts using the Canva software to communicate the nutritional benefits and scientific effectiveness of the Uplift Food product range to customers, retailers, affiliates, and other key stakeholders and business partners.

**Significance:** Uplift Food is a startup snacking company created by an Australian, Registered Dietitian. To reach the most people, advertising through Instagram posts, stories, and reels has the most significant impact on marketing since there are over 700 million users on the app, and it is free. Instagram offers a feature where accounts can view their demographic trends. This is a helpful tool for curating posts to target our main consumers and attract new ones. Currently, the Uplift account has over 12,000 followers. This past month's reach has been 26,478 accounts, and account engagement is at 304. Uplift Food's target audience has been women (89.9%) aged 35-44 (28.2%) living in New York City (5.2%). The ultimate goal for social media marketing is to increase the number of followers, reach, and account engagement on Instagram in order to increase product sales. The goal is to communicate the nutritional benefits of the products through Instagram posts. By highlighting the science behind the use of the snacks, customers are more likely to make a purchase.

**Method/Approach:** Instagram and Canva are the main outlets for Social Media Marketing. On Canva, custom feed posts/stories are generated using the site's text and file upload features. All posts are encouraged to include nutritional benefits and scientific callouts in order to make the products more attractive to consumers. After a post and its appropriate caption is drafted, the Head of Marketing reviews and approves them so that they can be moved to the Content Planner feature on Canva. The order posts are scheduled on the Planner is: an influencer post, recipe post, and product post. Posts are scheduled at least two weeks in advance, and they are uploaded 4 times a week on Mondays, Tuesdays, Saturdays, and Sundays.

**Outcomes/Results:** All feed posts followed a "bright theme" and included approved company colors, or a branded background with the Uplift logo. The post that did the best during the time operating the Instagram account was a recipe post uploaded on 5/31/2022. The post consisted of a photographed baked oats bowl sent in by a happy customer, using the Daily uplifter product. The photo was then added to a branded logo background. The post has reached 375 accounts, resulted in 2 profile activities, has 4 comments, and 22 likes. 197 of the accounts reached are from the account's followers and the remaining 178 are non-followers.

**Evaluation/Conclusion:** Success for this project will be measured through how well the account's Instagram analytics progress. If the account's reach goes up, more accounts are seeing the page. If the account engagement goes up, that means more people are liking, commenting, and messaging in regards to the product. The ultimate measure of success will be the amount of revenue the company generates from product sales. For Uplift Food, progress is monitored continuously. If there is a decline in account engagement or product sales, then the Instagram marketing strategies need to be modified.

## Internship Abstracts

**Title:** Cold Therapy with Post Operative Patients  
**Name:** Caroline Heagen  
**Preceptors:** Kyala Pascual, MSN, RN, ONC, CJCP| Joint Care Coordinator  
**Agency:** Robert Wood Johnson University Hospital - New Brunswick, NJ

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**Purpose:** To evaluate the staff's knowledge first and then educate the staff members through interactive games, on the proper way to use cold therapy on post-operative patients.

**Significance:** Assessing the level of knowledge the hospital staff has in regards to cold therapy, and educating staff regarding the proper use of cold therapy will encourage a greater number of staff members to suggest cold therapy as an alternative in pain management for postoperative patients. "The anesthetic effect of local cooling is produced by the slowing or elimination of the transmission of pain signals" (Quilan, 2017). This project holds value because it allows for the level of knowledge regarding cold therapy to be assessed, then an interactive educational game can be designed based on that level to increase everyone's knowledge given before the interactive games had an average score of 64%. This dramatically increased to 86.4% after the population played the interactive learning games. As discussed in the American Journal of Orthopedics, cold therapy is being "Used in post op of orthopedics to decrease analgesic requirements and blood loss as well as to increase range of motion" (Piana, 2018).

**Method/Approach:** Research was conducted to gain a well-rounded background in cold therapy and the benefits it has to offer. As research progressed it began to focus on how cold therapy impacted post-operative patients and how it can be used properly. After researching cold therapy, the gears shifted to focus on the impact of interactive learning. Using the knowledge gained from the research, an event was prepared for all employees to come to the Orthopedic unit and test their knowledge and then gain additional knowledge through interactive learning games. A test was constructed of ten questions all revolving around cold therapy and the proper use of cold therapy. The same test was given before and after the interactive learning games to evaluate how much knowledge the subjects gained.

**Outcomes/Results:** Data collection showed that there was an overall increase in average test scores after the interactive educational games were played. The average pretest score was 64.09% and the average posttest score rose to 86.14%. However, not every job role showed an increase, Clinical Care Technicians showed a decrease from 86.66% to 80.00%. Though it is crucial for all employees to have background knowledge on cold therapy, it is extremely important for RNs and PT/OTs to have a more in depth education. These two roles did see increases in average posttest scores as well, RNs had an average pretest score of 67.50% and the average posttest increased to 84.16%. Meanwhile PT/OT had a n average pretest score of 70.59% and the average posttest score increased to 86.66%. Overall the outcome was a success and the educational method was shown to be effective.

**Evaluation/Conclusion:** The results of the interactive learning experience were determined by comparing the average pretest and the average posttest scores to see if there was an increase in knowledge regarding cold therapy. Then the tests were broken down into job roles to see the progress per discipline to really narrow down who benefited most and who needed the most help. By creating this interactive learning experience, the staff was able to be properly educated on how to take care of their postoperative patients while using the new cold therapy for post-operative pain management.

## Internship Abstracts

**Title:** Evaluation of Oral Hygiene and Diets in Root Canal Patients

**Name:** Rachel Houston

**Preceptors:** Dr. Anne McIlhagger

**Agency:** Shankill Dental Care, Belfast, Northern Ireland

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**Purpose:** To evaluate and implement a plan for patients that have had root canal treatment resulting from poor oral hygiene and bad diets, and to assess the awareness that those patients have of their own oral hygiene and diet choices.

**Significance:** A vital part of overall wellness is good oral hygiene. The UK's worst oral health disparities are found in Northern Ireland (BDA, 2022). The number of people in Northern Ireland who are registered with a dentist who is part of the health sector is just under two-thirds (NISRA, 2021). Understanding people's oral hygiene routine practices can help build an innovative solution to fight tooth decay and oral illnesses. A significant number of teeth each year receive root canal treatment, and almost all can be averted. The Shankill Dental Care provides public awareness of sugar-filled foods and beverages and poor lifestyle choices to patients in a hope to help prevent further decay and pending root treatments. This is achieved by regular screening of oral hygiene and treatment every six months. An informative brochure will increase the awareness of oral hygiene and bad diets to patients and help patients make better decisions regarding their teeth.

**Method/Approach:** A questionnaire was designed and given to all patients upon entry to the surgery and patients were asked to complete it before leaving. It covered aspects of the patient's lifestyle choices such as alcohol consumption and smoking, sugar intake, length of time they brush their teeth and how frequently they brush their teeth. Over an eight-week period 160 questionnaires were collected. Results were collected and stored for further reference. A leaflet was also provided to all patients to advise on brushing technique and the correct diet to prevent further decay of the teeth.

**Outcomes/Results:** The goal of the program was to educate patients on the issue of poor oral hygiene and bad diets. By targeting specifically patients who had just received root canal treatment it would have hopefully prevented further treatment. Over two-thirds showed serious signs of oral hygiene neglect. The leaflet information was taken positively by all patients, and it will be evident as to if the patient took the advice or not when they return for their next six-month check-up or if they do not require emergency treatment. Expectations are that there will be a decrease in the number of root canal treatments and decay related problems due to the greater awareness patients now have of how to keep their teeth clean.

**Evaluation/Conclusion:** The evaluation will take place at the patients next six months' check-up. The success will be measured in the charts of the patient's teeth when the dentist is rechecking them. If it is evident that there is less decay and no need for treatments such as fillings and root canals, then the program was a success. However, if the teeth have not improved or have got worse then the patient will have to be encouraged again to follow the advice given. The questionnaire will be given again to the same patients and the results will be calculated to evaluate if there is improvement. Ongoing monitoring of oral hygiene and poor diet awareness will be undertaken to ensure continued improvement in the future.

## Internship Abstracts

**Title:** Medication Disposal Implementation to Promote Addiction Prevention

**Name:** Ava Jalshgari

**Preceptors:** Dr. Hisham S. Mabrouk, Pharmacist

**Agency:** Bedminster Specialty Pharmacy - Bedminster, NJ

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**Purpose:** To promote addiction prevention by implementing a medication disposal at the pharmacy in the town of Bedminster.

**Significance:** According to the New Jersey Substance Abuse Monitoring System, there were approximately 98,479 hospital admissions due to prescription drugs where patients were seeking substance abuse treatment during the year of 2019 (Lakeview Health, 2021). With increased access to drugs due to doctors over-prescribing medications that are highly addictive, many fall into the rabbit hole of addiction. The Bedminster Specialty Pharmacy is providing free medication disposals with proper accessibility to prevent addiction rates from rising. New Jersey's greatest public health threat is the availability of legal prescription painkillers, such as hydrocodone or oxycodone. Specifically, New Jersey residents are receiving addictive prescription medications, which contribute to increasing morbidity rates, where doctors on average write 44 prescriptions for every 100 residents (Garden Heights, 2020). The rise in prescription medications and access to these highly addictive drugs have contributed to the increased cases of drug addiction making preventative public health measures, such as medications disposals provided by The Bedminster Specialty Pharmacy, to be essential.

**Method/Approach:** A systematic review by Dr. Mabrouk and the team was completed in order to determine which medications were being disposed of by patients within the past seven weeks. Data for 17 medications was exported to a spreadsheet where five out of the 17 medications was an addictive medication. An analytical protocol led to the examination of pharmaceutical reports, clinical notes, and addiction preventative measures to evaluate the implementation of the medication disposal. The evaluation addressed two different types of results as to how to reduce the risk of increasing addiction prevalence rates: 1) Patients dispose of unused prescription medications and 2) Patients follow the prescription as advised by pharmacists.

**Outcomes/Results:** Of the sample size cohort (n=17), five medications (29%) were addictive medications whereas the other 12 medications (71%) were not. It is expected that there will ultimately be an increase in addictive medication in order to reduce the risk of becoming addicted to prescription medications with the implementation of the medication disposal. The medication disposal is used to create awareness on the increasing prevalence rates of addiction in New Jersey. Without the proper system to dispose of hazardous medications that are unused, it is undermined in society that addiction is capable of deteriorating public health. Through these contributions, addiction is addressed as a disease in which preventive measures, like the medication disposal, must be taken.

**Evaluation/Conclusion:** More than a quarter (n=5, 29%) of the medications from the sample size cohort (n=17) were addictive medications. Focus groups were used to serve as an effective strategy to enhance patient understanding of the medication disposal. Ongoing monitoring of the medication disposal will occur at the pharmacy to assure and evaluate the successful establishment of addiction preventative measures to prevent addiction related deaths in New Jersey.

## Internship Abstracts

**Title:** Project AIRA- Phase 2

**Name:** Ted Kail

**Preceptors:** Jill Anderson, Allison Mosier

**Agency:** Patient Experience Department at Robert Wood Johnson Hospital

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**Purpose:** Plan and oversee a video marketing and educational awareness campaign for Aira- a software that aids in helping the visually impaired navigate the hospital grounds.

**Significance:** In the United States there are over 12 million people 40 years and over who are visually impaired including one million people who are legally blind. There are many patients who frequent the RWJ Acute Care Hospital System who fall into this category and navigating the hospital while visually impaired can be difficult. RWJ Hospital is committed to combating this issue with the implementation of the software AIRA. AIRA is a mobile app that allows the user to access a live human guide who will help them navigate the entire hospital setting. This service is provided free of charge to any who need to access it while at any RWJ facility. To make patients and staff more aware of this innovative app, a marketing and awareness campaign was developed. Using professional video and a marketing campaign, RWJ hopes to increase the usage of the application while educating the RWJ community on the software.

**Method/Approach:** MindSpring, a media company based out of Michigan was contracted to create two instructional videos for AIRA software, one for staff and the other for end users. Research on the app was conducted to create a storyboard for the videos. Locations for the video shoot were scouted and decided upon and plans for using live actors versus animated videos were thoroughly discussed and budgets were created for both scenarios.

**Outcomes/ results:** A PowerPoint presentation was created for MindSpring Media to explain and fully detail the purpose and functionality of Aira. The details for each video were laid out in a separate meeting with MindSpring. Initial budgets were reported on costs for different scenarios and the RWJ Somerset location was decided upon for a filming location. The team decided that all 12 acute care centers would have full access to all material.

**Evaluation/ Conclusion:** Aira was implemented in January of 2022, but hospital usage was only at 5 percent. Through these videos, RWJBH along with Mind Spring hopes to promote, educate and make staff, patients and the community aware of Aira and all its benefits and capabilities. At this present time, there is no specific timeline on when the videos will be complete, as some of the finer details are still to be worked out by the end summer 2022.

## Internship Abstracts

**Title:** Safety Culture Survey Assessment

**Name:** Monica Kim

**Preceptors:** Mindy Rodden PhD, RN, CPNP-AC, Chief Nursing Officer

**Agency:** Rutgers University, Robert Wood Johnson Medical School

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**Purpose:** To analyze and compare two years' worth of safety culture surveys and create Excel graphs to highlight overall areas in need of improvement.

**Significance:** Each year, millions of patients are negatively affected by poor-quality healthcare. This includes medication errors, falls, infections, surgery complications, and more. Therefore, to improve healthcare, The Agency for Healthcare Research and Quality (AHRQ) provides some of the necessary tools and data to create a high-quality environment for patients and healthcare workers. The AHRQ and the Joint Commission found that incorporating Just Culture, a concept that emphasizes shared employee accountability, helps organizations mitigate risks. Therefore, the evidence from these surveys demonstrate a component of the current state of the organization's safety culture. This data helps to identify areas in need of improvement.

**Method/Approach:** The survey asked the employees several questions regarding the ambulatory care practices' performance. Their answers were each ranked from a Likert scale of 1-6 corresponding to the following descriptive, "never", "rarely", "sometimes", "most of the time", "always", and "do not know/does not apply". The same survey was also conducted the next year, in order to demonstrate the yearly progress, as well as analyze their current state. In order to organize and differentiate the poll more efficiently, the questions were split into two groups: questions pertaining to employee safety and questions pertaining to patient safety. The data from both surveys were transferred to spreadsheets, where several graphs were created. These graphs provided a visual summary of the information to enhance the understanding of the data.

**Outcomes/Results:** Many of the data points stayed consistent year over year; however, it is important to highlight the declining areas. The data demonstrates that there was a (5%) increase of staff believing that providers are never open to their ideas and another (5%) increase for never encouraging staff to express their alternate viewpoints. There was also an (3%) increase for never being able to talk openly. Moreover, there were also declines in the evaluation of the office performance. There was an increase (6%) of employees that stated that the office never reminds patients when they need to schedule an appointment for preventative or routine care. Additional findings demonstrated approximately (8%) more employees think that their office never follows up to receive reports.

**Evaluation/Conclusion:** Overall, it is evident that more employees are dissatisfied with the ambulatory practices' performance. Compared to the previous year, employees think that the organization is doing worse in regard to communicating with each other and being able to trust their co-workers. They also believe that the office could improve handling their patient's documents and treatments. Setting up weekly meetings, implementing safety concepts such as Just Culture and zero harm, and creating expectations and goals can greatly improve the safety culture. The same survey should be continued to be distributed for ongoing analysis and improvement efforts.

## Internship Abstracts

**Title:** Designing an Accessible and Current Printed Physician Directory at the Region Level

**Name:** Kate Kornitas

**Preceptors:** Lynette Davis, MPA - Director, Marketing, Central Region

**Agency:** Hackensack Meridian *Health*

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**Purpose:** Create a printed physician referral directory that can be easily updated with the most accurate provider information in an effort to increase in-network patient referrals.

**Significance:** Health care systems can prevent referring patients to providers outside of the health network (termed “leakage”) by referring patients to specialized providers within the system. Also, with annual physician turnover rates of 6-7 percent in the United States, there is a need for current provider information including addresses, phone numbers and accepted insurance plans. With more than 1,000 employed physicians and surgeons, the need to provide an accurate, up-to-date physician directory to support referrals to surgeons and other specialists within the network is a key business priority at Hackensack Meridian *Health* (HMH). Many of the physicians have voiced their preference for a printed directory for use in sharing information on in-network providers. Frequent changes in provider information, however, make a print directory out-of-date as soon as it comes off the presses. A digital directory that can be updated on-demand would be a more efficient solution, but is a less favorable option for these physicians.

**Method/Approach:** Meetings between the web, marketing, medical group, and physician liaison teams revealed the necessity of a printed directory for physicians and the limitations of the current *Find a Doctor* feature on the HMH website. Since there is no way to auto-populate a template for the directory from the Find a Doctor pages, a new system would need to be created and managed internally. The Find a Doctor profiles are also updated nightly, emphasizing how quickly a printed directory becomes outdated. The marketing team first experimented with dynamic QR codes that allow search parameters on Find a Doctor to be fully customized to fit the physician’s referral needs and to track user activity for optimization. The physician liaison team surveyed this solution for physicians. Physician response was that this method would be great for patient use, allowing office staff to easily connect them with a specialized list of providers based on their referral needs. However, physicians maintained their preference for a printed directory.

**Outcomes/Results:** Rather than printing and distributing a directory on a recurring basis, this proposed printed physician directory will be hosted on an existing platform. This will reduce cost while optimizing the functionality of services currently under-utilized. Internally, the directory database will be hosted on the HMH website. This database will allow individuals to print a complete PDF directory at any time or customize the printed directory based on search parameters like location and specialty. The printed directory will display the date and time that the PDF was generated so that providers are aware of how current this information is. QR codes will be created with custom Find a Doctor search parameters depending on the location and types of referrals each physician needs. The physician liaison, marketing, and medical group teams will be responsible for taking requests from providers and submitting them to the web team to implement.

**Evaluation/Conclusion:** Evaluation of the success of this project will be measured through internal referral rates, patient leakage rates, web engagement, and a feedback survey distributed to physicians.

## Internship Abstracts

**Title:** Affordable Housing Availability for Low-and Moderate Income Adults 65 and Older in New Jersey

**Name:** Deborah Lampley

**Preceptors:** Dr. Elizabeth Cooner, Executive Director and Professor Breanna Brock, TA

**Agency:** New Jersey State Policy Lab

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**Purpose:** To research affordable housing options, barriers, and innovative programs for older adults in New Jersey

**Significance:** People are living longer, and as they age, affordable housing becomes essential. New Jersey has the third highest housing costs in the United States. Municipalities have struggled providing enough housing for older adults. Governor Murphy proposed a new Affordable Housing Production Fund for fiscal Year 2023. This budget proposal invests \$305 million in federal American Rescue Plan funding for residents with low to moderate incomes. This project identified the current level of affordable housing (available and under construction), future plans, and what fraction of housing needs will be met.

**Method/Approach:** Google scholar was used to identify housing policy-related articles. Abstracts were written on each significant article. Additional keywords were identified including aging in place, community-based housing, and noninstitutionalized housing for older adults. Statistics about the Governor's Affordable Housing Production Fund were collected from local news articles and government websites.

**Outcomes/Results:** The types of housing options are nursing homes, assisted living residences, congregate housing affordable/subsidized housing, accessory apartments, adult family care, adult retirement communities, boarding homes, comprehensive personal care homes, congregate personal care homes, congregate apartment housing, continuing care retirement communities, home sharing, and subsidized apartments for the elderly. Fifteen articles mentioned unaffordable, availability, policies, longevity, housing equity, housing barriers and aging as a major issue for older adult housing. Eight articles mentioned policies, income, and access to non-medical health services as significant barriers for this population. New Jersey counties have a total of 205,846 affordable housing units; 75,497 units are for older adults. Another 3,300 units are under construction. Future plans will be expanding across 43 developments statewide. All identified municipal housing settlements for housing projects, finishing by the end of the governor's second term. A total of \$305 million in federal funding and AHPF will also fund \$30 million.

**Evaluation/Conclusion:** Construction of 50,000 new affordable housing units is still needed from municipalities across the state. Leveraging other state programs with AHFP programs could provide quality, safe, and affordable housing for low-to moderate income residents. Economic opportunities and investments from all stakeholders for New Jerseyans. Distribution and developments of the ANCHOR program, will provide \$900 million in property tax relief to 1.8 million homeowners and renters statewide.

## Internship Abstracts

**Title:** Analysis Of Radiculopathy Cases

**Name:** Derrick Luo

**Preceptors:** Jasmine Lam - Senior Patient Care Coordinator Supervisor  
Andrew Chan - Senior Physician Assistant

**Agency:** Hudson Medical + Wellness

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**Purpose:** To analyze ICD-10 codes on radiculopathy cases at Hudson Medical in the month of July 2022 and summarize the most common areas of pain on the spinal column.

**Significance:** Each year, over 65 million Americans report experiencing some form of back pain (Georgetown, 2019). Across the world, the years lived with disability (YLD) of people with low back pain increased by almost 53% from 1990 to 2017 (Wu et al, 2020). Spinal radiculopathy is specifically a diagnosis from clinicians of pain caused by injury or damage to the nerve roots of the spinal cord. Hudson Medical + Wellness works to combat spinal pain by providing a variety of treatments and services including medial branch blocks, radiofrequency ablations, epidural steroid injections, platelet rich plasma therapy, stem cell therapy, and other forms of conservative treatments like physical therapy, chiropractic treatment, acupuncture, and massage therapy. This project will bring awareness to this growing and debilitating health issue and inform readers on the most common areas that patients experience spinal pain.

**Method/Approach:** ICD-10 coding data was taken and extracted from the month of July to track patient's diagnosis when presenting with spinal pain. This data was gathered and interpreted, with the permission of the CEO, from the AthenaHealth EMR system. These medical codes were inputted to every patient for documentation and insurance purposes. Further analysis of intake notes, procedural lists, and patient-reported symptoms solidified these diagnoses and this data was then exported to a spreadsheet for evaluation.

**Outcomes/Results:** Of the sample size data (n = 999) of radiculopathy cases collected in the month of July 2022, 591 (59%) patients were diagnosed with lumbar radiculopathy, 370 (37%) patients were diagnosed with cervical radiculopathy, and 38 (4%) patients were diagnosed with thoracic radiculopathy.

**Evaluation/Conclusion:** The most common type of radiculopathy diagnosed in the month of July 2022 at Hudson Medical + Wellness was lumbar radiculopathy, also known as low back pain caused by nerve damage, inflammation, or irritation. This aligns with national data stating that low back pain is the most common type of spinal pain experienced in the United States. Cervical radiculopathy, also known as neck pain, was the second most common type of radiculopathy diagnosed. Finally, thoracic radiculopathy, also known as mid-back pain, was by far the least common type of radiculopathy diagnosed. This data is important for providers to analyze trends which can then be used to better formulate treatment options for patients, as certain aforementioned procedures only target and manage specific types of diagnoses. This data is also important for patients to get an understanding of where they are most vulnerable to pain on their spinal cord, which can allow them to take personal preventative measures to mitigate or reduce their susceptibility of experiencing some form of back pain in their lives.

## Internship Abstracts

**Title:** Perinatal Health Research for Pregnant and Postpartum Refugee Women

**Name:** Milca Macenat

**Preceptors:** Direct Supervisor: Dr. Norma Bowe  
Project Supervisor: Guerline Pierre

**Agency:** Global Grace Mobil Health Clinic

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**Purpose:** To study and analyze women of reproductive age, pregnant, or receiving postpartum care and find the importance of receiving COVID-19 vaccinations from refugees in South Jersey.

**Significance:** About 80 percent of all refugees reporting to be women and children experience months/years in temporary settings and limited access to care (Cohen, 1998). A study shows that 25 percent of newly resettled refugee women were pregnant, had a reproductive health problems, and missed routine preventative care (Katcher et al., 2021). In New Jersey, lack of knowledge and language barriers are some of the reasons that limit proper care for pregnant refugee women. The Interfaith Rise program (including the Global Grace mobile clinic) provides refugees, and asylees worldwide access to social, mental health, and healthcare services in Central New Jersey. Screening for the childbearing age women refugee population receiving the vaccinations should include information about pregnancy, postpartum care, and overall reproductive health. This project will provide fact sheets based on helpful research found and translated into the language needed.

**Method/Approach:** Data from a list of clients from the Interfaith Rise program were gathered to analyze our focus group. Women of childbearing age, pregnant, and recently given birth were the target population from the list. Refugee clients at the Interfaith Rise program in South Jersey receive various case management services to connect them to benefits and navigate the healthcare system. An Excel sheet application organized information and numbers from our target population.

**Outcomes/Results:** From the data collected, 106 clients were in the InterFaith rise program in the South Jersey area (n=106); 51 were female clients (48%); 36 were women of childbearing age (70.6%) from the sample or (34%) from the population group; 14 were infants (male and female) (13%) from the population group. The age of female clients the preceptor manages ranged from one month to 52 years old.

**Evaluation/Conclusion:** Of the sample size (n=51) of female clients, 70.6% are of childbearing age, and in the sample size (n=36) of the childbearing age group, 39% of infants are noted, showing those who are within the postpartum care timeframe. Fact sheets were created using the CANVA app to provide information on women's health. It focuses on reproductive years, pregnancy, postpartum care, and receiving COVID-19 vaccinations to strengthen their navigation.

## Internship Abstracts

**Title:** Increasing Hand Hygiene Compliance Through Direct Observations

**Name:** Karina Martinez-Ferreira

**Preceptors:** Diana Torres, Infection Prevention Manager

**Agency:** Englewood Health

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**Purpose:** To collect data on hand hygiene on all units in an effort to increase compliance and hand hygiene observation consistency across clinical units.

**Significance:** According to data from the CDC, about 1 in 31 U.S. patients contracts at least one infection in association to their hospital care each day. Many of these hospital-acquired infections (HAIs) are caused by antibiotic-resistant bacteria which can ultimately lead to sepsis or, in severe cases, death. One of the most effective and simple ways these infections can be prevented is by adhering to hand hygiene recommendations. Despite the importance of hand hygiene in a healthcare setting, the World Health Organization (WHO) notes that levels of hand hygiene compliance in high-income countries rarely exceed 70%. Englewood Health has taken steps to combat low compliance by placing hand sanitizers outside of patient rooms as well as inside the patient's room. Hand hygiene champions are tasked with making direct observations in their designated unit to increase compliance and awareness.

**Method/Approach:** Prior to making personal direct observations, research regarding the different points of hand hygiene in healthcare and ways to improve hand hygiene were researched through online sources and textbooks. Beginning March 2022, hand hygiene champions were given iPhones and tablets and access to a QR code to bring them to an audit tool where they can record each observation. Each unit was assigned around three hand hygiene champions who were to record observations on their designated unit device during their shifts (Day, Evenings, or Nights). Data from these observations were organized in an Excel spreadsheet to track the progress of unit compliance and number of observations done by hand hygiene champions.

**Outcomes/Results:** Data from March to June showed the Emergency and Labor & Delivery departments held the lowest observation rates, with a total of 1 observation in the Emergency Department and a total of 9 observations in the Labor & Delivery Department. The most apparent increase was seen in the Emergency Department where observations increased from 1 by hand hygiene champions to over 100, being the department with the most observations in the month of July. After creating spreadsheets and reports for the managers of each unit, there were increases in both observation consistency and compliance of these departments. Overall, from June to July, compliance in all units increased from around 65 percent to greater than 80 percent.

**Evaluation/Conclusion:** The hand hygiene project in Englewood Health remains to be an ongoing project that needs to be monitored. It is important for hand hygiene to continuously be monitored so compliance numbers can be increased and further maintained, to uphold a safe environment where there is a decreased risk of infection. There have not been any specific evaluation tools offered as this specific project remains ongoing.

## Internship Abstracts

**Title:** Get Screened Philadelphia Campaign

**Name:** Obiamaka Melie

**Preceptors:** Direct Supervisor: Michele A Capossela, Senior Manager Cancer Support Strategic Partnerships and Lindsay Nicholson, Cancer Support Strategic Partnerships Manager  
Project Supervisors: Taryn Jones, Regional Integrated Marketing Director and Kate Mastalski, Senior Manager Cancer Support Strategic Partnerships

**Agency:** American Cancer Society

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**Purpose:** To conduct outreach to targeted social media influencers for Get Screened Philly campaign to increase public awareness around screening and develop a breakout tool for a day of Summit.

**Significance:** “The Black community has the highest cancer death rate and black women are 41% more likely than white women to die from breast cancer” (Atlanta: American Cancer Society, 2022). “It is also estimated 5 million Black and Hispanic Americans have lost their healthcare due to the pandemic and screening rates are typically 40-50% lower for the uninsured” (Avalere Health LLC, September 2020 and American Cancer Society Cancer Detection and Early Prevention 2019-2020). Philadelphia’s diverse racial and ethnic population make it a critical area of focus for *Get Screened Philadelphia*. “Cancer remains the second leading cause of death in Philadelphia” and, due to the COVID-19 pandemic, many have put off their recommended screenings (Pennsylvania Department of Health, 2019). This will lead to many cancers going undiagnosed, untreated and when found will be at an advanced stage causing preventable cancer deaths. This comprehensive public awareness campaign followed by a summit, is a targeted approach to mobilize the public and have key stakeholders identify strategies and to take action to increase screening rates.

**Method/Approach:** An electronic search on social platforms was formulated. Healthcare professionals, cancer survivors and thrivers, community leaders, or those who have been closely affected by cancer (African American / Black audience, Hispanic bi-lingual audience, Asian American audience, LGBTQ+, and Rural) were the criteria applied to gather influencers within the target audience. Identified influencers were documented on a spreadsheet and assessed for further contact information. An outreach message was drafted and sent to influencers via email or direct message. A breakout tool was created to provide structured dialogue for those in attendance at the Summit. The breakout tool was developed to include questions and additional guides for dialogue.

**Outcomes/Results:** A total of 80 influencers were identified and contacted. A final breakout tool was generated to advance the day of Summit agenda. Gaps and limitations still exist in documentation due to the campaign occurring in September. Data will be collected after the event for future areas of research.

**Evaluation/Conclusion:** Anticipated audience is 50+. Effective strategies formed by healthcare systems, health departments, and local organizations attendees will serve as methods to increase screening rates. Post event surveys will be analyzed to measure strategy implementation and future progress to improve health equity.

## Internship Abstracts

**Title:** Ryan White Wellness Support Group Satisfaction Assessment

**Name:** Derek Merino

**Preceptors:** Direct Supervisor: Cindy Leon-Rosado, Program Assistant

**Agency:** Rutgers University - RWJMS - Eric B. Chandler Health Center

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**Purpose:** To analyze patient feedback on satisfaction with the Ryan White wellness support group and propose program changes to improve the patient experience.

**Significance:** Hispanic/Latinos accounted for almost 30% of newly diagnosed HIV infection cases in the United States in 2020 (Center for Disease Control and Prevention, 2020). Hispanic/Latinos are faced with challenges (i.e., language barriers, low education levels, and poverty) that negatively impact knowledge of HIV and awareness of HIV prevention services. In a list of New Jersey cities with 100 or more cumulative HIV/AIDS cases, the city of New Brunswick had the highest count for Middlesex County with more than 1100 cases and ranked 11<sup>th</sup> out of the 99 cities listed (New Jersey Department of Health: Division of HIV, STD, and TB Services, 2020). This evidence indicates that Hispanic/Latinos of New Brunswick are the most at-risk population for HIV infection. The Ryan White wellness support group will address this issue by promoting involvement in HIV preventative measures.

**Method/Approach:** A 18-question comprehensive Spanish survey was developed to capture patient demographics and satisfaction with support group sessions. Survey responses varied from a Five-point Likert rating scale to open-ended. The survey was administered via telephone interviews in June 2022 through three rounds of calls to reach as many patients as possible. Data was tracked using Microsoft Excel and analyzed using Pivot Tables.

**Outcomes/Results:** Participating Ryan White patients from previous wellness support groups (n = 32) were contacted, and 14 patients (43%) were reached. Nine patients (64%) identified as male, four patients (29%) identified as female, and one patient (7%) identified as transgender. Twelve patients (86%) were able to fully complete the telephone interview. One patient (8%) reported feeling extremely comfortable participating in the support group, ten patients (83%) reported feeling very comfortable participating, and one patient (8%) reported feeling somewhat comfortable participating. Nine patients (75%) were very satisfied with the topics discussed during the group sessions while three patients (25%) were somewhat satisfied with the topics discussed. Six patients (50%) are extremely likely to recommend the support group to others, five patients (42%) are very likely to recommend the support group to others, and one patient (8%) is somewhat likely to recommend the support group to others.

**Evaluation/Conclusion:** More than half (n = 10, 83%) of survey participants from the completed telephone interviews (n = 12), were satisfied with the wellness support group at Eric B. Chandler Health Center. Survey results will be presented to the Infectious Disease Quality Committee of Eric B. Chandler Health Center in September 2022. Survey participants' suggestions on how to improve this service include: changing the time and day for the online Zoom meetings, having in-person meetings, advertising the support group to gain more participants, and increasing telephone notifications to remind participants of group sessions. All 14 patients that were reached were interested in participating in the renewed wellness support group in the Summer of 2022.

## Internship Abstracts

**Title:** Implementation of iCAM Inventory Management System at PHEL

**Name:** Christopher Ngo

**Preceptors:** Satyam Patel, Materials Management Unit Supervisor

**Agency:** NJ Department of Health Public Health and Environmental Laboratories

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**Purpose:** To implement a robust inventory management system to develop preparedness for future disease outbreaks.

**Significance:** As seen throughout the COVID-19 Pandemic, supply chains becoming backed up is a major problem that occurs, and not knowing where items are placed (Snowdon et al., 2021). The implementation of an inventory management system can help alleviate the problems that come from that. Being able to see accurate information on the inventory allows labs to plan ahead of time if they may need to place an order for materials sooner than usual, and it allows for them to always make sure they have stock on the materials they need. The implementation of an inventory management system also creates what is called “inventory visibility,” which means knowing the exact location of items, knowing the quantity, and knowing the flow of where the item is going when it gets taken out (Barlow, 2020). Many hospitals dealt with the problem of not knowing where items they needed were, but they knew they had some in their hospital, which in a pandemic can have drastic results. This system will prevent the worry of where a crucial item will be and instead will allow workers to worry about other things.

**Method/Approach:** A literature review was first conducted to see how other organizations in healthcare managed supply chain issues and what was done to deal with inventory management. After the literature review and thinking of methods, the roll-out of iCAM was conducted, with the first test subjects being the Radioanalytics Lab. Many things had to be discussed such as what items were to be inventoried, and what approach would be taken. It was decided that cabinets and drawers would be labeled as an easy identification for location on iCAM, and item information would be typed out on Excel sheets prior to being put into iCAM. The Excel sheet contained the following information for the items being inventoried: Type of Item (reagent, tube, etc.), Name of the Item, Location, Lot #, Expiration Date, Measurement of Item, Quantity of Item, and Manufacturer. The process required physically going through the locations, looking at the items, and marking the info, with assistance from those working in the lab.

**Outcomes/Results:** Currently, the whole first floor of the Public Health and Environmental Laboratories (PHEL) has been completed and put into iCAM, leaving the 2nd, 3rd, and 4th floors left. Before moving onto the 2nd floor, the Materials Management Unit would like for the whole first floor to be proficient with iCAM, so training has been conducted by the unit in the respective labs that have been completed. Completing the first floor has also allowed for editing the Standard Operating Procedures (SOPs) to make them more understandable and seeing what information is needed on them.

**Evaluation/Conclusion:** The first floor of PHEL has been onboarded and trained with the SOPs completed. Observation of the first-floor labs and their comfort with the system will determine when the project can proceed forward. Moving forward, the plan is to utilize iCAM with data that has been analyzed to identify specific counties with vulnerable populations to set up a distribution hub. By using predictive models that are developed using Python, the purpose is to predict the number of materials to order, to then send out ahead of time to counties to limit and suppress outbreaks.

## Internship Abstracts

**Title:** Get New Brunswick Youth Moving  
**Name:** Amarachi Onyeukwu  
**Preceptors:** Direct Supervisor: Manuel Castaneda, Community Health Director  
**Agency:** New Brunswick Tomorrow - New Brunswick, NJ

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**Purpose:** To bring awareness to the importance of physical activity for New Brunswick youth and provide educational resources on staying active and incorporating a healthy diet via social media.

**Significance:** According to the U.S Census, 36.1% of New Brunswick residents live in poverty. Due to the number of residents living in poverty, low-income residents don't have a wide range of healthy choices and lack awareness about healthy living. Unfortunately, the children of New Brunswick are experiencing the effects of a lack of physical activity. According to The New Jersey Childhood Obesity Study, 47.9% of obese or overweight children are ages 3-5 years old; 53% of parents claim that the cost of fruits and vegetables prevent them from buying. With the majority of New Brunswick's residents being Hispanic, creating a realistic social media campaign that is culturally competent and culturally aware is essential. New Brunswick has many parks and recreational centers that make physical activity easier for low-income residents. Live Well-Vivir Bien New Brunswick provides free resources and information to the low-income residents in New Brunswick. Within this project, the focus of this social media campaign is to encourage physical activity for New Brunswick youth and promote the use of parks and recreational centers by providing resourceful information.

**Method/Approach:** Using the Live Well-Vivir Bien New Brunswick's Facebook and Instagram pages to send out social media posts, the information and resources will reach Live Well-Vivir Bien New Brunswick's followers. Each of the posts is designed ahead of time on the website Canva. All posts are scheduled to post precisely at noon on Monday, Wednesday, and Friday, on Facebook and Instagram, with the website later. After each post, the impact is measured using Facebook insight. The first two posts contain general educational information about the problem of childhood obesity in New Brunswick and the medical issues that can arise from childhood obesity. The rest of the posts are specific information on solutions to dealing with childhood obesity. Overall this social media campaign differs from preexisting Live Well-Vivir Bien content because it focuses only on addressing childhood obesity in New Brunswick.

**Outcomes/Results:** The data collected is from July 2022, from Facebook and Instagram. The overall reach for all the social media posts was 349 people, and the total engagement for all posts was 15. On average, the total reach for each post ranges from 20 to 80 people. The average for each post on Instagram ranged from 20 to 43 people; the average on Facebook ranged from 30 to 53 people. The engagement for both Facebook and Instagram was low, but Instagram was higher, with a total of 13, and Facebook had a total of 3. The first two posts had the lowest reach and engagement for both Instagram and Facebook. The total reach for the first post was 24 people and the second post had a reach of 25 people. Both posts had the lowest engagement with a total of 0 reactions, comments, and shares.

**Evaluation/Conclusion:** Based on Live Well New Brunswick's social media goals, this project met their reach goals for Facebook and Instagram. A limitation of this project was that it didn't address environmental limitations like COVID-19 and neighborhood safety, which can limit youth activity. However, comparing the analytics of this project and Live Well's other social media campaign, this project was successful and could be a series on the Live Well New Brunswick platform.

## Internship Abstracts

**Title:** Creating a Resource Section about Food Insecurity For The TurnUp App (Remote)

**Name:** Nicole Palacios

**Preceptors:** Zev Shaprio, Executive Director  
Paulina Cano, Training Program Director

**Agency:** Turn Up Activism Inc. - Cambridge, MA

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**Purpose:** To boost awareness of the TurnUp app so users and interns can learn more about food insecure communities and are more prepared to help in their local areas.

**Significance:** This project is important because food insecurity affects many families across the U.S. Food justice addresses the systemic and structural barriers that food insecure individuals face, such as environment, socioeconomic, and diet-related diseases. The USDA (2022) reports that in 2019 and 2020, 10.5% of families were food insecure, meaning that 38.3 million people in the U.S lived in food insecure households. In these low-income communities there is a great availability of cheap nutrient-dense foods that these individuals will have access to, as opposed to nutritious foods at an accessible price. Furthermore, all of these issues disproportionately impact people of color because historically, the U.S has relied on inequitable and discriminatory policies to create its food system (GRACE Communications Foundation, 2021). This data indicates a disparity in knowledge and accessibility of resources for nutritious meals for food insecure individuals in low income communities.

**Method/Approach:** A resource section was created about food insecurity and food justice for the TurnUp app, owned by the nonprofit organization TurnUp Activism Inc. It includes free, accessible, and reputable sources to help interns and app users learn more about these topics. After the sources and research were collected, the next step was to develop an internal speaker series presentation about food insecurity and food justice. The completed presentation was rehearsed with the internship preceptor and assistant to identify any weak points. The presentation focuses on explaining to interns how to make an impact at a local level. Finally, a date was set to present it to all the interns and staff at TurnUp and have a short Q and A portion.

**Outcomes/Results:** This presentation was created to help interns and staff learn more about food insecurity, food justice, and how to make an impact at a local level. The presentation defines essential vocabulary terms, significant sources of information, statistics, and other data that highlight what areas of the U.S food system need improvement and what demographics need to be catered to. This project contributes to the bigger picture because many people are not aware of how many injustices there are in the current U.S food system.

**Evaluation/Conclusion:** Measuring the success of this project will include TurnUp interns filling out a satisfaction survey to provide feedback and help indicate how well the information was received after the presentation. The resource section on the TurnUp app will be updated if there are any other valuable sources to add and share with users and interns alike.

## Internship Abstracts

**Title:** Project Noise Reduction to Improve Patient Experience  
**Name:** Jeetkumar Patel  
**Preceptors:** Alexandra Rodriguez  
**Agency:** Patient Experience Department at RWJ University Somerset

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**Purpose:** To implement white noise machines during quiet time or quiet hours within the 1-East unit of RWJ Somerset hospital to improve patient satisfaction and HCAHPS score.

**Significance:** Noise level in hospitals regularly exceeds the standard level of noise that is recommended, which lessens the ability of patients to rest, heal, and recover. Noise pollution has had an impact on the Robert Wood Johnson University Hospital Somerset's overall performance of the care and services provided to its patients. Data has shown that RWJUH Somerset patients have complained about loud conversations between care team members and/or staff outside of patients' rooms, equipment noise (i.e. beeping machines, bed alarms, etc.), and noise disturbances from a roommate, which interfered with sleep, as well as, negatively impacted their health and recovery. The Patient Experience Department is working on a project to install white noise machines in patients' rooms to reduce noise levels and improve the hospital's overall patient satisfaction.

**Method/Approach:** A controlled trial ran between July 1, 2022, and August 4, 2022, involving the Patient Experience Department alongside nursing staff. Based on a survey of the literature gathered from the Rutgers library and RWJ University Hospital Somerset library, the controlled trial and experimental variable were chosen. White noise devices were installed in the 1-East unit at RWJ University Hospital Somerset on July 1, 2022, due to the unit receiving the lowest Press Ganey patient satisfaction score when compared to the other hospital inpatient units. Each patient who was admitted to the hospital received a white noise machine for use during their stay, and the assigned nurse went through the device's operating instructions with each patient. Following the implementation of the white noise machine, a questionnaire was conducted on behalf of the Patient Experience Department to gather patient feedback.

**Outcomes/Results:** The sample size of the trial was (n= 58) patients. Pre-trial results for Quarter 2 data from Press Ganey were as follow, Patients in East-1 unit who said the hospital was quiet "always" were 16 (25%); those who said it was quiet "usually" were 28 (43%); those who said it was quite "often" 12 (18%), and those who said it was quiet "never" were 9 (14%). Mid-post trial results of Quarter 3 data from Press Ganey were as followed, patients in the 1-East unit who said the hospital was quiet "always" were 32 (55%); those who said it was quiet "usually" were 15 (26%); those who said it was quite "often" 8 (14%), and those who said it was quiet "never" were 3 (5%).

**Evaluation and/or Conclusion:** Overall, the use of white noise devices to reduce noise in unit East-1 was an effective strategy for improving patient satisfaction. Most of the patients responding to the hospital being "Usually" (43%) quiet rather than "Always" (25%) quiet, showed that there was an issue attributed to the 'Quietness of the Hospital' that needed to be addressed. After implementing white noise machines, post-trial results show that almost two-thirds of the patients found the quietness of the hospital as "Always" (55%) quiet, and fewer patients indicated the quietness of the hospital as "Usually" quiet. As a result of this project, white noise machines show a promising strategy to address hospital noise to provide a better patient experience in hospitals.

## Internship Abstracts

**Title:** Nutritional Wellness Assessment for Children

**Name:** Mansi Patel

**Preceptors:** Gina Stavic - Executive Director

**Agency:** Raritan Valley YMCA

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**Purpose:** To increase awareness and overall nutritional wellness in children grades K-5 at the campsite and incorporate interactive lesson plans to engage children's attention.

**Significance:** Children are suffering from severe malnutrition globally each year, with around 14.7 million children and adolescents being affected by obesity from ages 2-19 (CDC, 2020). Those suffering from obesity have a higher risk of developing chronic diseases such as type 2 diabetes, cardiovascular diseases, hypertension, strokes, etc. Due to COVID-19, most daycare facilities were shut down, and children had to isolate themselves at home with little to no knowledge about nutritional wellness, causing an increase in adolescents' BMI (CDC, 2021). Adolescents that suffer from obesity catch themselves receiving lower rates of self-esteem and sometimes cause depression, which makes it harder to connect with children their age. Instructing lesson plans each week during summer camp will keep children's retention intact about the importance of nutrition in their life and encourage children to eat more nutrient-rich food.

**Method/Approach:** A series of 6 presentations and interactive activities at the campsite focusing on nutritional foods to encourage children of healthy eating. Pre and post-survey questions were asked in relation to children's nutritional knowledge of the healthy eating pyramid i.e., fruits, carbohydrates, vegetables, and protein at the beginning of the study and the end. Children were also taught and tested to measure portions of food groups, food labels, junk foods, and water/sugary drinks to the best of their knowledge. Along with the teaching material, children could learn through watching videos, and playing interactive games online and in-person. A list of five pre and post questions was asked at the beginning and end of each lesson as children were put to the test of their knowledge of each specific category.

**Outcomes/Results:** The final results were collected after the 6 weeks with a sample size of 181 children. In each lesson plan, pre and post questionnaires were asked to each child on weekly objectives. Out of all the questions, those who scored above 70% on the tests were collected from the study to show improvement on children's knowledge of nutrition. After each successful lesson, 50% of all children have shown an increase in their knowledge on measuring portions of food groups by being attentive on the presentation and Kahoot, 55% of all children have shown an increase in their knowledge of identifying nutritional labels by participating in the scavenger hunt, 59% of all children have shown an increase in their knowledge of junk food by learning through an interactive board game, and 56% of all children have shown an increase in their knowledge on water/sugary drinks by engaging in a constructive debate.

**Evaluation/Conclusion:** The project concludes with a final collection of nutritional pre and post surveys collected from 181 children weekly. The study has shown a significant improvement on children's knowledge about their dietary intake. As more children are understanding the importance of healthy eating, malnutrition and chronic illnesses can be prevented in the future by avoiding foods and drinks that have harmful chemicals, substances that have a drastic increase in sodium, sugar, cholesterol and fats. Watching what children are eating will prolong their life and incorporate a well-balanced lifestyle that will benefit them in the future.

## Internship Abstracts

**Title:** International Student of University of Delaware's Website Creation Addressing Communication Challenges

**Name:** Melanie Petermann

**Preceptors:** Dr. Paul Moon, Internship Coordinator

**Agency:** LeadershipEdges - Newark, Delaware

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**Purpose:** To evaluate the needs of the University of Delaware International Students to deliver a website that brings this group together and allows them to discuss and address communication issues.

**Significance:** Almost all research performed on international students identify communication as the largest barrier as it negatively impacts their academic performance, affects their conversations with other students, and affects their self-esteem and confidence (Wang, Sun, and Liu 2010). International students are taught English solely through academics, making conversations with other students and teachers difficult. This is amplified by cultural barriers such as the fear of asking questions as it can be seen as challenging authority which can negatively impact their studies (Wang, Sun, and Liu 2010). This fear can transfer into conversations with students, where international students feel unable to speak freely without being ridiculed or questioned for their English language level. Through the production of a website that allows students to have conversations with native English speakers through virtual connections, courses to further their understanding of common phrases, and forums to ask questions students can be given the opportunity to practice their communication skills.

**Method/Approach:** Three preliminary interviews were conducted with international students to evaluate the priority communication issues of the community. These issues- identified as slang terms, conversational English, and common pronunciation and spelling errors- were addressed in the creation of forums students could discuss issues in as well as online courses inside of the website. These online courses were designed as a study guide as well as a quiz tool where students could test their understanding of the course material. The forums created were focused on a general discussion of communication issues as well as specific issues, including the ones mentioned above as well as any other issues faced by students. Lastly, students had the opportunity to speak with native speakers through Zoom meetings about common conversational topics. The Zoom meetings allowed for communication issues to arise and be handled naturally as well as improving the overall speech of the students.

**Outcomes/Results:** Interviews with students revealed that communication issues were the main difficulty among students and created a strain on their relationships with other students. Being able to practice conversations with native speakers as well as having a space to ask questions about confusing phrases and words were noted as the most important content to focus on and would aid students as they continued growing in their understanding of conversational English.

**Evaluation/Conclusion:** The website is in production and will be ready to use at the end of September 2022. Changes to the look of the website and the content within it must be adjusted and created to give the website's users the best experience. The first community of users of the website are also expected to be finalized by mid-August, which includes international students as well as native speakers. After its initial release in September 2022, the website will be reviewed monthly by LeadershipEdges staff to ensure the website is working correctly for its users.

## Internship Abstracts

**Title:** Outreach efforts aiding in the decrease of diaper insecurity - Middlesex County, NJ

**Name:** Sherell Pressley - Williams

**Preceptors:** Heather Nover, Executive Director

**Agency:** Anshe Emeth Community Development Corporation - Central Jersey Diaper Bank

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**Purpose:** To increase family connections and donor support of the community in Middlesex County, NJ, through outreach efforts to families and agencies.

**Significance:** There is a diaper and formula shortage in the United States, partially attributed to the COVID-19 pandemic and inflation since 2020. According to the National Diaper Bank Network, 1 in 3 U.S. Families experience diaper need. As of 2020, the cost of infant care was 50% of a single-parent household income and 13% of a two-parent household income. NJ diaper banks help fill the gap by providing diapers when families cannot afford them. As of 2020, the National Diaper Bank Network had 9-member diaper banks in NJ collectively distribute 1,930,276 diapers annually. In 2019, 1.7 million infants and toddlers lived in families with incomes below the poverty line. The highest rates of impoverished households have been among Black and Latino infants and toddlers. To continue assisting as many as 3,000 infants and toddlers monthly, outreach to organizations and community partners continues to be vital to the upkeep of NJ diaper bank operations to support those in need, throughout Middlesex County, NJ.

**Method/Approach:** Several tools were created to connect the Central Jersey Diaper Bank with families and organizations in Middlesex County, NJ. The goal was to increase awareness of the diaper bank and what it does to help the community. 1) An open distribution was held where families were able to access services on site. Registration with the diaper bank allows clients to be eligible to receive deliveries of diapers and other essentials to their doorstep. 2) An email was composed to be sent out to supporters to encourage a diaper drive as donations are an effective way to enhance the diaper bank's functionality. 3) Simple promotional pieces were made to support the diaper bank. Two rack cards detailing volunteer and donation opportunities were created for the use at community engagement events, such as resource fairs. 4) A spreadsheet of middle and high schools in the cities of Middlesex County, NJ was created with an email to send to schools' administration encouraging a back to school diaper drive that would also act as a great community service opportunity for the youth.

**Outcomes/Results:** By engaging with the community through open distributions, over 130 families were serviced and approximately 17,000 diapers, as well as wipes, formula and clothes were distributed at the first distribution of the summer. Over 30 middle schools and high schools in Middlesex County, NJ were reached out to in efforts to have more diaper drives take place so more families can be provided the essential services of the Central Jersey Diaper Bank. The rack cards can be used at multiple events as promotional agents to increase the community awareness of the diaper bank.

**Evaluation/Conclusion:** Due to the constant efforts of the diaper bank and its connection to multiple agencies in the community, families throughout Middlesex County are receiving services that decrease the hardship of diaper insecurity. Upon completion of outreach coordination and execution within the community, a satisfaction survey should be conducted on clients utilizing the Central Jersey Diaper Bank's services. This survey should aid in identifying strong points in the functionality of the organization and areas where improvement may be necessary.

## Internship Abstracts

**Title:** Evaluation of Latent Tuberculosis Patient Education

**Name:** Julia Purakal

**Preceptors:** Project Supervisor: Anita Khilall, Program Director, Education & Training

**Agency:** Rutgers Global Tuberculosis Institute

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**Purpose:** To propose educational interventions and update patient brochures on current treatment regimens, information on side effects, and practical tips for administering medications for children diagnosed with latent tuberculosis infection (LTBI).

**Significance:** In 2021, over 7,000 individuals were diagnosed with tuberculosis in the United States, and an estimated 13 million people were living with LTBI (CDC, 2021). New Jersey is one of eight states reporting an incidence rate over the national average (NJ Health, 2020). Due to the challenges created by the COVID-19 pandemic, TB treatment was delayed for many people, resulting in increased morbidity and fragmented care. The Global Tuberculosis Institute (GTBI) in Newark, New Jersey serves as a CDC designated Center of Excellence for training, education, and medical consultation for the Northeastern region of the US. GTBI's Lattimore Practice provides clinical and public health services for TB patients in Essex and Union County. Patient education resources can improve the quality of TB care by addressing misconceptions about the disease and its treatment. In particular, educating parents of children who have been diagnosed with LTBI is one key strategy for increasing adherence to treatment. GTBI's existing brochure, *What Parents Need to Know about Tuberculosis (TB) Infection in Children*, was updated to explain the difference between TB infection and disease, treatment regimens, and tips for successfully administering medications to children.

**Method/Approach:** Formative research was conducted to review CDC modules on TB and guidelines for diagnosing and treating TB infection. The existing brochure was updated to reflect current treatment recommendations. After consulting three pediatric TB experts from the Lattimore Practice and Hudson County Chest Clinic, internal feedback was solicited on the layout and content relevance for the revised brochure. A brief survey was developed to obtain patient feedback on content and format. The data collected from patients will be analyzed to determine the brochure's effectiveness, clarity, and design.

**Outcomes/Results:** The education and training staff and pediatric TB experts provided feedback to improve the overall design, level of content, and formatting. Patients are being interviewed to assess their understanding of the language in the brochure, instructions for administering medications, and overall layout. Qualitative data will be used to make final revisions to the digital bi-fold brochure on LTBI and the final product will be uploaded on the GTBI website and shared with a national audience.

**Evaluation/Conclusion:** The development of updated patient education materials can help address the lack of understanding and prevailing misperceptions about TB among patients surrounding the disease and its treatment. Utilization of resources by healthcare staff at Lattimore Practice can increase patient understanding, which may improve treatment adherence and patient engagement in their TB care. Follow-up surveys can help evaluate additional limitations surrounding patient comprehension of TB. The material may be amended as needed to incorporate updated treatment recommendations for children.

## Internship Abstracts

**Title:** Middlesex County Caregivers Coalition

**Name:** Mark Rogers

**Preceptors:** Renata Svincicka, Community Health Manager

**Agency:** The Family Resource Network

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**Purpose:** To analyze the issues that caregivers in Middlesex County face so they can be provided the resources and services they need to improve their quality of life.

**Significance:** Caregivers make up a large portion of the population with about 44-54 million active in the United States alone. In general caregivers face a multitude of challenges including communication issues, financial and emotional concerns, poor social support, a decreased quality of life, and other challenges directly related to patient care (Chi et al., 2018). Many caregivers think that their lives will not improve without the help of legislative action. In New Jersey, there are about 37,000 people receiving assistance from the Division of Developmental Disability (DDD). 65% of the people registered live with their families but only receive 9% of the DDD's budget to help with family care (Caregivers of New Jersey, n.d.). Caregivers of New Jersey, an affiliate of the Family Resource Network combats this problem by advocating on behalf of caregivers and by coordinating support and services that can be beneficial to them. This project contributes to the solution by specifically assessing the issues and needs of caregivers in Middlesex County by using survey questionnaires and focus groups. This would allow Caregivers of New Jersey to find support that will be most beneficial to them. It also helps to increase the coverage for caregivers across New Jersey.

**Method/Approach:** In the first portion of this coalition a working plan was created. A search was then conducted to find potential stakeholders in the community. After this a list of 240 people was compiled from the search and invitations to join the coalition were sent out. Twenty six stakeholders from organizations such as the Legal Services of New Jersey, Carefinders Total Care, Easterseals of New Jersey, Parkerlife, and the Family Support Organization of Middlesex County attended a meeting in-person. Following this, more information about the coalition was given to attendees along with focus group questions and a survey questionnaire.

**Outcomes/Results:** The Middlesex County Caregivers Coalition assessed the caregiver population in Middlesex County, New Jersey. Similar projects have been performed in the past in other counties throughout New Jersey. Each successfully identified issues unique to caregivers in the region they target, then addressed them. This coalition will serve as a resource to caregivers where they can get information, referrals to programs, support, and services.

**Evaluation/Conclusion:** The success of this coalition will be determined by the impact of the recommendations in the long-term. The Family Resource Network has played a major role in the success of coalitions in the past. As they continue to launch coalitions in different counties, the coverage for caregivers across New Jersey continues to increase.

## Internship Abstracts

**Title:** CRM Data Clean Up  
**Name:** Jaiden Rowe  
**Preceptors:** Stephen Greico, Senior Vice President  
**Agency:** USI Insurance Services - New York, NY

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**Purpose:** To refine data in USI Insurance Services Customer Relationship Management Software (CRM) system 'Uengage' to enable producers to focus on credible accounts and generate more revenue for USI.

**Significance:** Due to the current discourse over health reform, many instances of people lacking adequate health insurance have emerged. These include people whose employers do not provide insurance, people who cannot afford it, and people whose plans restrict coverage of preexisting conditions or cap insurance for certain destructive situations (U.S. Bureau of Labor Statistics, 2013). The estimated price per worker of employer-sponsored health insurance increased by 6.3 percent because workers and their families began seeking treatment after postponing it due to the pandemic (Society for Human Resource Management, 2022). The team of benefit consultants at USI conduct thorough analyses and implement creative ideas to lower healthcare costs for workers without compromising care's quality. The data clean up project will generate an increase of valid accounts for the producers to sell affordable insurance to. Utilizing USI ONE—an infrastructure that combines statistics, interconnected resources, and strategy development—producers will provide more individualized comprehensive and efficient benefit packages to help reduce the financial impact on each company.

**Method/Approach:** Producers, sales people, at USI Insurance services are lacking enough accounts to generate the maximum revenue. Each producer must have 200 accounts in their name, at minimum. When joining the team at USI, five new producers had less than 100 accounts in their name. Utilizing 'Uengage' unused accounts will be transferred to new producers. To establish unused credible accounts, new views in the system were created. These views filter accounts that were used by termed producers, imputed as house accounts, or issue accounts sitting in the warehouse.

**Outcomes/Results:** Before each view was refined there were over 1,500 accounts under termed producers names, 600 accounts under a general house account name, and 800 accounts in the warehouse unusable. For the termed producer view, 1,500 accounts under termed producers were divided evenly and placed into 6 new producers accounts, each receiving 250 accounts which they could create opportunities for. The 600 accounts that were assigned to the general house account were given to three established producers who were looking for new accounts to go after, resulting in an increase of 200 accounts per producer. The 800 accounts in the warehouse were reviewed and reassigned to the current producer the account was assigned to, concluding that a bug in the CRM lacked automation for the assignment of these specific accounts.

**Evaluation/Conclusion:** Based on the clean up project, new and established producers generated 30% more opportunities than previous months and had a 15% increase in initial appointments. The upkeep of Uengage has been deemed a necessity to the overall success of each producer. This region of USI has concluded that there must always be a team working on refinement in order for the company to function more efficiently.

## Internship Abstracts

Title: Financial coaching outreach for individuals facing a cancer diagnosis

Name: Caitlin Ryan

Preceptors: Amanda Maddalone - Financial Coaching Program Manager

Agency: Family Reach

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**Purpose:** To conduct outreach to families who have submitted applications to Family Reach, indicating that they would be interested in the financial coaching services, along with connecting families with their pro-bono volunteer financial coaches to increase the success rate of the financial coaching service.

**Significance:** According to the Annual Report to the Nation on the Status of Cancer, in 2019, the national patient economic burden associated with cancer care was \$21.09 billion (National Cancer Institute, 2021). About two-thirds of adults with cancer or a family member diagnosed with cancer have cut their spending on food, clothing, or other household basic needs. One in four adults have also declared bankruptcy or lost their homes due to cancer's financial burden (Lopes et al., 2022). The Family Reach Financial Treatment Program offers wrap-around services that give families immediate relief while preserving their financial health for tomorrow. As part of these comprehensive services, financial coaching pairs families with pro-bono financial planners for free advice about managing their money during and beyond cancer treatment.

**Method/Approach:** This program was created to pilot a new comprehensive outreach program for individuals requesting to be enrolled in Family Reach financial coaching service. Outreach began on May 31st, 2022, and continued through July 31st, 2022. Two hundred and thirty-four families were contacted via email to confirm interest and provide an in-depth explanation of the benefits of the financial coaching service provided by Family Reach. After the family confirmed interest, an email was sent to pair the individual with a volunteer financial coach.

**Outcomes/Results:** The results of this program are still preliminary. By providing outreach to confirm interest in the program before matching the individual with a financial coach, it is expected for the case numbers to go down, while the success rate increases. Out of the two hundred and thirty-four families contacted via email, thirty families responded confirming their interest in the program; five said they were not interested, one hundred and thirty-one were unresponsive, and sixty-eight were pending. For those who confirmed interest, twenty-nine percent of the families paired with a pro-bono financial coach and received a personalized connection had a successful engagement. This is a nine percent increase compared to the same timeframe last year. Last year in 2021, the financial coaching program contacted 720 total families. Currently in 2022, Family Reach has contacted 502 families. Prior to this new outreach system, there was a thirteen percent success rate. Despite having limited data and a small subject group, if the rate continues, it is predicted that Family Reach will increase its success rate from 13% to 15.8%.

**Evaluation/Conclusion:** The program has the potential to have a significant impact on the success rate of the financial coaching service. Through this new outreach program, Family Reach has now connected many more families with financial coaches allowing them to receive support and guidance to help overcome financial side effects while going through a cancer diagnosis. Developing new programs such as innovative ways to reach more families it bridges the gap between financial burdens and cancer diagnosis.

## Internship Abstracts

**Title:** Assessing Helmet Safety Knowledge of Parents and Guardians  
**Name:** Umayma Saifuddin  
**Preceptors:** Diana Starace, Injury Prevention Coordinator  
**Agency:** Robert Wood Johnson University Hospital - Trauma and Injury Prevention

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**Purpose:** To assess helmet safety knowledge of parents/guardians at bike rodeo events and distribute an educational guide on proper helmet fit.

**Significance:** According to the *Injury Epidemiology* journal, 75% of all bike-related mortalities are due to head injuries. Amongst these mortalities, 85% could have been prevented with proper use of a bicycle helmet. Another study from the *Pediatrics* journal concluded that 96% of children and adolescents wore helmets in improper condition and/or with improper fit. In order to encourage helmet use, Robert Wood Johnson University Hospital's (RWJUH) Trauma and Injury Prevention offers free helmets to all participants of Middlesex Bike Rodeos. Implementation of a helmet fitting demonstration and distribution of education resources inform Middlesex residents on proper helmet use. By assessing parent/guardian knowledge on helmet fitting, RWJUH can understand the effectiveness of these demonstrations and whether improvements can be made.

**Method/Approach:** On July 17th, 2022, dozens of families attended the Piscataway Bike Rodeo to participate in wheeled sports activities. In order to enter the event, families must stop at registration. This provided them with a layout of the event and provided them with a bike raffle ticket. Then, they were encouraged to take a two-part assessment on helmet fitting to receive an extra raffle ticket. The first part of the assessment was taken at registration and the second part was taken at the helmet fitting station. At the helmet fitting station, helmets were provided to those who did not have one along with proper helmet fit demonstrations. Once done, participants completed the post-demonstration assessment and were given links to further educational resources from Safe Kids Worldwide. Then, they were able to collect the extra raffle ticket.

**Outcomes/Results:** For the pre-demonstration assessment (n=16), 75% of responses were correct. For the post-demonstration assessment (n=28) 94% of the responses were correct. For the first question "Which chin strap is properly fitted?" the pre/post accuracy was the same (i.e. 88%). For the second question "Which helmet is sitting correctly on the head?", the pre/post accuracy was 69%/100%. For the third question "Which helmet fits correctly around the ear?", the pre/post accuracy was 69%/92%. The last question asked participants to evaluate the following statement on a ten-point scale (1 = Not at all, 10 = Every time): "I feel confident fitting my child's helmet." The average confidence level during pre-demonstration polling was 5.75 whereas post-demonstration polling indicated a confidence level of 8.75.

**Evaluation/Conclusion:** The results of the pre-demonstration and post-demonstration assessments indicate a substantial increase in accuracy regarding helmet fit. Moreover, parent/guardian confidence in their ability to fit a helmet increased 53% after bike helmet demonstrations. This data, although limited, validates that helmet demonstrations are effective tools in teaching parents proper helmet fit and in encouraging safe helmet practices.

## Internship Abstracts

**Title:** Municipal Operations Redevelopment Project

**Name:** Carolina Santos

**Preceptors:** Stephanie Dollinger, Borough Administrator

**Agency:** Borough of West Long Branch

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**Purpose:** To promote increased quality of data management, archival records retention, and other Municipal processes by organizing, updating, and streamlining the current systems in place.

**Significance:** The State of New Jersey's Department of the Treasury, via the Department of Revenue, has established various records retention schedules for State and Municipal Agencies. When followed appropriately, government agencies are able to efficiently organize their records by determining what records are ready for destruction and what records are permanent or archival records. The Borough of West Long Branch had a large collection of records from the past 20 years that needed to be separated properly to free up space. This project initiated the separation, organization, and recording of files to restore the agency's ability to retrieve records of importance and to comply with state guidelines.

**Method/Approach:** All stored records were identified and cataloged based on their record series number pursuant to the Department of Revenue's records retention schedule. Records that fell within the authorized destruction window based on their age were flagged and listed to submit for destruction authorization. Other current and non-current records were organized into their own files and re-labeled with their identifying record series number, window of retention, and their expiration year. Records aged through to their destruction year were entered into the Artemis Portal, where requests to destroy public records are submitted to the State Department of the Treasury for approval. Requests were submitted individually by file number, date range of the subject records, and by volume of the contents based on their square-footage. Records authorized for destruction were packaged into banker boxes and labeled with the authorization slip generated from Artemis and set aside.

**Outcomes/Results:** File boxes authorized for destruction were set aside in a designated area. A recycling event is scheduled in October, where the records will be properly disposed of. Record destruction requests pending State authorization have been re-filed in a specific file cabinet until final authorization has been received. Cataloging Borough records in this manner cleared file space in the two main storage closets and a small hallway lined with file cabinets. Each file cabinet holds an estimated 10 square-foot worth of files; an average total of 620 square feet worth of documents have been organized, cataloged, and marked for proper disposal. Emptied file cabinets were re-designated to specific departments in a manner which was deemed most functional. A new system was set up in which departmental records were filed by their record series number and marked with their expiration dates in order to streamline the destruction request process in the future. Active records were then organized by date and category for easy reference. Two file-digitization companies were contacted and requests for estimates were submitted.

**Evaluation/Conclusion:** The Borough was struggling organizationally and the buildup of 40-years worth of documents was hindering its ability to function optimally. Catching up the municipality on its records retention system cleared space and allowed for a new system to fill its place; one that allows for efficiency and, in turn, the municipalities ability to better operate and serve its residents. Opening the pathway for records digitization will only advance this progress further.

## Internship Abstracts

**Title:** COVID19 Office Safety Protocols and Efficiency  
**Name:** Christine Shamy Cavezza  
**Preceptors:** Samantha Cardullo MHA, Practice Administrator, Project Supervisor  
**Agency:** University Children's Eye Center

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**Purpose:** To analyze COVID19 office safety protocol procedures to ensure office safety and efficiency to maintain productivity while ensuring the safety of staff and patients.

**Significance:** To this point, COVID19 has killed over 6 million people worldwide, over 1 million in the United States alone. According to the Centers for Disease Control and Prevention's (CDC) community data which explores cases and deaths, testing, vaccination, hospitalizations, and community characteristics, Middlesex County, New Jersey is currently at a high community level risk (CDC COVID Data Tracker, 2022). According to the United States Department of Labor Occupational Safety and Health Administration's (OSHA) healthcare workers who provide care to the general public, even those patients who are not known or suspected to have COVID19, are at an increased risk of exposure to COVID19 (Healthcare Workers and Employers, n.d.). Given this information and the fact that University Children's Eye Center is a healthcare facility in Middlesex County, the practice needs to take additional measures to provide COVID19 exposure protection for employees and patients. Regularly monitoring trends and guidance recommendations will address the level of precautions that need to be taken.

**Method/Approach:** A review of current data provided by the CDC, as well as a retrospective review of COVID19 data trends over the past two years was completed. CDC community data was monitored on a bi-weekly basis, as well as recommended actions based on current levels. These rates were updated weekly by the CDC. This information was then analyzed to determine safety protocols for the office and whether we could eliminate some COVID19 safety protocols, or whether they need to be more stringent.

**Outcomes/Results:** During the period monitored Middlesex County stayed mainly in the high community level risk, occasionally falling into the moderate community level risk. During the period tracked the number of cases in all of New Jersey dropped from 4,735 cases on June 2, 2022, to 3,197 on June 16, 2022. From there the number of cases rose slightly again from 3,911 on June 30, 2022, to 4,271 on July 14, 2022. New hospital admissions in New Jersey followed a similar trend going from 163 admissions on June 2, 2022, to 127 admissions on June 16, 2022, followed by 128 admissions on June 30, 2022, and 169 admissions on July 14, 2022. As of July 21, 2022, New Jersey has a rate of transmission of 1.09 statewide. New Jersey also has a fully vaccinated population rate of 49.2% according to the New Jersey Department of Health, which was much higher than the CDC-reported national fully vaccinated population rate of 34.2%.

**Evaluation/Conclusion:** During the month of June both numbers of cases and new hospitalizations fell, leading the practice to determine it was safe to open the waiting room for patients and allow two parents, instead of just one, to accompany patients. However, since Middlesex County continued to rise into high community-level risk. Being that healthcare workers are at additional risk for COVID19, masks were still required in the office, symptoms of patients must be monitored before arrival, and sanitizing methods should continue. Also to be considered is that the number of cases and hospitalizations have been rising recently, therefore, continued monitoring of these trends will be necessary.

## Internship Abstracts

**Title:** The 2022 National Caregivers Conference  
**Name:** Chloe Shneiderovsky  
**Preceptors:** Renata Svincicka - Community Health Manager  
**Agency:** The Family Resource Network

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**Purpose:** To increase public knowledge of The National Caregivers conference and the importance of caregiving through various marketing strategies.

**Significance:** There are currently over 3.4 million people in the nation who have epilepsy, and more than 5.4 million people are on the autism spectrum. More broadly, the nation has over 63 million family caregivers who provide care each and every day for their loved ones who have mental or physical disabilities. Caregivers hold a very important place in our healthcare system but often do not get the recognition they deserve. The Family Resource Network is planning and hosting a National Caregivers Conference to honor and acknowledge caregivers and their crucial contribution to the healthcare system. The Conference raises awareness for caregivers while simultaneously providing access to resources, speakers, and meaningful support systems. This project concentrates on the marketing aspects of the National Caregiver's Conference, which will be held on October 16 - October 17, 2022.

**Method/Approach:** A marketing strategy was prepared in order to plan out publicity efforts and maximize outreach. A list of sponsors was used to send out emails to inquire if any companies would want to sponsor the event. The emails contained an ask letter for sponsorships and an information packet about the conference. All of the conference's upcoming speakers were asked to post on their own individual social media sites to increase public knowledge about the event, and multiple posts were made on The National Caregivers Conference's social media pages- such as LinkedIn and Facebook. Additionally, influencers from social media platforms such as TikTok were contacted and offered a complimentary ticket to the conference as incentive to post about it on their social media platforms. Multiple Constant Contact newsletters were sent out containing information about the conference.

**Outcomes/Results:** Before marketing efforts were made, there were eight people signed up to attend the National Caregivers Conference. After various marketing approaches, there was a noticeable increase in people who signed up to attend the conference both in person and virtually. Social media impressions largely increased which resulted in additional outreach. Posts that were made on Facebook had 3,313 impressions, and posts that were made on LinkedIn had 757 impressions. In addition, 43 sponsorship emails were sent out to various companies in the healthcare industry. 2 newsletters were sent through Constant Contact, which were opened and viewed by 11,987 people.

**Evaluation/Conclusion:** The ultimate goal of the conference is to honor caregivers while increasing awareness of the importance of family caregivers and industry leaders in caregiving. The conference will bring together a group of professionals and family caregivers who all share the commonality of providing quality care to those who need it. Each year, the conference should aim to grow and continue to use various marketing strategies to increase public knowledge of the event, continuing its positive impact on the caregiving space.

## Internship Abstracts

**Title:** Problem Drinking Co-Use and Dual Substance Use Disorder Assessment

**Name:** Arushi Singh

**Preceptors:** Dr. Matthew Lee, Research Professor

**Agency:** Center of Alcohol and Substance Use Studies at Rutgers University

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**Purpose:** To analyze the co-use and dual substance use disorder among alcohol, different types of opioids, and cannabis, across young adulthood, midlife, and older adulthood to show generational differences.

**Significance:** An estimated 95,000 people die from alcohol-related causes annually, alcohol is the third-leading preventable cause of death in the United States (*Alcohol Facts and Statistics, 2022*). Over the years, we have seen an increase in opioids and marijuana co-used with alcohol use at different lifespans. In 2018, approximately 2.6 million college students co-used alcohol and marijuana (McCabe SE, etc., 2021). Almost half of the opioid overdoses in 2016 included alcohol, cocaine, or benzodiazepines (Samet JH, Kertesz SG, 2018). When problem drinking leads to both cannabis or opioid use, the effects of this would increase in magnitude with age and are especially pronounced in older adulthood. Using evidence-based data, analyses will show the age when dual-use was most prevalent.

**Method/Approach:** This project was conducted using the National Epidemiological Survey on Alcohol and Related Substances (NESARC) from Wave one, completed in 2001-2002. All data were collected and analyzed using IBM SPSS Statistical Software. The variables included past-year opioids, alcohol, and cannabis use and their disorders, which were recoded into binary variables to distinguish who was and was not dependent on the substances in the past year. These variables were then sorted into three age groups, which were young adulthood (18-44), midlife (45-64), and older adulthood (65+), to distinguish different generations.

**Outcomes/Results:** From the Wave 1 analysis, there was a higher use of opioids among drinkers and non-drinkers, with an increase of 2.3% in young adults, 0.5% in midlife, and 0.2% in older-adulthood. A significantly greater change in young adulthood compared to midlife and older adulthood. There was a higher co-use of cannabis among drinkers compared to non-drinkers. 8.5% of the data in young adulthood co-use compared to only one percent of data that uses only cannabis. Opioid Use Disorders, OUDs, have a higher prevalence among Alcohol Use Disorders, AUDs, in young and midlife than non-AUDs in young and midlife but decrease in older adulthood (0.1% to 0%). Cannabis Use Disorder, CUDs, has a higher prevalence among AUDs, in all three different adulthoods when compared to non-AUDs, young adulthood (10.6% increase), midlife (2.6% increase), and older adulthood (1.3% increase).

**Evaluation/Conclusion:** The analyses concluded that opioid use and cannabis use were significantly higher in drinkers than non-drinkers, and OUDs, and CUDs, were also more co-diagnosed with AUDs than non- AUDs. We see generational differences as these increases were present in young adulthood with more significant changes than in midlife and older adulthood. The only place a discrepancy shown is between opioid use disorders among non-AUDs and AUDs, specifically in older adulthood. Opioid use disorders among non- AUDs were greater than opioid use disorders with AUDs. A future goal of this study is to analyze longevity between these Wave one cases to Wave two data.

## Internship Abstracts

**Title:** Consumer Paneling Remodel

**Name:** Shalini Sivaraman

**Preceptors:** Project Supervisor: Dawn Sauseda, Director of Complex Care Member Services

**Agency:** United Healthcare

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**Purpose:** To analyze current Medicaid and Medicare needs among United Healthcare consumers and construct a paneling system to efficiently pair consumers to navigators.

**Significance:** United Healthcare works towards connecting consumers to navigators whom they can build meaningful connections with and receive guidance from throughout their healthcare journey. Historically, an Excel spreadsheet was used to determine the pairing of consumers and navigators. The spreadsheet mapped out all 50 states and how many navigators and consumers there were in each state. With the number of Medicare and Medicaid consumers rising, United Healthcare's current paneling model cannot efficiently process the high volume. This project used Maestro to automate these connections.

**Method/Approach:** To compare the old and new processes, a baseline was determined. When there was a repaneling request, navigators submitted the request through SharePoint. The nature of the request, due date, additional notes, and name of the consumer was shared to the team. A time study was conducted on each request to see how long it took to complete the request. This data was logged into an Excel spreadsheet. The average time per day per transaction was calculated to assess how efficiently the paneling requests were completed. This data was compared to the data collected in Maestro, where the paneling process is automated.

**Outcomes/Results:** The time study showed that to "add a panel" took an average of 41 minutes. To "remove a panel", took an average of 37 minutes. To "reassign an individual member" took an average of 9 minutes. With the new automation in Maestro, to "add a panel" was less than 10 minutes (depending on panel size). To "reassign an individual member", took less than 1 minute. To "remove a panel", took under 5 minutes.

**Evaluation/Conclusion:** Once the development of Maestro is complete, test cases will be used to conduct time studies on paneling requests. If the time is cut down to the project time then the project will be a success. The consumers will have a better experience working with United Healthcare. Additionally, navigators will be able to better reach their consumers and build stronger connections. Moving forward, the software will need to be monitored for software updates and malfunctions. There will always be room for development in Maestro to better the quality of care for consumers.

## Internship Abstracts

**Title:** Program Evaluation of Leadership in Asbury Park

**Name:** Jayde Tedesco

**Preceptors:** Quadai Palmer

**Agency:** From Jersey With Love

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**Purpose:** To evaluate the efficacy and efficiency of a leadership centric program, targeting empowerment and development of current and future leaders.

**Significance:** In the Greater Asbury Park area, there is a population of 24,000 people. This region has an average of 5.4% unemployment rate, 22.5% poverty rate, and a crime rank of 242 out of 244 municipalities, which makes it among the top 3 crime stricken municipalities in the state of New Jersey. From Jersey with Love has spent years equitably providing access to resources in the community. During the pandemic, they spent countless hours working in the community through their Leading in Love, Let's Eat and Closet of Love programs. These programs focus on empowering community leaders, providing food and clothing resources, respectively. The Leading in Love program was developed to impact communities starting with leadership. The mission is to promote strong communities by empowering its leaders.

**Method/Approach:** Conferences, webinars, and other activities were held between March 2020, and March 2022. Weekly newsletters were sent between February 2022 and July 2022. From Jersey with Love collected surveys between March 2020 and March 2022 which evaluated conferences and webinars. Intake forms were collected for mentoring and consulting clients. Finally, we completed comparison research to other organizations offering similar programming.

**Outcomes/Results:** Evaluation surveys and mentoring intake forms were evaluated using Google Workspace. Twenty-two percent of organizations from the community felt there needed to be a leadership-centric program targeting self-care and wellness among community leaders. We were able to assess program effectiveness based on engagement. 70 participants attended conferences, webinars and activities over a three-year timeframe. Of the 70 participants, 36 sought out further resources such as mentoring and one on one consultations. Weekly newsletters have a 60% open rate, meaning out of 70 organizations, 42 consistently read our newsletter. Other organizations offer similar programming at efforts of supporting the Greater Asbury Park community. These ways include hosting events for the corporate or enterprise rates which can be difficult for smaller nonprofit organizations to take advantage of their resources. From Jersey with Love offers services at no cost to organizations.

**Evaluation/Conclusion:** Leadership roles in public health are valuable and important for nonprofit organizations such as From Jersey with Love. From Jersey with Love has shown leadership through their Greater Asbury Park area, and programs that keep participants engaged. Based on the statistics of poverty and crime in the Significance section above, the data shows how important it is for leaders to have roles in nonprofit organizations. Communities such as the Greater Asbury Park area show a public health issue with poverty and crime rates, and I believe From Jersey with Love can decrease those rates over time with their leadership. In conclusion, From Jersey With Love has the ability to create a revenue source and build stronger partnerships by monetizing this revolutionary program.

## Internship Abstracts

**Title:** Diversity, Equity and Inclusion HR Policies  
**Name:** Tiffany Tirado  
**Preceptors:** Jamie Williams, HR and Operations Manager  
**Agency:** Day One New York

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**Purpose:** To revise Day One's HR policies, specifically focused on diversity, equity and inclusion.

**Significance:** In the workplace, diversity, equity and inclusion is a holistic approach to hiring, empowering, and retaining a diverse workforce. The goal of DEI is to create an environment that encourages representation and participation of diverse groups of people, including people of different genders, races and ethnicities, abilities and disabilities, religions, cultures, ages, and sexual orientation. Diversity, equity and inclusion policies create diverse and inclusive workplaces where employees share unique perspectives, respect one another's individual needs, and earn more commitment and engagement from their employees. A DEI policy is a long-term systemic approach that touches on various elements of an organization, from hiring to training to marketing.

**Method/Approach:** The first step for constructing a new DEI policy was researching and analyzing effective ways to create a safe and inclusive workplace environment. The initial research began with getting a better sense of the organization's culture. By understanding Day One's goals, values, and leadership, it provided an outline for the policy. Part of the research included reading through multiple healthcare organization handbooks as well as non-healthcare organizations in order to construct an appropriate policy for Day One. Hiring and communication practices were researched and created in order to provide transparency with the organization and employees. Two drafts were created and presented to Ms. Williams, and finally, a final draft was presented to the director.

**Outcomes/Results:** This final policy was created in Microsoft Word and is 2 pages long. It focuses on demonstrating hiring and communication policies at Day One. It also includes a new Pay Transparency Law that will take effect in New York November 1, 2022. This law requires New York employers to post salaries in their job descriptions. Providing salary information ensures that all applicants will get paid equally and equitably. This was presented to the Executive Director in August. Day One will be implementing this new diversity, equity and inclusion policy in their updated handbook.

**Evaluation/Conclusion:** The goal was to create a policy that will demonstrate diversity, equity and inclusion practices are being implemented and enforced at Day One. This new policy will be included in the new Day One Employee Handbook. For a DEI policy to be successful, it can't be just a hiring strategy or an occasional workshop; it has to flow through the entire organization.

## Internship Abstracts

**Title:** Warren County Farmers Fair Educational Booth

**Name:** Kristina Wahl

**Preceptors:** Jennifer Gruener, Superintendent

**Agency:** Warren County Mosquito Extermination Commission

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**Purpose:** To create an interactive experience that educates the community on mosquito and tick diseases in Warren County, New Jersey, as well as how to prevent and protect themselves and their neighbors from bites that can lead to those diseases.

**Significance:** According to the World Health Organization, on a global basis, Vector-borne diseases account for more than 17% of all infectious diseases and are the cause of more than 700,000 deaths annually. In New Jersey, the 2021 Vector-Borne Surveillance report states that there were 3121 human cases of tick and mosquito-borne diseases recorded in the state that year. The Warren County Mosquito Extermination Commission works to combat vector-borne disease transmission using many methods. Our biggest focus is on controlling the larval mosquito population all over the county by routinely monitoring and treating standing water sites, and responding to reports of standing water by residents. The most challenging obstacles we face trying to control the mosquito population in Warren County are the many residents who have containers in their yards that hold water and breed mosquitoes. Having a display booth at the local farmers' fair will allow us to gain the resident's attention and educate them on the importance of keeping their yard free of debris that can hold water. By keeping all containers dry, flipped over, and stored properly, mosquitoes will be unable to breed in their yards and will be less likely to infect them and those around them with diseases.

**Method/Approach:** The method chosen to educate the public on the mosquito and tick-borne diseases in Warren County is to create an appealing and educational booth at the county farmers fair where residents can read about vector-borne diseases, learn whether they are viral, bacterial, or parasitic and about the undesirable symptoms associated with each. The first step was to plan what the booth would look like, choose a theme to draw positive attention, and decide what information was most important to include without having too much, deterring visitors from reading it. The next step was to collect the resources needed to bring the vision to life. This included gathering art supplies to create decorations, researching and typing out facts about each significant vector-borne disease, ordering informational brochures from various health departments, and ordering free items to hand out like fly swatters. Finally, the booth needed to be set up and manned during the event.

**Outcomes/Results:** At the end of the farmer's fair, 129 fair guests entered a drawing for a gift card by answering the quiz question "Is yellow fever a bacterial, viral, or parasitic infection?" The answer was on the display walls, showing that those 129 people interacted with the booth and read through the information to find the answer.

**Evaluation/Conclusion:** The fair booth proved to be effective with 129 guests interacting with our booth and participating in the quiz question, with the incentive of a \$25 gift card possible to be won. Most of the participants answered the question correctly, indicating that many may have learned something they didn't know before from inspecting our booth display. All of the information sheets made for the display can be reused for future fair displays and other public relations events, and the quiz question can be changed each year to direct fair guests to learn something new.

## Internship Abstracts

**Title:** HCG Employees Working From Home Mental Health Analyzation

**Name:** Willow Meredith

**Preceptors:** Paul Kudarauskas, Human Resource Department

**Agency:** Healthcare Consultancy Group, HSC, Manhattan, New York

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**Purpose:** To analyze the impact that working from home has on the mental health of employees at HCG.

**Significance:** The COVID 19 pandemic changed the future of society, resulting in the restructuring of many normalcies, specifically speaking the rate of employees now working from home. The United States workforce population averaged around 35.2% of workers working from home in May 2020. COVID 19 is a continuous threat to society, prolonging the work from home implementation policies in corporations and creating a new future for online employment. Studies suggest that working from home rates can amount to a 75% increase when compared to pre-COVID levels (Jain et al., 2022). According to the study, *“Impacts of Working From Home During COVID 19 Pandemic on Physical and Mental Well-Being of Office Workstation Users”*, recipients experienced a decrease in physical and mental well-being when switched to a fully online work structure (Yijing et al., 2021). Using this information from the study, HCG can benefit from ensuring the best physical and mental health of their employees while transitioning from an in person to an online work environment.

**Method/Approach:** Research from the *“Impacts of Working From Home During COVID 19 Pandemic on Physical and Mental Well-Being of Office Workstation Users”* study, was used to create a 10 question survey, documenting the mental health of employees at HCG. The survey structure varied from multiple choice to opinion scale. The survey was administered to 10 HCG employees via an online url and the data was calculated using bar graph percentiles. With the data given, a guideline was created to ensure that HCG employees were equipped with resources to increase their mental and physical well-being while working from home.

**Outcomes/Results:** The data from the survey showed that 50% of employees decreased their daily work breaks, and 75% of HCG employees occasionally felt burnt out when working from home. Another 75% of employees felt that anxiety or depression, occasionally, interfered with their workplace productivity. There was a 25% increase in physical activity from employees working from home when compared to previously working in the office. When asked, “Do you feel that the agency has created enough resources to make you feel supported while working from home?” 75% of recipients said yes while 25% said no.

**Evaluation/Conclusion:** An evaluation of the data concluded that while the overall mental health of employees working from home at HCG has slightly decreased, the physical health has actually increased. While a majority of employees at HCG felt that the company was efficient in providing support in the transition from in person to online, 25% still did not feel there was enough support. A resource guideline was created that listed the company provided resources, such as free therapy and examples of healthy habits to use when working from home to increase the mental-wellbeing of employees.

## Internship Abstracts

**Title:** Analyzing the Feasibility of ctDNA as an Adjunctive Detection for Lung Cancer Patients  
**Name:** Yuxin Zhang  
**Preceptors:** Bo Yu, MD, Medical Center Manager  
**Agency:** USCI Medical Laboratory Company

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**Purpose:** To study and analyze the feasibility of using Circulating Tumor DNA as an alternative for tissue biopsy and its accuracy as a biomarker of relapse risk of lung cancer through literature review.

**Significance:** Liquid biopsy is a non-invasive method to detect cancer cells in the blood or other body fluids (Diaz & Bardelli, 2014). Compared with traditional tissue biopsies, liquid biopsies can extract circulating tumor DNA to help cancer patients perform genetic testing by identifying biomarkers. In one study, the use of ctDNA extraction to detect PDL1 status in patients with non-small cell lung cancer was as high as 93% concordance with tissue testing (Ilić et al, 2018), but not all the biomarkers targeted by the study have such high result variables in between cfDNA and tissue detection. (Yung et al, 2009). The recent gene sequencing projects conducted by USCI mainly focus on EGFR resistance mutations and KRAS gene mutations in patients with non-small cell lung cancer in the region, aiming to study the effectiveness of liquid biopsy and clinical application in early screening, recurrence monitoring, etc. Through conducting a systematic literature review of studies, the efficacy of liquid biopsy and the question of consistency across different experimental conditions will be better understood and predicted.

**Method/Approach:** Through PubMed and Rutgers Library, research for liquid biopsy of lung cancer patients and the consistency of ctDNA and tissue biopsy in mutation status were searched and evaluated. The content of the literature review was analyzed to understand its relevance and possible influencing factors. Statistical and cohort analyses were carried out on the literature's relevant data, and those approaches were used for the information and data collected for research.

**Outcomes/Results:** Through a meta-analysis study, in several articles on LUAD, in the case of using blood to test the ctDNA in the sample as a surrogate for tumor biopsy, the results vary widely. A study that matched tissue and blood for NSCLC gene mutations showed concordance as high as 94% (Schwartzberg et al, 2020), but only 88% in another (Mok et al, 2015), and more meta-analyses have shown concordance rates vary from 66% to 100% (Brevet et al, 2011). Different measurement methods, depth, and precision were analyzed as variables, such as the difference between NGS or ddPCR, showing a high correlation to the difference in results, and the analysis of the same samples on different platforms proved with a sensitivity varying from 58 % to 81% (Luchini et al, 2019). Research showed that even with liquid biopsy as a common test today, there are also large differences in between analysis of the prognosis of patients after clinical surgery and the monitoring of recurrence.

**Evaluation/Conclusion:** This outcome proves that although genetic testing using liquid biopsy has become the recommended treatment option for adjuvant therapy and for prognostication, more precise and subtype-specific studies are still needed. The analysis indicated the necessity of the following project of research and provided comparative data for the project of using liquid biopsy as a prognostic detection standard for EGFR-mutant non-small cell lung cancer patients.

**References:** [Yuxin Zhang References](#)

## Internship Abstracts

**Title:** Report of adverse reactions and events

**Name:** Zihao Zhou

**Preceptors:** Shuan Sheng, Intern Preceptor

**Agency:** Hailun Dazhong Pharmaceutical Inn - Changzhou, Jiangsu, China; Changzhou Food, Drug, and Fiber Quality Supervision and Inspection Center - Changzhou, Jiangsu, China

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**Purpose:** To collect, sort, analyze, and summarize the data of adverse events generated by medical devices in various hospitals, physical examination centers, nursing homes, and convalescent centers, and the data of adverse reactions of drugs sold in hospitals and pharmacies, and try to make recommendations to decrease the number of reported adverse events.

**Significance:** Each year, the adverse drug reactions kill about 2,000,000 people in China. To change this situation, the online National Adverse Drug Reaction and Monitoring System to collect, sort, and analyze the data was developed. It is found that an adverse drug reaction monitoring and reporting program can furnish benefits including: catering information about the quality and safety of pharmaceutical products; initiates risk-management plans; preventing the predictable adverse effects and helps in measuring adverse drug reaction incidence; and instructs health care teams, patients, pharmacists and nurses about adverse drug effects and creates awareness regarding adverse drug reactions. (Ram et al., 2014) This evidence indicates that adverse drug reaction monitoring systems can bring positive effects on monitoring, measuring, and even urging positive activities as well as decreasing the population of those who might be influenced by adverse drug reactions. After all the outcomes were calculated, preceptor Sheng encouraged all intern students to engage in the conference to come up with solutions to decrease the number of adverse drug cases reported.

**Method/Approach:** The program started with gathering the information and data by using the national adverse drug reaction monitoring system. After the data and information of all hospital, pharmacies, physical centers, etc., were collected, the next step is to analyze the data of adverse reactions of drugs sold in hospitals and pharmacies, and report the outcome into the system, then sort, and summarize the data of adverse events generated by medical devices in various hospitals, physical examination centers, nursing homes, and convalescent centers, then report the outcome into the system.

**Outcomes/Results:** Based on the data collected and analyzed on the national monitoring system, the result is that from June 2021 to June 2022, there were 8915 cases of adverse reactions to drugs reported. That is 501.3 percent more than the cases reported from June 2020 to June 2021. There are also 728 adverse cases of medical apparatus and instruments reported, which is 32 percent more than last year; 945 adverse reaction reports of cosmetics, which is 2 percent more than last year; and 423 reports of substance abuse, which is 138 percent more than last year.

**Evaluation/Conclusion:** The purpose of this project is to decrease the adverse reactions of drugs. Therefore, after the outcome is calculated, possible ways to stop and decrease the increasing trend of adverse drug reactions are also come up with. The first thing is to increase monitoring ability and professional proficiency of rank and file. The second thing is the construction of sentinel points mainly inside hospitals and pharmacies. Therefore, constant monitoring and reporting the data and information to the system is able to not only locate the problem, but also help in developing solutions to decrease the number of adverse reaction cases in order to better ensure people's safety.

## Internship Abstracts

**Title:** Effectively Marketing Assisted Living Succeeding the COVID-19 Pandemic  
**Name:** Jordyn Zieden-Weber  
**Preceptors:** Sara Culang, Volunteer Services Manager  
**Agency:** Stein Hospice at the Wilf Campus for Senior Living

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**Purpose:** To analyze and discuss the impacts of COVID-19 on dementia care and develop a marketing strategy for Stein Assisted Living following the pandemic.

**Significance:** Approximately 500,000 individuals are diagnosed with Dementia annually in the United States and require long-term care. Roughly 48% of nursing home residents live with Dementia (Alzheimer's Association, 2020). However, the COVID-19 pandemic plagued the assisted living industry with poor occupancy rates and brand reputation instability. Assisted living occupancy rates fell to a record low of 75.5% in the first quarter of 2021, as the abundance of COVID-19 cases in assisted living facilities prevented the admission of countless dementia patients (NIC, 2021). Additionally, the pandemic has increased the percentage of remote workers, allowing dementia patients to receive care from family members at home. This evidence indicates a need for improved research and adaptation of dementia care services to attract patients and families to long-term care facilities following the pandemic. Consequently, Stein Assisted Living will develop an amended marketing strategy so their facility can provide the highest quality dementia care to the community.

**Method/Approach:** Interns collected data from all long-term care facilities on the Wilf Campus for Senior Living regarding current dementia care services and occupancy rates since the pandemic. The report was analyzed to reveal gaps in the current dementia care model that could be amended to accommodate patients' needs succeeding the COVID-19 pandemic. Pertinent research supported an updated marketing strategy that should improve occupancy rates and the level of dementia care provided in all contracted facilities. To effectively market safe and high-quality services to families, extensive construction within the dementia unit and an overhaul of the company's admissions process occurred.

**Outcomes/Results:** Stein Assisted Living's updated marketing strategy included facility renovations and improved engagement with family members before patient admission. Renovations allowed for greater personalization of patients' rooms and updated common areas to create a more inviting environment and pleasurable visitation experience for patients and families. An amended admissions process sought to cultivate greater trust between patients' families and faculty. This project was committed to enhancing patient experience within care facilities and allowing family members to feel secure with the decision to seek long-term care services for loved ones during the pandemic.

**Evaluation/Conclusion:** Satisfaction surveys will be developed and sent to all families of current dementia patients to evaluate the success of the newly implemented engagement tools and facility renovations. A limitation of this method includes participants' failure to follow up, which may skew results and hinder the evaluation of facility improvements. Additionally, observing increased occupancy rates at Stein Assisted Living would indicate a successfully implemented marketing strategy. Project re-evaluation should occur six months after completing all facility renovations to determine whether patient satisfaction and occupancy rates are progressing toward the project's goals.

## Internship Abstracts

**Title:** Compliance Risk Management and Alleviation  
**Name:** Katarina Zonic  
**Preceptors:** Brian Daku, Sr. Expert of Compliance Applications  
**Agency:** Legend Biotech

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**Purpose:** To mitigate compliance risks for employees in an approved cancer cell therapy corporation by evaluating qualification records to ensure that they are certified and qualified to perform their role.

**Significance:** In the United States, in 2019, 1,752,735 new cancer cases were reported, and 599,589 people died of cancer. For every 100,000 people, 439 new cancer cases were reported, and 146 people died of [cancer](#) (CDC, 2019). One type of cancer that affects individuals is multiple myeloma, which is a cancer of plasma cells found in the bone marrow. Multiple myeloma is a relatively uncommon cancer, yet about 34,370 new cases will be diagnosed, and about 12,640 deaths are expected to [occur](#) (American Cancer Society, 2022). Due to its rare yet fatal nature, Legend Biotech is dedicated to the research and clinical trials of CAR-T therapies, increasing rates of remission. Compliance projects ensure the safety of trials, focus applicability on the Office of Inspector General's 7 Elements of An Effective Compliance Program and Department of Justice, and maintain the integrity of employees and investors from engaging in non-compliance activities that could hinder the use of this life-saving product.

**Method/Approach:** An evaluation of employee qualification records (QR) was conducted to confirm that each individual is qualified for their position. The data for QR packages were located on ComplianceWire (Learning Management System), where curriculum vitae were accessed, and the information was then transposed onto an excel sheet with over 1000+ employee names and IDs. Spreadsheets were separated by countries in which Legend offices reside (China, US, Belgium, and Ireland), and folders were made for each department to hold employee CVs. Each employee was assessed by indicating whether their QR package (current CV and JD) were complete with a simple "yes or "no" or if they had elements missing such as employee and manager signatures, a 2021/2022 signature date, correct job description, and title, or if a CV was never created.

**Outcomes/Results:** The main focus of the project was to primarily evaluate Legend departments in the US, and the QR package report for US revealed that out of 689 employees, only 242 (35%) employees had a completed CV, 179 (26%) had no CVs, 263 (38%) had errors, and 5 (0.7%) were maybes. The rest of the world offices, China, Belgium, and Ireland, were consolidated into one group and statistics show that out of 682 total members, 58 (9%) had a good CV, 543 (80%) had not created a CV, 51 (7%) had errors, 16 (2%) were maybes, and 14 (2%) were CV system access errors. Collecting this data is part of a larger initiative to protect and verify Personally Identifiable Information (PII) and adhere to General Data Protection Regulation (GDPR) principles for accurate distribution to local HR groups.

**Evaluation/Conclusion:** The assessment shows that 1,068 (78%) out of 1,371 employees are non-compliant because their CVs were either not created or had errors. Streamlining a communication through email can provide clear instructions on how to format one's CV and create a new training module with a quiz to test their knowledge. A longitudinal study will be overseen in order to track the progress of completed CVs and re-assessed in a spreadsheet once again. Once PII/GDPR data have been verified and collected correctly, a new system will be used to collect CVs and distribute them to respective HR personnel. The completed CVs will be used during FDA inspections to ensure compliance.

**Internship Abstracts**

Capstone Projects

## Internship Abstracts

**Title:** The Subconscious Effects of Digital Design on Large Scale Human Psychology

**Name:** Hargun Kohli

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**Purpose:** To identify and examine the effects of intelligent digital design on large scale human behaviors and societal notions.

**Significance:** With the advent of the digital age, one could say that everything has become an advertisement, even people themselves. Advertising has become so normalized in this society, considering the fact that a large portion of the excitement around the Super bowl, one of America's top holidays, is regarding the advertisements in between breaks. Everything has become an advertisement, all media consumed has some sort of push or message it is trying to translate, sometimes in subtle ways so that the viewer is unaware of this effect. It is for this reason that it is important to study the effect of specific, deliberate, intelligently designed media, first, to understand to what extent this media can affect perceptions, and second, whether there is a specific strategy used to make media more effective, so that the consumer can decipher when marketing strategies are used on them and make choices on their own volition, without bias or influence. The end goal of this project is to help consumers make more informed choices.

**Method/Approach:** This paper will first draw upon previously conducted and peer-reviewed research to first establish that design does in fact play a role in influencing perception. It will then present cases of deliberate design choices made by both for profit and nonprofit or public organizations operating in the same field, and will explain whether or not they were successful in achieving their goal of perception. Focusing on the topics of smoking/smoking prevention, public vs. private transportation, and meat-centric vs. meatless diets this paper will create a pool of similar design choices and draw conclusions as to whether there are specific design choices that, as a whole, are much more useful in translating a message. It is important to note that there are other marketing choices not entirely based in design, such as differences in the target demographic, an institution's reputation, or their financial success, that can also affect whether an institution can meet its goals. This paper will analyze whether these choices have a greater impact on marketing success than smart design.

**Outcomes/Results:** As per the research conducted and the case studies reviewed regarding the three aforementioned topics, two things can be established. First, there is a correlation between intelligent design and the influence of human social behavior. This is established through the research done particularly by the Vanderlinden and Swasty papers, the former of which proves that the aesthetic design of technological environments has a correlation with the homogeneity of a social environment, while the latter establishes that color is an important attribute in persuasive design for most consumers, especially those part of the Millennial and Generation Z demographics, and that color, as well as other design facets, can invoke emotional response. The second is that color and the usage of space are the two design assets that have the most influence on the effectiveness of a media campaign.

**Evaluation/Conclusion:** More research is needed to justify these claims beyond a doubt; particularly in the topics of public versus private transportation, as there is not much research done in the American demographic.

## Internship Abstracts

### Abstract

**Title:** Health Disparities Between Central American Immigrants and Native U.S. Citizens

**Name:** Megan Melville

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**Purpose:** To analyze the social and political factors involved in perpetuating the health disparities between Central American immigrants and non-immigrants as well as quantifying the severity of these disparities in order to establish effective policy solutions to abate them.

**Significance:** The existence of immigrants in the United States, especially undocumented immigrants, has been used as a political diversion by elected officials from the lowest to the highest level, and as a result, foreign policy has been inaccurately influenced by baseless propaganda as opposed to objective medical and sociological data. The health disparities that exist between immigrants and non-immigrants due to these circumstances is rightfully categorized as a public health crisis and it becomes clear through an analysis of these disparities that structurally xenophobic state and federal laws are the central cause. An uptick in anti-immigrant propaganda in recent years coupled with a neglect of the utilization of objective data in creating public policy has perpetuated anti-immigrant laws and wide health disparities to grow between immigrants and non-immigrants due to the discriminatory contingencies of these policies.

**Method/Approach:** The methods of this research project will involve aggregating data from several cogent bodies of research concerning the health disparities between immigrants and non-immigrants to compose a persuasive anthropological study. In observing a collection of sources including medical anthropological data, statistical data of federal agencies, an analysis of recent legislation and political surveys, this research project will successfully measure the health disparities experienced by Central American immigrants as well as demonstrate the role of xenophobic policy in perpetuating these trends.

**Outcomes/Results:** Immigrants compose a significant majority of the American labor force and Central American Immigrants in particular are shown to have very high labor participation rates. Being that Central American immigrants, both documented and undocumented, represent a crucial component of the U.S. labor force and consequently support the growth and stability of the economy, abating the impact of the disparities they experience is in the interest of progressing towards a health equitable future and their disproportionately negative health trends can rightfully be categorized as a public health crisis.

**Evaluation/Conclusion:** Structurally xenophobic public policy has become more so in recent years, and the simultaneously worsening health trends experienced by Central American immigrants is shown to be parallel to these findings. These laws at both the state and federal level restrict immigrants from obtaining access to health services and violently enforce immigration laws against them. In concluding this research project, it becomes clear that the key to abating these disparities is reforming immigration and public health laws to increase access to health services for immigrants as well as providing them with a workable path to citizenship.

## Internship Abstracts

**Title:** Physician Retention in Rural and Underserved Areas

**Name:** Fatima Morsy

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**Purpose:** To analyze educational and financial interventions to improve physician retention in rural and underserved areas across the U.S.

**Significance:** Rural areas are known for their limited presence of physicians, with only 11% of physicians across the U.S practicing in rural areas (Jaret, 2020). With the aging physician workforce, projections showcase that within the next ten years there will be “a quarter fewer” physicians working in rural areas despite significantly worse health outcomes among the rural population (Jaret, 2020). The *Journal of the American Medical Association* published a study that showcases that “82% of rural counties are classified as medically underserved regions” (Mensik, 2020). Due to the physician shortage crisis in rural and underserved areas, improving physician retention is more important than ever to improve access to care. Health disparities in rural areas, such as higher death rates from cardiovascular and lung disease, will only worsen with the lack of physicians to treat these patients (Jaret, 2020). Therefore, addressing physician retention in rural and underserved areas will aid in improving physician shortages and access to care across the U.S. This paper contributes to the literature by identifying effective interventions to improve physician retention rates.

**Method/Approach:** This research was conducted by reviewing scholarly articles through the Rutgers Libraries databases as well as Google search. The articles came from a variety of journals including the *Journal of the American Medical Association*, *The Journal of Rural Health*, *American Journal of Public Health*, and many more. The publications examined ranged from the years 1996 through 2022. Different types of published studies were examined including longitudinal studies, cross-sectional studies, literature reviews, survey research, interview research, and more. Therefore, this paper evaluates previously published research to draw conclusions pertaining to improving physician retention in rural and underserved areas.

**Outcomes/Results:** Addressing financial incentive programs as well as clinical education and training programs have proven to be significant areas to focus on. For financial incentive programs, it was found that loan repayment programs are the most effective in improving physician retention rates among rural and underserved populations. This is due to the requirement that obligates them to practice in rural and underserved areas. Furthermore, providing clinical education and training both at the medical school level and residency level that caters to rural healthcare has been associated with higher retention rates as well. This clinical exposure is effective as it addresses numerous factors that impact retention such as lack of preparedness, integration, community ties, and more.

**Evaluation/Conclusion:** To continue addressing the factors that impact physician retention in rural and underserved areas, public policy action is needed. The Biden Administration recently allocated funding for clinical education and training programs in rural and underserved areas. However, this funding needs to become permanent rather than temporary to allow these programs to continue to be successful. States, such as Hawaii, are also taking policy action to increase funding for clinical education and training programs in rural and underserved areas as well as loan repayment programs. More states will need to take this type of policy action to increase the presence and effectiveness of such programs.