

# Community Matters

## A Community Research Poster Forum



Project Presentations

THURSDAY, SEPTEMBER 30, 2021

THURSDAY, OCTOBER 14, 2021



## Welcome from our Campus Dean

MATTHEW HUNSAKER, MD



I hope you enjoy exploring the scholarly projects that our medical students have completed in partnership with local community organizations.

The student projects link medical education with the resources and needs of Green Bay-area communities to promote health in northeastern Wisconsin. This unique MCW experience is designed to cultivate medical skills and interests, deepen ties to the community, and provide an appreciation for the physician's potential role and impact on local health needs.

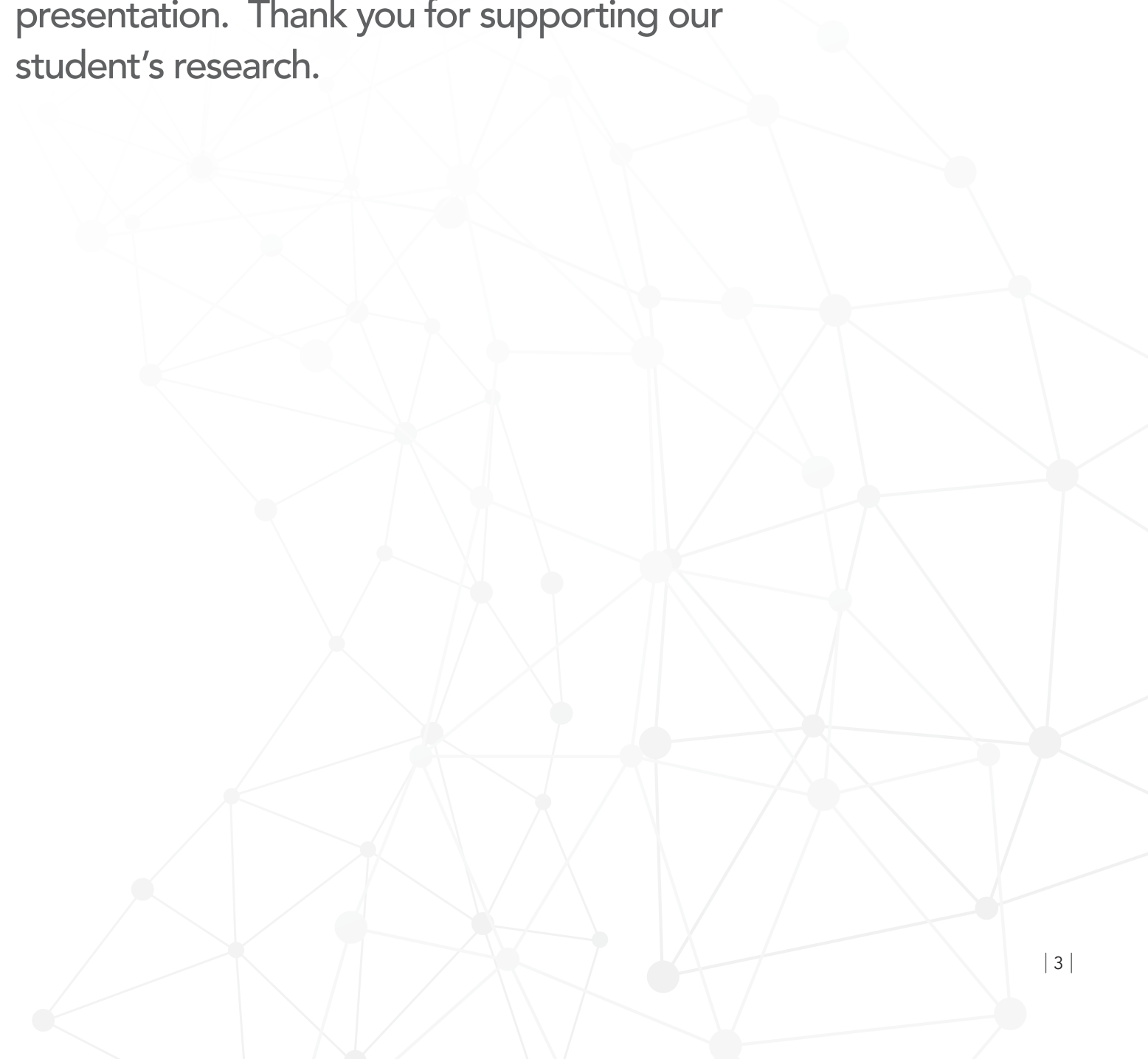
I would like to recognize the partner organizations and community mentors who volunteered with our medical students on these projects. You are a critical element to their medical education and we could not have accomplished this work without your support. ■

## Welcome from Eva Christensen, MD, PhD, DABR Pathway Course Director

Welcome to the fourth annual MCW-Green Bay community research poster forum. Our medical students complete a Community Oriented Primary Care (COPC) scholarly research project. COPC emphasizes a systematic approach to community and individual health, combining elements of epidemiology, primary care, preventive medicine and health promotion. Through the Physicians in the Community Pathways Course and other aspects of the curriculum, our students establish relationships with many local organizations who are directly involved with the well-being of the population, and thus identify health needs, design appropriate interventions, and assess the effects of the interventions from a "boots on the ground" perspective, finally resulting in a public poster presentation. Our goal is to help students become community engaged physicians, moving us from the care we have, to the care we need.

Many thanks to our St. Norbert College colleagues, Chrystal Woller, BSN, RN, Senior Director, Health and Wellness Services and Dr. Jamie Lynch, Associate Professor of Sociology, for working directly with students to help guide project design, launch, and analysis. Our appreciation goes out to all of our community partners; those represented in the poster presentations, as well as those who give generously of their time and expertise in countless other ways to help MCW-Green Bay achieve our lofty goals. Please enjoy the surprising variety of community projects. ■

This year our student poster forum will be presented virtually due to the pandemic. In this way, our students will be able to share the results and stories of their community health-related research projects safely, and still gain important presentation skills. There will be time for live question and answer sessions after each presentation. Thank you for supporting our student's research.



# WELCOME & INTRODUCTION

## Thank You!

A special thank you to our many community partners for your time and investment in our students.

### Abstract # Partner

- |    |   |
|----|---|
| 1  | Bellin Health Emergency Department, Paul Casey, MD  |
| 2  | Christian Medical and Dental Association, Gloria Halverson, MD;<br>Wisconsin Medical Society, Laura Jacobs;<br>Wisconsin Medical Society, Clyde Chumbley, MD, MBA |
| 3  | Golden House Domestic Abuse Program and Shelter, Cheeia Lo and Kwynn Carter   |
| 4  | Aging and Disability Resource Center of Brown County, Kimberly Gould, RD  |
| 5  | Brown County Medical Society, Rebecca Liebers   |
| 6  | Beecher-Dunbar-Pembine High School, Chryss Veirauch   |
| 7  | Aging and Disability Resource Center of Brown County, Barb Michaels   |
| 8  | Bellin Health Emergency Department, Paul Casey, MD  |
| 9  | De Pere Fire Department, Chief Alan Matzke and Lieutenant Brett Jansen  |
| 11 | Family Services of Northeast Wisconsin, Angela Steuck   |
| 12 | ThedaCare Bariatrics, Raymond Georgen, MD, and Andrea Wolff, MD;<br>ThedaCare Behavioral Health, Michael Griffith, LCSW and Elizabeth Strong, LCSW                |
| 14 | Medical College of Wisconsin, Kyle Wellhouse and Gisela Chelimsky, MD   |
| 15 | University of Wisconsin-Green Bay, Debra Pearson, PhD;<br>Bellin Health, Sabeeha Bedi, MD   |
| 16 | Western Racquet and Fitness Club, Keri Merrill  |
| 17 | East Central Wisconsin Regional Planning Commission, Nick Musson;<br>Lutheran Social Services, Holly Keenan;<br>ThedaCare, Tracey Ratzburg                        |



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## In-patient COVID-19 Trends in Green Bay, Wisconsin

MEGAN BARTHELS



### Introduction

One of the early challenges of the COVID-19 pandemic was monitoring the spread and patient load on hospitals. There has been little research conducted in the Green Bay, WI area regarding COVID-19 cases. Many of the early models suggested by epidemiologists predicted vastly different results than the outcome (i.e., Hains, 2020; IHME COVID-19 health service utilization forecasting team). Models rarely consider human variance, relying more heavily on disease specific information. The purpose of this study is to determine any correlation between large events in Green Bay, Wisconsin, and the load of in-patient COVID-19 admissions at Bellin Hospital.

### Methods

The project was conducted at the Bellin Hospital. Dr. Paul Casey, an emergency medicine physician at Bellin Hospital, monitored COVID-19 in-patient trends. The data was correlated with large events. Large events were characterized as nonrestrictive and restrictive. Restrictive events included outbreaks, political events, and large social gatherings (>100 people). Restrictive events included COVID-19 protection mandates.

### Results

The results showed that there was a relationship between frequency of large nonrestrictive events and increased in-patient loads (i.e., meat packing plant outbreak, Donald Trump rallies of 10/03/20 and 10/30/20, presidential election day). There was also a negative correlation between restrictive events and in-patient COVID-19 trends (i.e., 'Safer at Home' order, Executive Order #3 limiting indoor mass gatherings).

### Conclusions

It is apparent that non-restrictive large events, restrictive large events, and the in-patient COVID-19 load at Bellin Hospital are interrelated. Causality cannot be established; however, the data suggests nonrestrictive events had a positive relationship with a heavier in-patient burden and restrictive events had a negative relationship. ■

BEN HODAPP



# Human Trafficking in Wisconsin: The Physician's Role in Ending Modern Day Slavery

## Introduction

Human trafficking is the second most lucrative criminal industry in the world, profiting \$44 billion/year. Over 28 million people are trafficked worldwide, in which most victims enter “the life” at 12-14 years old and only live for approximately 7 more years. A physician encounters at least 1 victim during their career, thus physicians play a pivotal role in identifying and helping victims. Every county in Wisconsin has had reports of human trafficking, however, since Wisconsin does not mandate training in human trafficking, many physicians lack the confidence and knowledge to help victims.

## Methods

OBGYN, Family Medicine, and Emergency/Urgent Care physicians in the Wisconsin Medical Society completed questions regarding their demographics. Then, they completed a pre-self-assessment regarding their knowledge and confidence in human trafficking protocols. They completed a quiz about basic knowledge regarding human trafficking. Finally, they read a short educational article and afterwards completed the same self-assessment and quiz.

## Results

Most physicians have not received training specific to human trafficking but are familiar with their local resources. Their understanding of human trafficking and confidence to treat/help a victim improved after reading the article. Most physicians were unwilling to complete an online training course in human trafficking, even with CME credit as a reward.

## Conclusions

Overall, most physicians lack the knowledge and confidence to help victims of human trafficking, but this can be improved with education. Wisconsin should mandate training specific to human trafficking for all healthcare workers. ■



## Reminding Young Victims of Domestic Abuse and Displacement About the Importance of Self-Care Using Plants as a Model

MARY DALEY



### Introduction

Children who experience traumatic events such as domestic violence or abuse can develop traumatic stress that can affect their physical and emotional health. Through these adverse childhood events children can learn unhealthy ways of self-expression and become more susceptible to rationalizing violence. They may also miss positive statements and selectively attend to negatives, minimizing their ability to perform proper self-care. The purpose of the study was to use plant growth as a model for mental health in children who have experienced domestic violence.

### Methods

The project was performed at Golden House in Green Bay, WI. A pre-survey was conducted to gauge participant knowledge of coping skills and self-care. Participants then planted a flower seed and decorated the pot, while the researchers related taking care of the plant to using coping skills and the importance of self-care in navigating stress. A post-survey was then conducted to gauge retention of the information. Results and data were analyzed.

### Results

The results show some prior knowledge of coping skills. Following the activity, our 2 participants demonstrated improved understanding on the use of different coping mechanisms and positivity to perform proper self-care and navigate traumatic stress.

### Conclusions

While unable to make definitive conclusions due to the low "n" and statistical insignificance of the data, the trend seen indicates that participants had a better understanding of emotional well-being and self-care following the activity. ■

GRETA FRITZ





## Reducing Isolation and Loneliness

### Introduction

Loneliness and isolation have been studied and found to be alarmingly harmful to health. They have been found to pose a bigger risk for premature death than smoking or obesity. Additionally, there is an associated increased risk of developing coronary heart disease, stroke, and hypertension.

Homebound individuals have more barriers to socialization and have fewer opportunities to stay connected. This population, most of whom are age 60 or older, are at the greatest risk to experience the negative health effects of isolation and loneliness.

### Methods

We designed a “phone-a-friend” program to combat loneliness in participants of the Green Bay ADRC homebound meals program. Participants were matched based on similar interests and were encouraged to speak with their matches 1-2x/week, in hopes of building companionship. Feelings of isolation, loneliness, and a depression screen (PHQ-2) were measured before and after participation in the program.

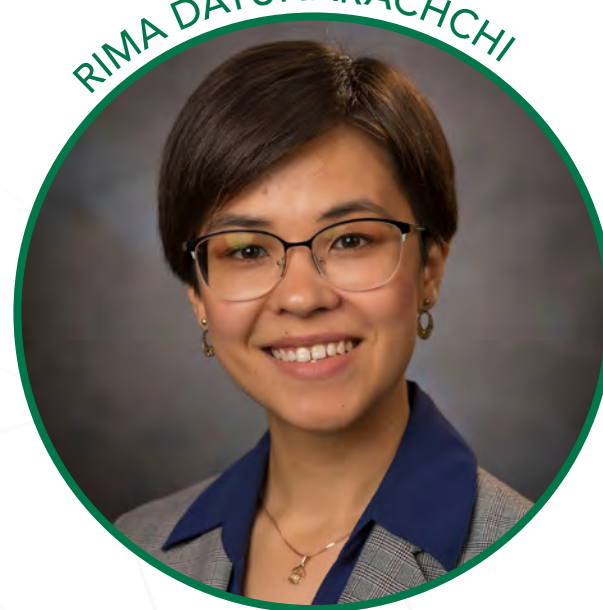
### Results

There were eight interested participants. Four were successfully matched, and three submitted follow-up surveys. Following participation in the program, there were improvements in feelings of companionship, isolation, and interaction. There was little change in PHQ-2 scores before and after participation. We received positive feedback about the interactions that took place among matched participants.

### Conclusions

Our program to reduce isolation and loneliness made a positive impact to people who participated. However, the quality of evidence is weak due to the small sample size. The program can be continued in the future with adaptations to improve participation and engagement. ■

RIMA DATUNARACHCHI



CARLY PATON



## Identifying Barriers to Patient Lung Cancer Screening Among Advanced Care Providers in Brown County, Wisconsin

JAKE DEVILEY



### Introduction

It is estimated that over 4,000 new cancer diagnosis will be made in 2019, resulting in over 2,800 lung cancer deaths. The National Lung Cancer Screening trial completed in 2011 demonstrated a 20% decreased observed mortality from lung cancer in patients that were followed with annual low-dose CT. Despite this study, in 2015 the National Health Interview Survey demonstrated that only 4% of eligible patients received proper screening. This study was proposed to identify barriers to lung cancer screening among providers in Brown County, WI between 2019 and 2020.

### Methods

In June of 2020 an IRB approved study was distributed via Qualtrics to 71 Family Medicine and Internal Medicine providers (NP, PA, MD/DO) asking 13 questions regarding lung cancer screening tactics. Results were then graphed and qualitatively assessed.

### Results

Responses were few, with only 8 respondents. It was found that in Brown County, WI healthcare providers believe they understand screening guidelines and refer roughly 73% of their patients to appropriate screening modalities. There are mixed viewpoints on whether lung cancer screening is as important when compared to breast or colon cancer screening, however, many physicians would recommend more patients given queues from their Electronic Medical Record system.

### Conclusions

More research is needed to fully assess barriers to lung cancer screening in Brown County, Wisconsin. However, providers generally rate themselves higher than the national average found in 2015. ■

# Mental Health in Rural Wisconsin Youth: How to Provide Support

## Introduction

The prevalence of mental health disorders in children is rising. Untreated problems can lead to poor school performance, disturbed development, and self-harm. Rural youth face additional barriers to receiving mental health care including poverty, lack of anonymity, and inaccessibility.

This study aims to identify effective methods to provide mental health support to rural youth.

## Methods

The project was conducted at Pembine School with 6<sup>th</sup> through 12<sup>th</sup> grade students. Students took a survey before and after a presentation about identifying mental health conditions, methods for supporting someone during a crisis, and virtual mental health resources. Results of the surveys were analyzed.

## Results

Results showed that students are more comfortable speaking with friends about mental health, rather than parents or teachers. However, over half of students had no experience successfully supporting someone in a mental health crisis.

After the presentation, average student comfort supporting friends in a mental health crisis was 8.31/10 vs 7.8/10 before. 94% of students rated the program as being beneficial and 67% said they would feel more comfortable talking to parents about mental health if parents attended a similar presentation.

## Conclusions

Educating students about virtual resources and how to support friends during a mental health crisis is an effective way to support mental health in rural youth without access to formal care. Educating parents about specific ways to address mental health concerns in children, and things to avoid saying, may also be beneficial. ■

HAYLEE GEIB



## Analysis of Male Incontinence and its Effect on Social Interaction

MADISON HARGER



### Introduction

Incontinence is an issue that affects a significant amount of the older adult population. However, there is little being done to combat this issue. The aim of this project is to help the ADRC set up a program for male incontinence that is specifically tailored towards their specific wants and goals.

Incontinence can also lead to a negative impact on one's social life, including isolation of the person from the rest of society. There seems to be a negative stigma around bladder and bowel leakage that also contributes to this increased isolation. Additionally, I want to explore how they perceive their incontinence affects their mood and social life.

### Methods

This project was done with the ADRC. Surveys were sent out to adult males through the ADRC and through the Green Bay Men's Club. Results and data were analyzed.

### Results

The results showed that there is a significant amount of men in the Green Bay area who are affected by fecal and urine incontinence. Many of whom who have not received medical treatment for it. These problems have somewhat negatively impacted their social life and receiving education would be beneficial.

### Conclusions

Overall, there appears to be a need for a program that focuses on overcoming male incontinence in the Green Bay area. Almost all the respondents reported at least some difficulty in managing their symptoms; and more than half demonstrated that incontinence has negatively affected their social life in some form. ■



# Emergency Department Wait Times with Low Acuity Conditions

## Introduction

Emergency departments (ED) nationwide have seen a surge in utilization rates and patient wait times. This has resulted in an overall increase in medical costs, length-of-stay, and mortality in admitted patients. Many factors play a role in patient utilization of the ED and this study investigates if there is an isolating factor affecting low-acuity conditions specifically.

## Methods

This project was conducted at the Bellin Hospital ED. Data was collected from patients with pre-determined, low-acuity conditions (acuity level 4-5) following triage nurse evaluation. All study candidates (N = 38) voluntarily completed the survey that was distributed and collected by the lead investigators. The results and data were analyzed.

## Results

Our hypothesis attempted to correlate low acuity conditions and willingness to be seen at a separate facility with a lower wait time. This was incorrect, as the majority of patients surveyed preferred to remain in the ED rather than seek care elsewhere. These findings demonstrated that while the vast majority of low acuity presentations corroborated national statistics, with pain being the most common chief complaint, there are other factors contributing to current ED utilization.

## Conclusions

Overall, it appears that even if the ability to receive more expedient care elsewhere was available, the majority of patients would choose not to exercise this option. This finding leaves the potential for future investigation on specific rationale for remaining at the current ED. ■

COLE JOUBERT



JACOB TALHELM



## Effectiveness of Community Fall Prevention Initiatives

MOLLY KADLEC



### Introduction

Falls are a very common reasons for emergency medical services each year. With each fall a patient's risk of a subsequent fall and fall-related complications, is increased. The De Pere Fire Department created the Stay at Home Assistance Program to address home hazards that increase fall risk. This study strives to determine whether the introduction of this program has decreased the incidence of repeat falls in the community.

### Methods

The project was conducted at the Medical College of Wisconsin with support from the De Pere Fire Department. Retrospective data was gathered from patients who utilized emergency medical services (EMS) for a fall incident. EMS personnel offered patients follow-up from the assistance program. These individuals were stratified based on whether they agreed to receive services. Incidence rates of recurrent falls in each group were determined and results and data were analyzed.

### Results

Over the course of three years follow-up assistance was offered by EMS at one-third of the fall incidents and patients agreed 8% of the time. The results showed that the proportion of patients who had a repeat fall did not differ significantly by their request of follow-up assistance.

### Conclusions

Overall, the findings in this study are limited by the small portion of patients who were offered the assistance and responded favorably. It is recommended that how these services are being offered should be assessed to increase patient interest. ■

LUKE SCHUH



# Wellness Habits of M1 Students

## Introduction

There are few studies that analyze the wellness habits of medical students. With the increase in physician burnout and suicide rates---personal wellness should be one of the tenets emphasized in medical school. This study strives to discover what the exercise, nutrition, mindfulness and stress-relief habits are of current M1 students.

## Methods

An anonymous 21-question survey was sent to all M1 students at MCW-Milwaukee and MCW-Central Wisconsin. The survey inquired about exercise, nutrition, cooking, mindfulness, stress levels and mental health resource usage both before and during medical school.

## Results

The results showed that M1 students do physical activity an average of ~1.5 days per week. Nutritional assessment showed that majority of meals are homemade. However there were some outliers who ate an average of ~8 fast food meals per week. Most students have not taken advantage of the mental health services that MCW offers to students despite an extremely high stress level.

## Conclusions

Overall, M1 students at MCW do not meet the minimum recommended exercise requirements---most reporting time as the biggest constraint. Several students implied that they wished MCW offered cheap, healthy food options for their students. It would be of interest to survey first year residents to see how their health habits change from medical school to residency. ■

REBECCA McCULLOUGH



## Postpartum Depression and the Efficacy of Treatments

PAUL NOWAK



### Introduction

Postpartum Depression is often unrecognized and untreated, which can result in negative long-term health effects on both mother and child. Studies have shown PPD affects approximately 17% of healthy new mothers and the success rate of treatments for PPD to be 80%. This study was conducted to collect more data to support the idea of receiving treatment if one is experiencing PPD.

### Methods

Mothers who screened positive on the EPDS were offered referrals to treatment, which they either accepted or declined. They then were given follow-up screening at 8 weeks, 3 months, or 6 months.

### Results

Of those who accepted treatment, 9 of 12 subjects improved to negative upon follow-up screening. Of those who declined treatment, only 2 of 9 subjects improved to negative upon follow-up screening. The scores of the subjects who accepted treatment improved by 7.2 points on average upon follow-up, while the scores of the subjects who declined treatment only improved by 1.8 points on average.

### Conclusions

Our limited data strongly supports that accepting treatment for PPD will vastly improve one's recovery from this illness. ■



# Evaluating the Use of Cognitive Behavioral Therapy for Improving Self-Efficacy After Bariatric Surgery

## Introduction

Successful, long-term weight loss solutions are needed to address the obesity crisis in the United States. Cognitive behavioral therapy (CBT) has been used to improve outcomes after bariatric surgery. The purpose of this study is to determine how successful a CBT course is for improving bariatric surgery outcomes and to identify timeframes during treatment where interventions are needed.

## Methods

This is a two-part prospective cohort study of CBT course participants and bariatric surgery patients between 2019 and 2021. The CBT participants were evaluated with a pre-course and post-course test with overall test score being the primary outcome. Bariatric surgery patients completed a self-reported confidence level survey, and the total confidence level score was used as the primary outcome.

## Results

There were 145 pre-course tests and 88 post-course tests collected. Patients scored an average of 7.18% higher after completing the CBT course (0.7179 vs. 0.7897,  $p < 0.05$ ). There were 310 self-reported confidence level surveys collected with an overall score ranging from 10-40 points. The average confidence level score increased by 1.71 points when comparing patients before and after surgery (32.88 vs. 34.57,  $p < 0.05$ ). In addition, patients who underwent the CBT course reported higher overall confidence (34.39 vs. 32.64,  $p < 0.05$ ).

## Conclusions

Confidence levels increase as patients approach their surgery date and continue to increase in the post-operative period. The higher self-reported confidence level for patients who underwent CBT suggests that CBT courses in the pre-operative period may improve bariatric surgery outcomes. Confidence levels increase as patients approach their surgery date and continue to increase in the post-operative period. The higher self-reported confidence level for patients who underwent CBT suggests that CBT courses in the pre-operative period may improve bariatric surgery outcomes. ■

NICOLE PETCKA



## Supplementation in Wisconsin Collegiate Student Athletes

TOM SCHULTZ



### Introduction

Collegiate athletes are a sub-population known to utilize nutritional and non-nutritional supplementation for athletic performance. The NCAA surveys these students every four years concerning illicit substance use; however, little is known comprehensively about what other supplements and substances student-athletes are putting into their bodies. The purpose of this research is to understand what athletes are utilizing, the reasons, and perceived efficacy of each substance.

### Methods

A multi-institute online survey of Wisconsin collegiate athletic departments was performed. IRB approval was received at 6 institutions in coordination with the MCW IRB. Surveys were sent to athletic directors at each institution with instructions on distribution of surveys to student athletes. Athletes age 18+ filled out these surveys which were de-identified, and information was analyzed using Qualtrics software.

### Results

Approximately 23 students (12 M, 11F) completed this survey. Protein was the most commonly used supplement (39%) followed by multivitamins (26%) and vitamin C (26%). These substances were also utilized the longest with 37.5%, 50%, and 17% of respondents using over four years respectively. Other highly used substances included caffeine (57%) and alcohol (55%). The longest use over four years for other substances were caffeine (62.5%) and OTC pain medication (100%).

### Conclusions

Overall, student-athletes utilize many different substances both nutritional and illicit. The length of use, purpose, and efficacy were all substance specific. A larger scale survey in the future would be beneficial to increased statistical significance. ■

JAKE WILCOX



# Exploring Implicit Bias in Medicine: An Interactive Experience for Medical Students

## Introduction

Many theories postulate individual bias to be a contributing factor to the persistence of healthcare disparities that exist between different patient populations. In an effort to increase medical student awareness of the impact of individual bias in medicine, this project aims to engage medical students in a dialogue that addresses how individual bias shapes interactions with others, specifically in the context of patient-provider relationships.

## Methods

We recruited 41 first year medical students at the Medical College of Wisconsin to participate in a series of 3 virtual small group sessions and asked them to complete surveys before and after the sessions in order to both quantitatively and qualitatively assess their experience. For each small group session, we developed a lecture centered on a different clinical scenario where bias has been known to commonly arise and recruited community members from the representative patient population to help provide insight and facilitate the small group discussions.

## Results

The results of the pre and post surveys demonstrate a significant difference in participant belief that unconscious bias impacts healthcare outcomes. This may suggest that the small group discussions effectively increased participant awareness of the role of bias in medicine.

## Conclusions

Participant feedback after the sessions was very positive. Overall, students reported feeling inspired and challenged by the small group discussions, commenting that the current curriculum lacks a longitudinal thread and instead offers sporadic “touch points” where controversial topics such as racism and bias are addressed. ■

AMELIA SCHURKE





## Simple, Goal-setting Lifestyle Change Videos and their Impact for Patients with Prediabetes

RACHEL SEILER



### Introduction

The current guidelines state that when a patient receives their first elevated A1c, they are to try lifestyle changes and then return in 6 months. There is often a gap in access to information about what these lifestyle interventions entail and not every clinic has access to diabetes education staff. Our project seeks to provide quick, digital materials with simple, lifestyle goal-setting tips to educate and motivate patients.

### Methods

The project was conducted with help from Dr. Bedi of family medicine at Bellin Health. Prediabetes patients were contacted through MyChart and asked to complete a digital pre-survey, watch a video sent to their email every 2 weeks, and then complete a post survey after watching all three videos. The average change in motivation on numerical scales was assessed and text feedback on videos collected.

### Results

The preliminary results of the study are inconclusive as only a small number of subjects were able to be contacted through MyChart. More data will be needed to draw significant conclusions.

### Conclusions

Overall, there is more to be learned about digital delivery of lifestyle goal setting information as many patients may not have access to digital technology or have easy methods of contact through MyChart. ■

LILLIAN WHALEN





## Examination of the Benefits of Rock Steady Boxing

### Introduction

Parkinson's disease (PD) is a progressive neurodegenerative disease manifesting with both motor and cognitive symptoms. Recent studies focus on the concept of intense "forced" exercise and suggest that exercise may be neuroprotective and can reduce, delay or reverse PD symptom progression. Rock Steady Boxing (RSB) is a program that was developed to provide education and physical training to individuals with Parkinson's to combat their disease.

### Methods

This project was conducted with the participants of RSB program at Western Racquet and Fitness Club in Green Bay, WI. Two electronic surveys were distributed, 8 weeks apart, via email to each participant. Only individuals who completed both surveys were included in the results.

### Results

After participating in RSB, all members strongly believed that exercise was important following their diagnosis of PD. 83% had increased knowledge of the type of exercises they would benefit from and reported that RSB increased the numbers of days they exercised per week. 100% of participants recognized improvement in their PD symptoms with exercise after participating in RSB compared to 50% prior to RSB. All participants reported improvement in their strength, mobility and quality of life since participating in RSB.

### Conclusions

RSB effectively provided education regarding the importance of exercise as well as beneficial exercises for those with PD. Most participants acknowledged that the program improved physical symptoms and found that RSB provided major additional benefits such as having fun, improving self-confidence, and fostering community. ■

MEGAN VANDENBERG



SAMANTHA WOLLER



## Waupaca County Non-Emergency Medical Transportation (NEMT) Assets

MATTHEW WALDROP



### Introduction

Many rural areas lack alternative transportation options across the United States, which plays an important role in the healthcare disparities that rural patients face. In 2006, 6% of federal transit resources supports public transportation options in rural areas, which represents 19% of the U.S. population. In a 2019 study, 46% of Waupaca County residents reported being late or missing medical appointments because of a lack of reliable transportation. 87% of respondents needed to use alternative transportation options 1+ times per month. 42% cited medical appointments being the top reason they needed to use alternative transportation options. There was a total of 41,097 NEMT trips taken in Waupaca County in 2019..

### Methods

Surveys were administered to transportation organizations in Waupaca County via phone call. Organizations agreed to share their information with the public for future use in a Waupaca County Transportation website. Survey question included: name/email/phone number/website of organization, clientele served, hours of service, cost of service, numbers and types of vehicles, handicap accessibility, detailed service area, payment methods, certifications or forms needed for service, and any limitations on services.

### Results

Results were conveyed in map format.

### Conclusions

In Waupaca County, NEMT organizations are located near the 3 towns with largest population densities. A large group of rural Waupaca County residents are greater than 30 minutes from the nearest NEMT organization. Healthcare systems are more widespread throughout Waupaca County than NEMT organizations. ■

NOTES:

A series of horizontal lines for writing notes, overlaid with a faint, light gray network diagram consisting of interconnected nodes and lines.



# MCW

## Green Bay



MCW

Green Bay

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