

OVERVIEW
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SANFORD CENTER FOR BIOBEHAVIORAL RESEARCH

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RESEARCH

In collaboration with Sanford Behavioral Health, Sanford Children's and the
Sanford Eating Disorders & Weight Management Center

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I. Introduction

The Sanford Center for Biobehavioral Research (CBR) is a clinical research and education facility with a particular focus on eating disorders, bariatric surgery, child traumatic stress, and mental health care delivery in rural settings. In this brochure, we will try and provide a summary of the major projects that are being conducted at CBR. Anyone who has additional questions about the work being conducted at CBR is encouraged to contact us at (701) 293-1335. We are happy to interact with clinicians, scientists, and the public about any of the topics we address in our work.

II. Eating Disorders and Bariatric Surgery Research

SANFORD CENTER OF BIOMEDICAL RESEARCH EXCELLENCE (COBRE): EATING DISORDERS AND OBESITY

This project, funded by the National Institutes of Health (NIH) in 2021 as a Center of Biomedical Research Excellence (COBRE), is titled the Center for Biobehavioral Mechanisms of Eating Behavior (CBM-EB). It is a large-scale and unique clinical-science program that includes scientists from around the U.S. and effectively integrates Sanford with North Dakota State University and the University of North Dakota School of Medicine. Additionally, this project will help to further integrate CBR with the Sanford Eating Disorders & Weight Management Center (EDWMC), thus creating a true clinical-research program. Although numerous COBREs exist across the United States, particularly in the basic sciences, this COBRE is focused on clinical research and is the only COBRE in the country that focuses on eating disorders and obesity. The overarching goal of this project is to develop a strong, nationally recognized clinical research center and a research infrastructure that supports the development of young scientists who go on to become independent investigators and conduct clinically relevant research. To support these aims, the CBM-EB maintains an active Clinical Research Training and Mentoring Program and Pilot Projects Program.

SANFORD/UNIVERSITY OF MINNESOTA/UNIVERSITY OF CHICAGO: NIH T32 MIDWEST REGIONAL FELLOWSHIP FOR EATING DISORDER RESEARCH

The Midwest Regional Fellowship for Eating Disorder Research has existed in Sanford for approximately 14 years. This fellowship program attracts early-career scientists who are committed to becoming independent investigators in the area of eating disorder research. The project is a consortium with three sites: the Sanford CBR, the University of Minnesota Department of Psychiatry, and the University of Chicago Department of Psychiatry. Each site maintains two fellowship positions which last a minimum of two years. Much of the training and programming in the fellowship is shared through video conferencing platforms between the three sites. Furthermore, fellows may conduct research with faculty at all three sites. This site has been an excellent source of recruiting both eating disorder scientists and clinicians who can contribute to Sanford Research and Sanford Health following their fellowship training. Currently, this consortium is one of only two T32 programs in eating disorders in the United States.

SANFORD NIH-FUNDED RESEARCH PROGRAM IN EATING DISORDER RESEARCH

CBR has been intensively engaged in eating disorder research for over two decades. CBR has received over 15 NIH grants targeting eating disorders during that time, which supported research on psychiatric diagnosis, psychobiological factors related to the course of the illness, and eating disorder treatment development. Sanford scientists have been asked to contribute their scientific findings and clinical recommendations to NIH, various professional organizations (Eating Disorder Research Society, Academy for Eating Disorders, National Eating Disorder Association), and a special White House Eating Disorder Task Force in 2015. CBR works closely with the Sanford Eating Disorder & Weight Management Center (EDWMC) to facilitate recruitment of participants in their various studies and also to interact with clinicians at the EDWMC to integrate clinical and scientific perspectives on eating disorders.

SANFORD NIH-FUNDED RESEARCH PROGRAM IN BARIATRIC SURGERY RESEARCH

CBR has been conducting NIH-funded research in the area of bariatric surgery since 2003. CBR has received over fourteen NIH grants targeting bariatric surgery patients that have empirically examined areas such as the short- and long-term safety of bariatric surgery, cognitive functioning, sexual functioning, psychosocial outcomes after surgery, the impact of bariatric surgery in adolescents, risk of problems with alcohol after surgery, as well as depression and weight regain after surgery. Sanford scientists have presented their research at the American Society for Metabolic and Bariatric Surgery and The Obesity Society's annual conferences. Additionally, in 2018 two Sanford scientists were invited to take part in the Radcliffe Institute's meeting of nationally recognized experts in the area of increased risk for alcohol use disorders after bariatric surgery. CBR is tightly aligned with the Sanford Bariatric Surgery Department, where they recruit most of their bariatric surgery research participants.

SANFORD/UNIVERSITY OF MINNESOTA INTEGRATIVE COGNITIVE AFFECTIVE THERAPY LEARNING COLLABORATIVE

This project involves international dissemination of a treatment for eating disorders titled, Integrative Cognitive-Affective Therapy (ICAT). ICAT was developed and tested in research projects funded by NIH at CBR, the University of Minnesota Department of Psychiatry, and the University of Wisconsin Department of Psychiatry. ICAT is a short-term, structured, empirically supported treatment for bulimia nervosa and binge eating disorder. It has been tested in randomized controlled trials, funded by NIH, and found to be as effective as alternative first-line treatments. In 2020, the Academy for Eating Disorders asked clinical scientists from CBR and the University of Minnesota to provide a training program for clinicians across North and South America. This project is now completed, but staff from CBR continue to train clinicians in Portugal and various sites around the United States.

III. Sanford Treatment Collaborative for Traumatized Youth (TCTY)

The TCTY was established in 2006. The mission of the TCTY is to deliver training, education, and clinical services to the state of North Dakota that assist traumatized children and their families. The programs listed below highlight the various services and resources that the TCTY has brought to the state in an effort to enhance the lives of North Dakota's maltreated children.

TRAUMA-FOCUSED COGNITIVE BEHAVIORAL TRAINING (TF-CBT) PROGRAM

The Sanford Trauma-Focused Cognitive Behavioral Training (TF-CBT) program is a statewide clinical training and education program which has disseminated evidence-based treatments for traumatized children with behavioral health difficulties since 2006. The program focuses on TF-CBT training in mental health treatments for traumatized children and families, as well as broad-based mental health screening to detect mental health difficulties and the impact of trauma on children. Over 500 mental health professionals in North Dakota have received treatment training through the program and over 300 professionals have received training in trauma related screening. Additionally, the TF-CBT program maintains a comprehensive webpage with a roster of trauma-trained clinicians across North Dakota, hosts a monthly CEU event, and disseminates resources on trauma to mental health professionals. TF-CBT program has had a significant impact on training mental health clinicians treating traumatized children and families for the state of North Dakota.

SANFORD MENTAL HEALTH TRAUMA TRAINING FOR RESIDENTIAL TREATMENT PROGRAMS IN NORTH DAKOTA

Since 2022, a team from TCTY has conducted a series of trainings and consultations for residential treatment programs across North Dakota. This program was requested and funded by the North Dakota Department of Health and Human Services. Residential treatment program staff encounter large numbers of children with severe mental health disorders and most have trauma histories. The work is challenging, and many programs face high turnover rates. Program directors at these sites recognized the need to provide training to staff on the consequences of child trauma on development and behavior. Currently, this is a two-year program with the first year focusing on staff mental health, burnout, trauma treatment impact on staff, and building resiliency. The second year shifts to understanding the relationship between psychological trauma, child development, and problematic behavior. Trainings in the second year weave in skills from year one to help staff continue working on building resiliency. The presentations and associated clinical consultations are evidence-based, clinically oriented, and practical with the objective of assisting direct service workers with knowledge and practical skills to better understand and serve youth with trauma histories. (This project was completed in 2023.)

TELEHEALTH OUTREACH PROGRAM FOR TRAUMATIC STRESS

Since 2021, TCTY staff have been involved in the Telehealth Outreach Program for Traumatic Stress (TOP-TS) housed in the Mental Health Disparities program at the Medical University of South Carolina (MUSC). TOP-TS is funded through SAMHSA as part of the National Child Traumatic Stress Initiative. The telehealth model for delivering Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) was researched and developed by TOP-TS. The SAMHSA-funded project involves wide-scale dissemination of knowledge, implementation, resources, and sustainability of a telehealth service delivery model for treatment for underserved youth (i.e., racial/ethnic and/or linguistic minorities, rural, low SES) in the U.S. and Puerto Rico. The project is currently funded from September 2021 through September 2026. TCTY staff are involved in training nationally on telehealth, curriculum development, and resource development for this project.

ND STATEWIDE RESPONSE TO PROBLEMATIC SEXUAL BEHAVIOR OF CHILDREN

Since 2022, TCTY staff has been involved in the Comprehensive System of Care for Children and Youth with Problematic or Illegal Sexual Behavior in North Dakota project. Dakota Children's Advocacy Center is leading this statewide initiative and partnering with several organizations to achieve the grant goals. The project is currently funded from October 2022 through September 2025. The goals of the project include: 1. Create a comprehensive, evidence-based, treatment program to address the needs of children and youth with problematic and/or illegal sexual behaviors. 2. Provide coordinated EBT services for child victims and their families. 3. Provide enhanced case management and engagement through advocacy for children and families to foster greater connection, support, engagement, and successful treatment completion. 4. Educate and provide resources for multidisciplinary team members, community members and caregivers on Problematic Sexual Behavior (PSB) identification and response as well as team member resiliency. TCTY staff are involved in grant administration and leadership, statewide service planning, training and resource development, and supervision of direct services.

TRAUMATIC STRESS EDUCATION SERIES

Since 2021, TCTY has hosted the monthly education event entitled "Bring Your Own Lunch and Learn" on topics related to traumatic stress and complex trauma. National and local experts provide education and consultation during the one-hour virtual event. CEUs are provided and the event is open to all mental health professionals. This project is in collaboration with, and funded by, the Council on Abused Women's Services (CAWS) North Dakota.

REDUCING BARRIERS, EXPANDING ACCESS AND ADVANCING TRAUMA CARE FOR CHILDREN TO HEAL IN NORTH DAKOTA (REACH ND)

REACH ND, funded in 2023 by Substance Abuse and Mental Health Services Administration as a site in the National Child Traumatic Stress Network (NCTSN), is led by the Treatment Collaborative for Traumatized Youth (TCTY) housed within the Sanford Center for Biobehavioral Research. The purpose of REACH ND is to increase access to trauma-focused, evidence-based treatments (EBTs) for underserved/under-resourced children (age 3-18) and families impacted by trauma in North Dakota. REACH ND focuses on addressing behavioral health disparities, reducing barriers to services, increasing familial engagement in trauma-informed evidence-based treatments, and improving frameworks for sustaining progress in these areas. To achieve goals and objectives, REACH ND collaborates with local and national partners including the Sanford Traumatic Stress Treatment Center, Dakota Children's Advocacy Center, Red River Children's Advocacy Center and other NCTSN sites. By 2028, REACH ND will (1) Provide care coordination using intensive engagement strategies and effective evidence-based treatments via telehealth; (2) Conduct trainings on telehealth and complex trauma for providers; (3) Adapt treatment resources for rural populations, American Indian/Alaskan Native children, and linguistic minorities; and (4) Increase professional and community trauma awareness and engagement using outreach education and media strategies.

ENHANCING TRAUMA CARE FOR NATIVE AMERICAN YOUTH TO HEAL IN NORTH DAKOTA (PROJECT HEAL)

Project HEAL began in 2023 and is funded by the North Dakota Department of Health and Human Services Behavioral Health Division. The Treatment Collaborative for Traumatized Youth, Project HEAL was developed to address significant gaps and improve access to evidence-based trauma services for Native American children across North Dakota. By 2026, Project HEAL will consult with local and national experts in Native American mental health to provide education to child-serving systems on the incidence and consequences of trauma in Native American youth and communities. Additionally, this project will increase access to culturally informed, trauma-focused treatments by training mental health providers in Honoring Children, Mending the Circle - the culturally enhanced adaptation of Trauma-Focused Cognitive Behavioral Therapy for Native American youth. The project will also develop and provide general training for mental health providers on clinical strategies to incorporate cultural factors and culture-related processes in trauma treatment with Native American youth. Lastly, this project will increase access to services by specifically allocating the time of trained providers for telehealth and in-person treatments for Native American youth at the Sanford Traumatic Stress Treatment Center.

IV. Technology and Mental Health

PEDIATRIC MENTAL HEALTH CARE ACCESS PROGRAM

The North Dakota Pediatric Mental Health Care Access Program (PMHCA) strives to increase the capacity of primary care providers to screen, treat, or refer children and adolescents who have behavioral/mental health conditions. The program also offers care coordination by linking primary care providers and families to child and adolescent psychiatry providers and other behavioral health professionals. North Dakota is a very rural state with limited mental health care providers. Nine out of ten children receive care regularly from their primary care provider, yet only one in three of the primary care providers feel that they have sufficient training to treat children with mental health or behavioral concerns. The program works to enhance that training by partnering with primary care providers in case consultations, conferences and bi-monthly Extension for Community Healthcare Outcomes (ECHO) training sessions focused on pediatric mental health concerns. The continuation of the ND PMHCA grant from the Health Resources and Services of America (HRSA), and in conjunction with the North Dakota Department of Health and Human Services (ND DHHS), allows for the expansion of services to schools, emergency departments, and other diverse child-serving agencies state-wide for care consultation, training, and development of local and regional infrastructure for a streamlined children's system of care.

SANFORD/TORONTO GENERAL HOSPITAL: PROJECT RESTORE

Project RESTORE is an eHealth intervention for health care workers who have been exposed to traumatic or extreme stressors related to the COVID-19 pandemic and are experiencing a significant stress response. This program was developed by clinical scientists from Toronto General Hospital and Ryerson University in Toronto. This team is very well known for their groundbreaking work in the treatment of post-traumatic stress disorder (PTSD). Their PTSD treatments have been disseminated around the world. Project Restore adapts the fundamental principles of their PTSD treatment to the COVID-19 pandemic. Importantly, it is easy to access given that it is an online treatment. The treatment consists of a series of treatment modules which are completed online by the individual receiving the treatment. The program also provides a message from a treatment guide who helps the user navigate any components of the treatment program which are unclear. The project was recently launched in the Sanford Fargo Region.

SANFORD/UND SCHOOL OF MEDICINE AND HEALTH SCIENCES: BEHAVIORAL HEALTH BRIDGE

The Behavioral Health Bridge is a web-based resource that was designed to promote mental health during the COVID-19 pandemic. Teams of individuals from CBR and the University of North Dakota worked on developing the initial components of the webpage, which focused on information and education about pandemics, stress reactions, mental health problems, and mental health treatment. A host of modules were developed targeting a range of topics that would be relevant to the general public, including one module designed explicitly for health care professionals. As the project evolved during 2020, additional modules were added which included a host of mental health screening tools as well as a mental health column staffed by experts who answered questions frequently asked by the public. In 2022 the Behavioral Health Bridge began developing a third phase of the project focused on using technology to provide training and mental health consultation to primary care providers across North Dakota. In essence, this will provide rural health care professionals with opportunities to seek professional consultations from mental health experts in the larger cities in North Dakota.

SANFORD - REACH FOR RESILIENCE

The Reach for Resilience Program is a program focused on education, training, and facilitation of treatment for health care professionals needing mental health support related to the pandemic. It was funded by the State of North Dakota Department of Health and Human Services and the Substance Abuse and Mental Health Services Administration. The program was developed in 2020 and is co-sponsored by CBR, Sanford Behavioral Health Services, and the State of North Dakota Department of Human Services. Mental health professionals working in the Reach for Resilience office have provided extensive messaging to health care systems, senior living environments, and other health care facilities across the state of North Dakota emphasizing the importance of mental health for their employees during the pandemic. Reach for Resilience provides a variety of resources, including web-based resources, training programs, and screening and triage services regarding referrals for direct mental health care. Funding for Reach for Resilience ends in 2023. Future plans are not determined.

(This project was completed in 2023)

SANFORD TELE-BEHAVIORAL HEALTH IN THE SCHOOLS

In 2019, Sanford Health, Sanford Research, the UND School of Medicine and Health Sciences, along with Fargo and Moorhead schools began a series of meetings to develop the idea of delivering mental health care via telehealth technology in school settings for children and adolescents. As part of this initiative, a group of Sanford and UND School of Medicine personnel went to the Medical University of South Carolina (MUSC) in Charleston to meet with telemedicine experts. MUSC is one of two National Centers of Excellence in telemedicine and hosted a North Dakota contingent. Based on that meeting, and our conversations with the schools, a decision was made to start a pilot project that would include one school in Fargo and another in Moorhead. Goals were established to enter 20 children in a telehealth protocol where a child and their family would be seen in a school setting by a Sanford mental health provider practicing in a distal clinic setting. A variety of different logistical and operational issues were addressed and the project was initiated in early 2020. Unfortunately, shortly after starting the project and enrolling children, the COVID-19 pandemic began and the project was temporarily suspended.

SAMHSA COLLABORATIVE WITH ST. JOHN'S UNIVERSITY - NEW YORK

The St. John's University-National Child Help Partnership program, a SAMHSA grant with the National Child Traumatic Stress Network, partnered with CBR to implement an interconnected system framework of trauma care within five schools in the communities of the Turtle Mountain Band of Chippewa reservation, in north-central North Dakota. Due to the significant lack of mental health resources in the community, this model aims to increase collaboration through local, state, and national school-family-mental health partnerships. Specifically, this approach aims to increase the size of the trauma-trained workforce, provide interventions that prevent and treat trauma-related mental disorders, and increase the number of children who receive trauma-specific services. CBR has been instrumental in collaborating with the Bureau of Indian Education, the Tribal Nations Review Board, and the Tribal Council to bring this program to their communities. Interventions offered at Turtle Mountain are all culturally enhanced and reflect the specific traumas of these communities. Program implementation and training are anticipated to take two and a half years with another two and a half years of supportive services and leadership from St. John's University.

V. Genetics and Pharmacogenetics

EDUCATIONAL CURRICULUM REGARDING GENETIC RISK AND PHARMACOKINETIC GENETIC TREATMENT GUIDELINES

This project focuses on a collaborative venture to create an educational curriculum in genetics and pharmacogenetics. It involves a close collaboration between CBR, Imagenetics, and various departments at NDSU. A wide variety of different disciplines were involved in creating the curriculum, including basic biology, biostatistics, genetic counseling, and pharmaceutical science, as well as significant inputs in terms of ethics and legal concerns in the clinical applications of genetics. In the end, a series of modules were created that can be utilized in a course (for credit) at North Dakota State University and also for continuing education and continuing medical education at Sanford Health. Over 10 faculty from NDSU and Sanford Health contributed to the project which has been overseen by Dean Carla Gross from North Dakota State University and a variety of individuals from Sanford Health and Sanford Research.

VI. Summary

CBR is committed to scientific study of a broad range of behavioral and medical disorders. Staff at CBR are committed to working closely with our clinical colleagues to collaborate on scientific projects in a manner that enhances the ultimate clinical value of the work. At CBR, we believe that the best medical science is conducted in close collaboration with our clinical colleagues, and our patients.

Although CBR is well-known regionally and nationally for its clinical research program, it is important to recognize that CBR is also committed to education and training for health care professionals and the general public. Many of the faculty at CBR have worked extensively in university settings providing meaningful educational experiences, which is critical to our mission.

As we move forward, CBR will continue to pursue scientific answers to real-life problems, offer impactful teaching and education, and provide service to Sanford, the health care community, and the general public.

