

Previously Funded Proposals CCOR Pilot Award



Clinical and Community Outcomes Research Pilot Awardees 2022-2024

Year	Principal Investigator/s	Affiliation	Title
2024	Funmi Abraham Lisa Cadmus-Bertram Betty Chewing	School of Pharmacy	Improving Mental and Physical Wellbeing of Children and Adults of African Descent
2024	Melisa Carrasco McCaul	SMPH Department of Neurology	The Hybrid Abecedarian Approach (Hybrid AA) for Cognitive Rehabilitation of Infants Living in Wisconsin Rural Communities, Following Perinatal Brain Injuries (PBIs)
2024	Amanda Margolis	School of Pharmacy	Improving Medication Use Among Veteran Patients with Inflammatory Conditions via Specialty Pharmacy Services
2024	Julie Keating Nasia Safdar	SMPH Department of Medicine	Staphylococcus Aureus Bacteremia Electronic Reminder Adapted for Rural Settings: The SABERUS Project
2023	Michael Koenigs	SMPH Department of Psychiatry	Peer-led Trauma Therapy for Re-entry
2023	Aurora Pop-Vicas	SMPH Department of Medicine	Cognitive Rehabilitation for Long COVID patients with Brain Fog – the First Step
2022	Catherine Allen Krisjon Olson Ryan Coller	SMPH Department of Pediatrics	Accessible Transition Readiness Assessment (aTRA): Adapting an Intervention for Congenital Heart Disease Survivors with Disabilities
2022	Rachel Grob Jane Evered	SMPH Department of Family Medicine and Community Health	Addressing Inequities in Long COVID Experiences: Implementing an Educational Intervention in Primary Care
2022	Art Walaszek	SMPH Department of Psychiatry	Advancing the Use of Academic Detailing and DICE as Ways of Enhancing the Care of Persons Living with Dementia
2022	Kate Walsh	L&S Department of Psychology	Understanding How the Forensic Nurse Exam can be Improved to Reduce Health Disparities Among Black, Indigenous, and LGBTQ2S Survivors of Sexual Assault

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2024 Awards

Improving Mental and Physical Wellbeing of Children and Adults of African Descent

Funmi Abraham, PhD – School of Pharmacy

Lisa Cadmus-Bertram, PhD – School of Education, Department of Kinesiology

Betty Chewing, PhD – School of Pharmacy

Collaborators: Bayview Community Center Multicultural Center, Life Center Madison, Westside Community Center, Sun Prairie Community Schools - Northside Elementary, Eagle Heights Community Center, Bakke Recreation and Wellbeing Center, National Association of Nigerian Nurses in North America (NANNNA), Nigerian American Professionals Association (NAPA), Prisco Community Center, African American Health Network of Dane County

Summary: The mental health crisis among children and adults in Wisconsin is a critical issue, with high rates of depression, anxiety, and suicide. African American/Black immigrant families from disadvantaged backgrounds are at higher risk. Accessibility to mental health services remains a challenge due to disparities. In addition, obesity prevalence, especially among Black adults and children, is a concern, increasing the risk of other health conditions. Culturally responsive dance, such as gospel afrobeat dance, has shown great promise for improving mental health and cultural preservation in diverse communities. The scientific rationale supporting this research stems from the need to address health disparities among individuals of African descent. Previous studies have documented the disproportionate burden of physical and mental health issues among this population, resulting in adverse outcomes and increased healthcare costs. However, limited evidence exists regarding culturally responsive interventions targeted at this specific group. The Gospel Afrobeat Dance MEDicine (GAME), rooted in Afrobeat dance and gospel music, offers a culturally relevant approach that embraces the community's unique identity and addresses their specific needs. This project will investigate the effects of a culturally responsive fitness program, GAME, on the mental and physical wellbeing of black children and adults. The research findings will contribute to the body of evidence on the effectiveness of culturally responsive interventions in addressing health disparities among minoritized populations.

The Hybrid Abecedarian Approach (Hybrid AA) for Cognitive Rehabilitation of Infants Living in Wisconsin Rural Communities, Following Perinatal Brain Injuries (PBIs)

Melisa Carrasco McCaul, MD, PhD – SMPH, Department of Neurology

Collaborators: Abecedarian Education Foundation, Reach Dane, Wisconsin Birth to 3, UW Waisman Center

Summary: Children with perinatal brain injuries (PBIs), or brain injuries sustained around the time of birth, are at risk of poor academic achievement and cognitive disability during childhood and into their adult life. PBIs are typically sustained secondary to premature birth; they may also occur secondary to complications around the time of birth and delivery. There is currently not enough evidence to support the use of any of the existing cognitive interventions, for children with PBIs living in rural settings. Available interventions for cognitive rehabilitation following PBIs in the United States are limited and only available to children living near large academic centers. The transformative initiative proposed here would allow for the creation of a hybrid (combined

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virtual/in-person) iteration of the Abecedarian Approach, an established intervention consisting of a suite of teaching and learning strategies that were developed to improve the early development and later academic achievement of children from at-risk and under-resourced families. The primary objective of our research is to adapt the existing, fully-in person AA intervention into a Hybrid AA intervention (combined virtual/in-person), and to create the infrastructure needed to support this intervention. The second objective will be to collect preliminary feasibility data to determine how the Hybrid AA can be administered in a small sample of participants. Data collection will involve a combination of observational assessments and standardized tests, aimed to capture a comprehensive picture of the impact of the Hybrid AA on cognitive and executive function development in children with PBIs.

Improving Medication Use Among Veteran Patients with Inflammatory Conditions via specialty pharmacy services

Amanda Margolis, PharmD – School of Pharmacy

Collaborator: William S. Middleton Memorial Veteran's Hospital

Summary: One in three Veteran patients has arthritis, which is a 60% increase compared to non-veterans. Veterans with arthritis are also often significantly disabled and less likely to be able to work, given the debilitating nature of arthritis. Biologic medications are life-prolonging and life-changing for patients with inflammatory arthritis; however, self-administered biologics require self-injection, complex initiation schedules, infection risks, and are high cost (27% of US prescription spending on 2% of prescriptions). Therefore, many health systems have incorporated specialty pharmacists to conduct education and monitoring, which increases medication adherence, improves medication safety, and reduces costs for both patients and health systems. Therefore, at the Madison VA, a new Centralized Specialty Medication Management (CSMM) clinic has been piloted, where patients initiating self-administered biologics are offered education and monitoring from a specialty pharmacist. As of November 2023, 61% of Veterans initiating biologics in CSMM was for inflammatory arthritis (n=177), and 53% have at least 50% service-connected disability. Initial evaluations of CSMM have shown benefits to patients and cost containment; CSMM pharmacists make a medication adjustment for 20% of the patients to improve disease control, minimize side effects, and save \$787 per patient. While dissemination throughout the VA nationally would be ideal to improve Veteran care, identification of CSMM core elements and evaluation tools to measure CSMM clinical outcomes are required to craft a competitive federal application to request national funding to test and disseminate the model.

Staphylococcus Aureus Bacteremia Electronic Reminder Adapted for Rural Settings: The SABERUS Project

Julie Keating, PhD – SMPH, Department of Medicine

Nasia Safdar, MD, PhD – SMPH, Department of Medicine

Collaborator: Association for Professionals in Infection Control (APIC)

Summary: Staphylococcus aureus bacteremia (SAB) is associated with the highest mortality rate, length of stay, and healthcare costs of all bloodstream infections in the USA. SAB causes 160,000

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cases, 40,000 deaths, and over \$2 billion in healthcare expenditures annually. SAB is also the most common cause of co-infections and superinfections in patients with COVID-19, with methicillin resistant *Staphylococcus aureus* (MRSA) bacteremia increasing significantly in 2020 according to data from the Centers for Disease Control and Prevention. SAB treatment is complicated by the increased likelihood of endocarditis, septic arthritis, epidural abscess, and recurrence. Patients with SAB commonly need extended courses of intravenous antibiotic therapy that increase their risks of complication and toxicity. Research shows that access to infectious disease (ID) expertise and adherence to clinical practice guidelines for SAB treatment significantly improve survival, quality of care, and can improve health disparities by ensuring common complications are screened for, appropriate antibiotics are prescribed for appropriate durations, and outpatients are monitored. However, access to on-site ID expertise is limited in lower-resourced, rural hospital settings due to geographic location, resource allocation within hospital systems, and low numbers of ID clinicians in the workforce. For non-ID clinicians, the use of passive clinical practice guidelines is limited by recall, interpretation, and execution. Failing to address the gaps between rural/resource poor and urban/resource rich healthcare settings propagates healthcare disparities and puts rural patients with SAB at higher risk for substandard care and death. Electronic health record systems are increasingly available across all healthcare settings in the USA and can support clinicians in making informed treatment decisions by integrating infectious disease guidelines with relevant patient information. An electronic health record-integrated guideline-concordant support tool would extend the reach of ID expertise to clinicians and patients at medical centers with limited-to-no access to specialist care. I hypothesize that expanding access to ID expertise by utilizing the existing infrastructure to address a known health disparity will improve provider and patient outcomes for SAB.

2023 Awards

Peer-led Trauma Therapy for Re-entry

Michael Koenigs, PhD – SMPH, Department of Psychiatry

Collaborators: Nehemiah Community Development, EX-incarcerated People Organizing (EXPO) Wisconsin, Wisconsin Department of Health Services

Summary: There is a significant unmet need for treatment of post-traumatic stress disorder (PTSD) among formerly incarcerated people living in the community. Our team's ongoing stakeholder engagement efforts have identified two key barriers to obtaining treatment of PTSD among this population: (1) lack of access and (2) lack of trust. Working collaboratively with community partners impacted by trauma and incarceration, we have developed a novel proposal to address these barriers by training peers (i.e., individuals with personal history of trauma and incarceration) to deliver an evidence-based PTSD treatment. This proposal leverages an existing Certified Peer Specialist (CPS) program, which is administered through the Wisconsin Department of Health Services (DHS). The main focus of this pilot project is on feasibility of peer-led group Cognitive Processing Therapy (CPT) for PTSD. We hypothesize that peer-led group CPT will be feasible and acceptable to formerly incarcerated people, based on measures of participation, retention, compliance, therapist adherence and competence, safety, and acceptability.

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Cognitive Rehabilitation for Long COVID patients with Brain Fog – the First Step Aurora Pop-Vicas, MPH, MD – SMPH, Department of Medicine, Internal Medicine

Collaborators: UW Community Advisors on Research Design and Strategies (CARDS), UW Collaborative Center for Health Equity (CCHE), UW Center for Community Engagement and Health Partnerships (CCEAHP), UW Community Academic Aging Research Network (CAARN), Access Community Health Center – Madison, UW Health Long COVID Outpatient Clinic, All of Us Research Program

Summary: In the pandemic aftermath, 20-25% of survivors live with Long COVID – persistent symptoms that impair function, leaving approximately 3.5 million people out of the US workforce each year. Racial and ethnic minorities, disproportionately affected by COVID-19, are at increased Long COVID risk due to higher hospitalization rates, disparities in vaccination, and reduced healthcare access. Cognitive decline, or “brain fog,” is a chief reason that prevents returning to normal function. The elucidated biological mechanisms show brain changes consistent with ongoing neuroinflammation and long-term tissue damage. Unfortunately, the clinical management of Long COVID brain fog remains limited by significant diagnostic and therapeutic gaps. Currently, cognitive evaluation in clinical practice relies on neuropsychological testing that views cognition as the sum of isolated constructs (i.e., working memory, attention), with little regard to how cognition manifests in functional tasks. The tests mostly used – the mini-mental state examination (MMSE) and the Montreal Cognitive Assessment (MoCA) – do not accurately detect deficits in instrumental activities of daily living (IADLs). Some patients score well within the normal range yet have difficulties performing IADLs; others are correctly classified as having cognitive impairment but exhibit no daily life difficulties due to successful use of compensatory strategies. We propose to overcome these diagnostic shortcomings by evaluating Long COVID brain fog through the lens of functional cognition – one’s ability to integrate cognitive skills, performance skills, and performance patterns to accomplish a desired task. Our proposed performance-based functional cognitive assessment can more accurately quantify the real-world impact of Long COVID brain fog and inform future development of specific cognitive therapies. Our objective for this pilot proposal is to determine the best clinical diagnostic tool for Long COVID brain fog through an observational study that increases access to Long COVID resources for minority patients at risk, including Black people.

2022 Awards

Accessible Transition Readiness Assessment (aTRA): Adapting an Intervention for Congenital Heart Disease Survivors with Disabilities

Catherine Allen, MD – SMPH, Department of Pediatrics
Krisjon Olson, PhD – SMPH, Department of Pediatrics
Ryan Coller, MPH, MD – SMPH, Department of Pediatrics

Collaborators: UW-Madison Waisman Center Youth Health Transition Initiative, Conquering Congenital Heart Disease – Wisconsin, Adult Congenital Heart Association, Wisconsin Board for People with Developmental Disabilities, Wisconsin Department of Workforce Development

Summary: Effective surgical and medical therapies have dramatically extended life expectancy for

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the one in one-hundred children born with congenital heart disease (CHD), but 40% of the 1.4 million survivors face lifelong disabilities. Child survivors encounter an adult healthcare system unprepared for their medical complexity, communication, and caregiving needs. As many as 62% drop out in the transition from pediatric to adult congenital cardiac care and experience high risk surgical procedures, admission to the intensive care, or premature death as a result. An estimated 83% suffer severe complications of the advanced therapies (heart transplant, mechanical support, stents etc.) they received as children accounting for 10% of spending in healthcare. Fewer patients and families will get lost in transition if we can identify the individual, health, and community factors that make care accessible. Survivors find themselves in a disability-health paradox: aging into an adult healthcare system not designed for them. We want to learn directly from disabled survivors' experiences of health care and services to improve transitions.

Addressing Inequities in Long COVID Experiences: Implementing an Educational Intervention in Primary Care

Rachel Grob, PhD – SMPH, Department of Family Medicine and Community Health

Jane Evered, PhD, RN – SMPH, Department of Family Medicine and Community Health

Collaborators: Wisconsin Research and Education Network (WREN), Office of Community Health (OCH), Center for Patient Partnerships (CPP), ICTR D&I Launchpad

Summary: By the end of the Omicron wave, 15-20 million Americans will be experiencing long-COVID symptoms. Addressing long COVID is increasingly urgent given the staggering number of those projected to be affected, the depths of suffering it induces for patients and families, and its health equity implications. Our preliminary data – 24 in-depth qualitative interviews with people experiencing long COVID – demonstrate the potency of narrative approaches for documenting overlap between clinical symptomology of a novel condition and intertwining societal, relational, and economic structures. As patients and clinicians both struggle to understand and respond to long COVID, there is a critical need to build clinicians' knowledge, confidence, and efficacy with respect to the social impact of this novel clinical phenomenon on patients.

Advancing the Use of Academic Detailing and DICE as Ways of Enhancing the Care of Persons Living with Dementia

Art Walaszek, MD – SMPH, Department of Psychiatry

Collaborators: Wisconsin Alzheimer's Institute, Richland Hospital, Milwaukee Health Services

Summary: Approximately 90% of persons with dementia experience behavioral and psychological symptoms of dementia (BPSD) over the course of their illness, including aggression, psychosis, and depression. BPSD are associated with worsened quality of life and higher risk of injury for persons with dementia and their caregivers. Most people with BPSD, especially in rural and urban underserved areas, do not have access to specialty geriatric care – thus it is critical that primary care clinicians are prepared to assess and manage BPSD. We have developed an educational intervention for healthcare professionals that combines two complementary approaches: the academic detailing model and the DICE Approach™ (DICE). Academic detailing engages

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healthcare professionals to persuade them to make changes to their clinical practice. Multiple randomized controlled trials have demonstrated the efficacy of academic detailing in improving healthcare outcomes. DICE is an evidence-informed approach to addressing BPSD that encourages comprehensive assessment of patients and use of non-pharmacological interventions.

Understanding How the Forensic Nurse Exam can be Improved to Reduce Health Disparities Among Black, Indigenous, and LGBTQ2S Survivors of Sexual Assault

Kate Walsh, PhD – College of Letters and Science, Department of Psychology

Collaborators: Dane Multi-Agency Center (DaneMAC)

Summary: One in five women in the US will experience a lifetime rape, including oral, anal, or vaginal penetration due to force or incapacitation from drugs and alcohol, and nearly one in two will experience other unwanted or nonconsensual sexual contact. Rates of sexual violence are elevated among lesbian, gay, bisexual, transgender, queer and questioning, and two-spirit (LGBTQ2S) people as well as people of color, particularly Indigenous and multiracial women. Sexual violence is associated with elevated risk for long-term physical and mental health problems, and significant economic costs. In national samples, one in five sexual violence survivors has sought a forensic nurse exam (FNE) following their assault. While many survivors report positive experiences with the FNEs, others have felt that they did not have agency in the process, which is a critical component of trauma-informed care. For Black, Indigenous, and LGBTQ2S survivors, structural racism in the healthcare system as well as overt discrimination on the basis of race, gender, and sexuality, and microaggressions rooted in racism, cisgenderism, and heterosexism may interact to produce significant health disparities in post-assault care received. Indeed, nurses have been shown to have difficulty identifying injury in Black survivors, and Black survivors are less likely to seek mental health care following rape compared to White survivors. However, no studies to our knowledge have examined whether Black, Indigenous, and LGBTQ2S survivors' experience with the FNE impacted their utilization of referrals and subsequent health outcomes.