

MCW

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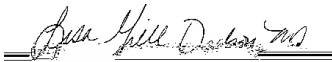
*Physicians in the Community
Scholarly Pathway*

Our goal is that all the students who train on the Medical College of Wisconsin-Central Wisconsin regional campus will be community-engaged physicians. This means that they will reflect on the impact that the social determinants of health have on their patients' lives and advocate for the overall health of the communities where they choose to practice.

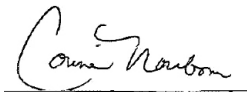
Over the two-year Physicians in the Community course, students have forged relationships with community members across many professional disciplines and have explored local health priorities. In partnership with community mentors, the students have identified community needs, collaborated to design appropriate methods, and developed presentations to share their results. Many of the students are building upon projects started by previous medical students and we anticipate the projects will continue to evolve to meet the needs of our Central Wisconsin community.

We would like to thank our many community teachers and community mentors, as well as the Physicians in the Community Advisory Board for their input into the training of our future doctors- many of whom we anticipate will return to live and work in Central Wisconsin communities.

Gratefully,



Lisa Dodson, MD
Campus Dean



Corina Norrbom, MD
Course Director



Amy Prunuske, PhD
Course Director



Medical Students:

3. *Health Management Psychology in 9th graders at Wausau East High School*

Community Mentors: Jessica Truax & Dr. Brad Peck, Wausau East High School
MCW-CW Collaborator: Dr. Amy Prunuske

Purpose: Obesity is a prevalent and growing issue in our nation. If this trend continues unabated, it is predicted that half of our children will be overweight within the next generation and 86% of adults will be obese by the year 2030. With growing concerns for addressing obesity, movements are being established to address weight management in adolescents. Unfortunately, these interventions may be exacerbating student weight stigma by focusing on weight rather than healthy habits. Ironically, creating an overemphasis on shape and weight is associated with increased BMI and negative internalized health issues.

Methods: At Wausau East High School a one session intervention was ran in the 9th grade health class. The intervention focusing on healthier self-talk and how it effects one's health.

Community Mentor: Kelly O'Heron, Aspirus Wausau Cardiology/Ideal Weight Loss Clinic
MCW-CW Collaborator: Dr. Amy Prunuske

Purpose: Patients participated in weekly health coaching and followed a meal plan emphasizing low carbohydrate, low fat, and normal protein to promote weight loss. There was an average of 23% weight reduction in surveyed population. Previously uninvestigated, weight regain at 1 year after completion of weight loss program was examined in comparison to Self-Efficacy (initial metric) and the factors of Self-Efficacy (secondary metric).

Methods: A chart review was conducted on 1112 patients who began the program in 2015 or 2016. Weight regain was calculated at 1-year \pm 200 days from program completion. Participants were emailed a DIET-SE screener that calculates overall self-efficacy and breaks into three factors: High Caloric Food Temptations (HCF), Social and Internal Factors (SIF), and Negative Emotional Events (NEE).

Questionnaire scores were recorded using Qualtrics technology. Overall SE score and HCF/SIF/NEE scores were compared to weight regain.

Results: 1112 patients started the meal plan in 2015-2016. 726 participants were contacted and 173 returned survey (24% response rate). 68 that returned the DIET-SE screener met inclusion/exclusion criteria and were analyzed. Linear regression of DIET-SE on weight regain indicates that for one unit increase in overall self-efficacy score, weight regain is expected to have an average decrease of about 0.74 units (-0.74, p-value 0.0022). Linear regression of DIET-SE subscores are all negatively correlated with weight regain: HCF (-1.02, p-value 0.0708), SIF (-1.72, p-value 0.0067), and NEE (-2.14, p-value 0.0011).

Conclusions: Negative emotional eating played the greatest role of the three in creating lower self-efficacy (that corresponds with higher weight gain). DIET-SE questionnaire could be used to predict weight regain predisposition. Negative emotional events played a greater role in creating lower self-efficacy (strongest of the three factors to correspond with weight gain).

5. *The prevalence of ACEs by gender in individuals seeking substance abuse and addiction recovery*

Community Mentor: Daniel Shine, Lakeside Recovery at North Central Health Care

MCW-CW Collaborator: Drs. Amy Prunuske & Corina Norrbom

Though still not clearly understood, it is evident that having Adverse Childhood Events (ACEs) leads to significant mental, social, and physical outcomes in adulthood. This is of particular interest to rehabilitation facilities due to the connection between ACEs and high-risk behaviors like alcohol and drug abuse. Lakeside Recovery at North Central Health Care is one such 21-day rehabilitation program that has been collecting ACE questionnaires upon admission of individuals seeking addiction recovery. Knowing the connection between ACEs and substance abuse, this project focused on exploring the distribution of ACEs among this high-risk group. Specifically, it examined the total number of ACEs between the two genders, in hopes to better understand how adversities in childhood are affecting men and women differently (or similarly) in the Central Wisconsin community.

An unpaired t-test was performed between the total number of ACEs of the men versus the women who have utilized Lakeside Recovery's services, providing a p-value of 0.11. This is not statistically significant, and the null hypothesis, that there is no difference in the total ACEs between the two genders in this high-risk population, is supported. This is useful information for treatment facilities, particularly in Central Wisconsin, as it will help them better understand their target population and know that the prevalence of ACEs is equal among the two genders. Further research is indicated to identify any significant differences among the specific types of ACEs, which may provide information to tailor treatment for the individual seeking substance abuse and addiction recovery services.

Medical Student:

6. *Healthcare for the Homeless*

Community Mentors: Pam Anderson & Dr. Jeff Oswald, The Warming Center

MCW-CW Collaborator: Drs. Corina Norrbom & Amy Prunuske, Ashley Dunton M2

Healthcare is becoming an increasingly difficult commodity to access, particularly for those with limitations to income and transportation. To this end, Wausau Free Clinic was established in 2018. It is our mission to serve the uninsured and underserved in the community who lack the resources to access the healthcare system.

Wausau Free Clinic was operational November 2018 through April 2019 for its first season. Patients were seen for 2 hours every Wednesday night, consisting primarily of guests at the Warming Center. Surveys were offered following visits, and anonymized data was collected regarding the conditions treated.

We saw 32 unique patients in 68 visits, with over half of the visits being related to musculoskeletal, respiratory, or dermatologic complaints. Survey respondents indicated that we were the only free clinic that they were making use of. A vast majority of survey respondents also indicated that they had no unmet healthcare needs following their visit.

Wausau Free clinic has created an avenue for individuals who otherwise would not seek out care, by fostering a personal relationship with the patients and building trust. In addition, the clinic has provided an additional safety net for individuals unable to afford other services. In the future, the clinic has plans to expand into a larger clinic serving additional underserved populations for whom it is a significant financial hardship to seek medical care, and to do so in a more permanent setting.

7. *Evaluating the Impact of Community Correction Programming on Modifying Criminal Thinking Domains*

Community Mentor: Shawn Yeager, Alternative to Traditional Incarceration of Citizens (ATTIC)

MCW-CW Collaborator: Dr. Corina Norrbom

Purpose: Community Corrections Programs, such as ATTIC-Wausau, are alternatives to incarceration for offenses deemed by the court system to be mild in manner. This patient population is complex and diverse, and ATTIC is attempting to evaluate their program efficacy. Thus, we retrospectively analyzed criminal thinking domain scores from participants' pre and post-treatment surveys to analyze changes.

Methods: The TCU-CTS survey was administered to 120 ATTIC clients enrolling in the "Thinking for a Change" program from January 2015 - January 2018. This self-reporting question-based survey grades several established Criminal Thinking Domains, being Entitlement, Justification, Power Orientation, Cold Heartedness, Criminal Rationalization, and Personal Irresponsibility. The survey was then re-administered if clients successfully completed all treatment sessions. Pre-treatment and post-treatment TCU-CTS scores were then assessed to identify possible changes in criminal thinking domains after participating in the program.

Results: Score changes were assessed in each domain of the TCU-CTS survey of participants who both successfully completed the program and completed pre and post treatment surveys (n=28). These participants showed mean 4.89-point decrease in TCU-CTS score after treatment. All measured domains showed improvements, except for Cold Heartedness. The domain that improved the most was Justification, which showed a 2.25-point decrease on average ($p=0.03$).

Conclusions:

8. *PATCH (Providers and Teens Communicating for Health) Program Implementation in Central Wisconsin*

Community Mentors: Nicole Thill, North Central Area Health Education Center. Kimberly Pufahl, The Women's Community, Inc.

MCW-CW Collaborators: Drs. Amy Prunuske and Corina Norrbom, Anna Bauman M2

Adolescents demonstrate a need for access to sexual health, mental health, and substance use counseling, but many report never having discussed these sensitive health topics with a healthcare provider. Healthcare providers are a reliable source of knowledge, but there is a critical gap in communication with adolescent patients. The PATCH (Providers and Teens Communicating for Health) Program aims to bridge communication gaps between adolescent patients and healthcare providers by facilitating open and honest conversations about sensitive health topics. In collaboration with the North Central and Northern Highlands Area Health Education Centers, The Women's Community, Inc., and local high schools, we were able to implement the PATCH program in Central Wisconsin. To do this, Teen Educators, a diverse group of students selected from local high schools, were hired to lead two types of workshops - one targeting peers and the other healthcare providers - in order to increase utilization of healthcare resources by young people and improve communication in the provider's office. After participating in a PATCH workshop, providers demonstrated increased knowledge of adolescent concerns and preferences and of best practices to ensure honest conversations about health history. Their understanding of minor's rights increased significantly. Teens demonstrated greater understanding of the importance of patient/provider communication and increased self-efficacy. Overall, there was significant improvement in the areas of provider and teen knowledge, self-efficacy, and behavioral intentions to seek and provide quality healthcare. Further, providers reported actual behavior change in how they interact with teen patients.



Medical Student:

10. The Open Door of Marathon County: A Study on Recidivism

Community Mentor: Linda Glazner, The Open Door of Marathon County

MCW-CW Collaborator: Dr. Amy Prunuske

Purpose: The Open Door aims to help recently released inmates from the Marathon County Jail or the Wisconsin prison system. Having hard data regarding their mission will allow the Open Door to improve their model and prove their worth to potential donors.

Methods: Data collection was performed using private Open Door logbooks containing the names and date of birth of individuals who have utilized their services. These names were cross-checked with CCAP, with the end data point being either "Recidivism" determined by the individual appearing in CCAP for a violation beyond a misdemeanor within one year of utilizing services provided by The Open Door, or "No Recidivism" for those who did not reappear within one year.

Results: 170/260 individuals (65%) identified as recently released from jail or prison were found in CCAP. Of the 170 found in CCAP, 62 had committed a crime within the year following their contact with Open Door, giving a one-year recidivism rate of 36%.

Conclusions: The largest issue facing The Open Door in their desire to analyze their client population is in their current methods of collecting data. In order for useful information to be obtained from their records, a percentage far greater than 65% must be discoverable on CCAP. This issue has been discussed with The Open Door staff and measures have been made to improve their record collection process. The 36% recidivism rate obtained is relatively close to the Wisconsin average. However, with such a small sample size and with so many individuals undiscoverable in CCAP, it is hard to accept this number as a significant value. A far greater sample size is needed before meaningful data can be interpreted.

12. The Impact of Mentorship on Students with Adverse Childhood Events (ACEs) and Their Future Success

Community Mentor: Shannon Young, Ed. D, Enrich Excel Achieve Learning Academy

MCW-CW Collaborators: Drs. Jeff Fritz and Corina Norrbom, Courtney Schwebach M4, Krysten Rutzinski M2

Adverse childhood events (ACEs) have been linked to numerous negative health outcomes

Medical Student:

13. *The Joseph Project*

Community Mentors: Chaplain Ray Slatton, Pastor Yauo Yang, Ann Micholic, Kolbe Windows & Doors

MCW-CW Collaborators: Christopher Zeman M4, Aleksander Downs M2, Drs. Corina Norrbom and Amy Prunuske

Purpose: Unemployment is associated with poor health outcomes such as depression, obesity, and increased usage of drugs and alcohol. We propose that reducing unemployment rates for individuals with barriers-to-hire, such as ex-convicts and those in substance abuse recovery, can lead to improved health outcomes and increased utilization of health insurance. The purpose of our study was to track employment and retention, as well as health insurance coverage for Joseph Project participants pre and post-employment.

Methods: The Joseph Project is a 4-day class with courses consisting of personal financial management, conflict resolution, time management, and interviewing skills. Joseph Project course graduates are guaranteed an interview with a local partnering employer. Employment and retention outcomes were assessed by measuring employment turnover and average days worked.

Results: Over the course of eight classes we graduated fifty individuals from the Joseph Project. Thirty-eight were hired with an average of one-hundred-and-fifty-seven days worked. Eight continue to be employed. 54% of our class participants were not insured before employment. 31% were on Medicare/Medicaid/Badgercare.

Conclusions: The Joseph Project Wausau has been successful in getting class participants jobs but there is significant difficulty with employee retention. Our future plans are to evaluate how to improve the program's employment retention rates and to further demonstrate that by facilitating employment, the Joseph Project Wausau leads to subsequent improvements in health outcomes.

Medical Student:

14. Effect of Mentoring and Guidance Interventions on Academic Performance and Behavior in Adolescents

Community Mentor: Patty Zemke, Wausau School District

MCW-CW Collaborator: Drs. Amy Prunuske and Corina Norrbom

At-risk youth are susceptible to many of society's problems. This population is more likely to develop problems with drug abuse, crime, unemployment, and increased utilization of the healthcare system, making childhood an opportune time to intervene. In this project, we attempted to evaluate the effectiveness of a mentoring and guidance program that was a part of the student's regular school day. This program was implemented for 7th graders and involved three weekly group meetings in addition to high school student mentoring. Objectives included building resiliency and responsibility, promotion of goal-oriented behavior, and encouraging healthy choices. For evaluation of the program, students were surveyed at the start and end of their semester in the program. Questions on this survey were adapted for the program's goals from other youth assessment tools and assessed student perspectives on future goals, social support, personal achievement, and attitudes regarding unhealthy behaviors. Pre and post survey results were compared. Often there was little change in the student responses while other responses changed in an unexpected direction. Student grades, attendance, and disciplinary reports were also evaluated. From survey results alone, the program may appear to be ineffective, but successes were noted in individual student grades, attendance, and discipline.

Medical Students:

15. Investigating Factors of Repeat Domestic Abuse Victims

Community Mentor: Shannon Jarecki, The Women's Community, Inc.

MCW-CW Collaborator: Dr. Amy Prunuske, Gina Groshek- Class 2019

This research aimed to determine common factors that may predispose victims to repeatedly enter abusive relationships. Additionally, we sought to identify what tools and strategies provided by The Women's Community survivors found useful in recognizing violence and removing themselves safely from a situation. Finally, we hoped to aid the Women's Community in preventing victims from entering multiple abusive relationships and provide feedback on how the organization can better assist its clients. To gather data, both a modified Danger Assessment Scale (DAS) and open-question interview were used. Despite several changes to research methods and incentivization, we were only able to obtain three participants, all of whom completed the questionnaire and one participant who completed the interview. Due to this small sample size, we were unable to draw conclusions or inform the Women's Community on their programming.

16. Mental Health Screening of D.C. Everest Junior High Students using the GAIN-SS

Community Mentor: Brooke Davis, DC Everest Junior High School

MCW-CW Collaborators: Hilary Steltenpohl M3, Drs. Amy Prunuske and Corina Norrbom

Background: The Marathon County Youth Risk Behavior Survey reported that 31.5% of students described their mental health as not good during the past 30 days for 3 days or more. Prevention and early intervention during adolescence is crucial. The Global Appraisal of Individual Needs Short Screener (GAIN-SS) is an evidence-based survey that identifies needs for further assessment in areas of mental health. The GAIN-SS has been used in the clinical setting but has not yet been implemented in schools. This study aims to determine if the GAIN-SS is an effective tool to be implemented in schools for mental health screening of adolescents.

Methods: A consent form was sent to all parents of D.C. Everest Junior High students to allow their student to participate in the GAIN-SS. Students who obtained parental consent were then required to give or decline individual assent the day that the screener was administered. Of the students who gave assent to taking the GAIN-SS, those who reported thinking about committing suicide were flagged by student services.

Medical Student:

17. Mental Health Education and Promotion via “Kind Minds” Event for D.C. Everest 9th Graders

Community Mentors: Brooke Davis, D.C. Everest Area School District, and Beth Krueger, Achieve Center

MCW-CW Collaborators: Drs. Amy Prunuske and Corina Norrbom, Lexi Papke M2

Many of the medical students helped to make this day a success!

Purpose: During mental health screening of DC Everest 8th/9th graders, it was found that 20/123 (~16%) students had thoughts of suicide in the last year. With over 900 students in the school, that rate correlates to over 144 students. At DC Everest there were only 2 counselors for these 900 students during the year 2019-2020. When tackling the issue of adolescent mental health, healthcare systems alone are not enough. Studies have shown that as many as 1/3 of adolescents had no preventative healthcare from ages 13-17 years.

Methods: Local businesses, healthcare providers, and other resources within the community of Wausau were utilized to create presentations and activities for a mental wellness day. The event was named “Kind Minds,” voted on by the students themselves, and took place at Dales Weston Lanes in Weston, WI in March 2019. Topics covered included: testing anxiety, mindfulness meditation, social media safety and its impact on mental health, lowering stigma in relation to mental health, substance abuse and mental health, understanding and addressing teen dating violence, how to talk to healthcare providers about your mental health, yoga, pet therapy, horticulture, and reflective writing.

Results/Conclusions: Preliminary data analysis, showed that an overwhelming majority of students surveyed (~80%) found the day to have given them, “a better understanding of mental wellbeing and ways to improve it.” Additional survey data analyzation is to be determined. Future directions of the event include utilizing the D.C. Everest High School as a venue in order to have more spaces and therefore smaller groups of students with each presenter. We also plan to utilize the survey results of students and presenters to improve on this pilot year. Topics students wanted to have more of next year included: how to help friends struggling with mental illness, bullying, music therapy, and more physically active sessions.

18. Reducing Recidivism with Medical Case Management

Community Mentor: Dr. Linda Glazner, The Open Door of Marathon County

MCW-CW Collaborator: Dr. Amy Prunuske

Purpose: 4,875 inmates are released from Marathon County jail each year. 64 percent suffer from mental health issues that require treatment, and whose healthcare and prescription coverage are terminated upon discharge. Unfortunately, mental health services and reentry programs are limited in Marathon County; and with little to no support systems in place, 1 in every 3 ex-offenders reoffend within three years of release. The Open Door, a non-profit organization in downtown Wausau, was established to address these issues by providing ex-offenders with much needed support including employment and housing resources as well as a new medical case management program. The purpose of this program is to help ex-offenders manage their medical and mental health issues and provide them with the tools they need to re-contribute to society and ensure the safety of our community.

Methods: Guests are assigned a case manager for an agreed upon number of visits. To establish the validity of the program, guests are surveyed at three intervals: once at the initial interview, once after a month of enrollment, and once after six months of enrollment. This allowed case managers address what their needs are and what barriers obstructed their previous attempts to re-integrate. These surveys are then used to monitor their progress.

Results: Seven pre-service questionnaires were completed. Of the seven participants, five ranked untreated mental illness as a factor contributing to past recidivism. Four ranked poorly managed medical conditions as another factor. These challenges, among others, are the proclaimed reasons why 86 percent of guests have been incarcerated four or more times in their lifetime. Conclusions: Recidivism is a significant problem in Marathon County, particularly because there are limited resources available to ex-offenders. Guests at Open Door have indicated a great need to have their medical and mental health issues addressed, which makes them more likely to reoffend.

19. Community Paramedicine Project

Community Mentor: Tracey Kujawa, Wausau Fire Department, and David Cao, MD

MCW-CW Collaborator: Dr. Amy Prunuske

The purpose of the community paramedicine project is to reduce the 30-day readmission rate of local patients suffering from Chronic Obstructive Pulmonary Disorder (COPD). This is done through in-home visits by paramedics immediately following discharge from a recent hospital admission. During the visits, the paramedics connect community members with resources and reconcile newly prescribed medications. Although more longitudinal statistical analysis of readmissions was unable to be performed, surveys provided afterwards showed that patients perceived the program to be very successful.

About

