

THE PRESENCE OF MIND

UMASS MIND CLINICAL AND RESEARCH PROGRAM

ANNUAL NEWSLETTER, SUMMER 2023



CLINICAL

THE NEW VERSION OF *BMJ* BEST PRACTICE – SCHIZOPHRENIA PUBLISHED



The new version of *BMJ Best Practice – Schizophrenia* was published on March 9, 2023. Dr. Xiaoduo Fan is the contributor to this latest version,

supported by the BMJ team (data librarian, literature review methodologist, drug and content editors). *BMJ Best Practice – Schizophrenia* fully integrates the American Psychiatric Association Practice Guideline for the Treatment of Patients with Schizophrenia (Third Edition, 2021).

BMJ Best Practice is a point-of-care resource designed to provide clinicians with quickly accessible patient consult information. The user interface is straightforward and simple, enabling the user to reach the desired content with just a few clicks. Ranked one of the best clinical decision support tools for healthcare professionals worldwide, *BMJ Best Practice* provides step-by-step guidance on diagnosis, prognosis, treatment, and prevention, which is updated timely using robust evidence-based methodology and expert opinions.

BMJ Best Practice is uniquely structured around patient consultation with advice on symptom evaluation, test ordering, and treatment approach. It also includes international coverage of guidelines through BMJ's partnership with Cochrane Clinical Answers, enabling confident decision-making with patients.

One of the unique features of *BMJ Best Practice*, which differentiates it from UpToDate and other point-of-care medical reference apps, is the treatment algorithm. In *BMJ Best Practice – Schizophrenia*, the treatment algorithm is shown as a table that has two groups - Acute Psychosis and Chronic Symptoms. Within each group, the users can click on a given category and find the best treatment options for their specific clinical scenario (e.g., "chronic symptoms of schizophrenia" plus "depression").

In the US, healthcare professionals can use the *BMJ* website (<https://bestpractice.bmj.com>) or app, either through individual subscription to Epocrates or through institutional subscription to the Best Practice.



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UMASS SCREENING AND TREATMENT OF EARLY PSYCHOSIS (STEP) CLINIC ACCEPTING NEW PATIENTS

The UMass Screening and Treatment of Early Psychosis (STEP) Clinic, which is located at Community Healthlink, is open to accept new referrals. Following the coordinated specialty care (CSC) model, the clinic provides comprehensive services that include: 1) medication management; 2) individual psychotherapy; 3) supported education and employment; 4) peer counseling; 5) family education and support; 6) primary care referral and integration.

STEP accepts individuals aged 18-40 years old and within approximately the first 2-3 years of onset of psychotic symptoms. The clinic is not designed to serve individuals who have intellectual disability, autism spectrum disorder, or communications disorders.

To make a referral or learn more about the clinic please contact 508-860-1277 or 508-856-MIND (6463).



RESEARCH

UMASS MIND INVESTIGATES PHARMACOLOGICAL TREATMENT TARGETING “TRIPLE JEOPARDY” FACED BY INDIVIDUALS WITH SCHIZOPHRENIA

Individuals with schizophrenia often face a triple jeopardy: a devastating mental illness, co-morbid medical problems, and co-occurring substance use. UMass MIND aims to elucidate the etiology of each facet of triple jeopardy and develop novel intervention strategies to promote whole person health.

One of the ongoing clinical trials is evaluating whether brexpiprazole, an FDA-approved antipsychotic medication with the brand name Rexulti®, has the additional benefit of treating co-occurring substance use in patients with schizophrenia. This multi-site investigator-initiated trial is led by UMass MIND with University of North Carolina, Massachusetts General Hospital, and Augusta University as additional study sites.



Brexpiprazole is a dopamine D2 receptor partial agonist with high affinity and low intrinsic activity at the D2 receptor, which potentially normalizes the dysfunction of brain reward circuits during substance use and reduces cravings.

This 12-week study enrolls participants with schizophrenia or schizoaffective disorder and a co-occurring substance use disorder of marijuana, alcohol, cocaine, and/or heroin. Participants are randomized to one of two arms, either switching their current antipsychotic medication to brexpiprazole or maintaining their current treatment. Supportive counseling

is provided to all participants. Efficacy assessments include substance use and craving tracking, and psychiatric symptom evaluation.

Another investigator-initiated trial, which is expected to launch in the fall of 2023, aims to examine the potential metabolic benefit of adjunctive lumateperone treatment in clozapine-treated patients with schizophrenia.



Clozapine is considered a “wonder drug” for some patients with schizophrenia who do not respond well to other antipsychotic medications. However, it is associated with significant metabolic side effects such as weight gain, dyslipidemia, hypertension, and diabetes, which lead to an increased risk of cardiovascular disease and premature death.

Lumateperone, a newly FDA-approved antipsychotic medication with the brand name Caplyta®, has shown some metabolic benefits including weight loss in patients with schizophrenia, potentially due to increased synaptic N-methyl-D-aspartate (NMDA) activity. This 12-week, randomized, double-blind, placebo-controlled study will evaluate lumateperone's impact on a variety of metabolic outcomes including lipid particle size using NMR spectroscopy and body fat distribution using a body composition analyzer.

UMASS MIND BRINGS THE FOOD4THOUGHT NUTRITION PROGRAM TO GROUP HOMES

UMass MIND has completed the first two rounds of its new Food4Thought program, an educational nutrition program designed for individuals with serious mental illnesses (SMI). The earlier remote Food4Thought program was conducted during the pandemic with great success, and it was published in *Academic Psychiatry* recently. The current in-person program incorporates nutrition, mindful eating education, and hands-on cooking sessions to enhance healthy eating knowledge, attitudes, and behaviors in people with SMI.

Individuals with SMI remain among the most vulnerable populations in society. Data from the UMass Memorial Health system reveals that almost 40% of individuals with SMI in Worcester have also been diagnosed with various metabolic problems including high blood pressure, diabetes, obesity, or elevated bad cholesterol. Factors such as a lack of nutritional awareness, suboptimal diets, financial barriers, and medication side effects can exacerbate the risk of metabolic disturbances and cardiovascular disease among this patient population. Consequently, UMass MIND identified the need to implement holistic solutions to enhance nutrition, promote healthy lifestyles, and improve health outcomes in people with SMI.

In collaboration with Community Healthlink (CHL), part of UMass Memorial Health, UMass MIND introduced Food4Thought program to CHL residential group homes in Worcester, MA, where many individuals with SMI live. The program engages with group home residents and staff to bring these interventions directly to the group home kitchens, through completing nutrition workshops and cooking modules while simultaneously fostering community in the group home.

The Food4Thought program consists of eight sessions spread over four to eight weeks. The nutrition workshops focus on promoting healthy and mindful eating, diet and exercise, and budgeting. These sessions are followed by cooking modules in which residents work together to cook new recipes while practicing the skills they developed in the nutrition workshops. Throughout the program, data is collected using validated rating scales and a focus group session to better understand changes in eating behavior, psychiatric symptoms, self-efficacy, and mindfulness that may have been brought about by the program content.

So far, the Food4Thought program has been implemented in two residential group homes and received positive feedback from participants who enjoyed how “the recipes were delicious and easy to make.” Another participant appreciated the novelty of the intervention as “it was something different, something new. It was good for learning how to prepare things.” Group home staff have also noted an increase in interest in both cooking and eating healthy from their residents following the program. Additionally, the program has also served as an invaluable education experience for UMass medical students who are involved in the program, by giving them the opportunity to “interact face-to-face with [participants] and hear their real time feedback as to how we can improve the program.”

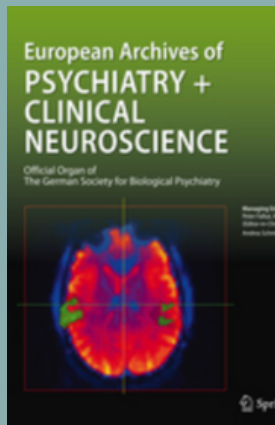
The positive feedback from participants has encouraged us to expand the implementation of our program across the Greater Worcester area.



To learn more about UMass MIND’s Food4Thought program, click [here](#) to watch a video!

Cheung A, Dutta P, Kovic Y, Stojcevski M, Fan X. Food4Thought: a medical trainee led, remotely delivered nutrition outreach program for individuals with serious mental illness. *Academic Psychiatry*, 2023; 47, 406-410. PMID: 36447069.

A COLLABORATIVE STUDY WITH CHINA FOUND BENEFICIAL EFFECT OF BERBERINE FOR NEGATIVE SYMPTOMS OF SCHIZOPHRENIA



A collaborative study by UMass MIND and researchers from Tianjin Medical University in China found adjunctive berberine treatment has beneficial effect for negative symptoms of schizophrenia. The findings were published in the journal *European Archives of Psychiatry and Clinical Neuroscience*.

medicine for thousands of years. Both animal and human studies have demonstrated that berberine can effectively reduce levels of inflammatory biomarkers such as C-reactive protein (CRP) and interleukin-6 (IL-6), which have been suggested as possible biomarkers for schizophrenia.

In this double-blind, placebo-controlled clinical trial, 59 patients were randomized to receive berberine 900 mg/day or placebo as adjunctive treatment for 8 weeks. Patients treated with berberine showed a significant decrease in negative symptoms as well as plasma levels of CRP. Further, there was a significant correlation between changes in negative symptoms and changes in CRP. In this study, berberine was well tolerated by the patient participants.

Negative symptoms, which include reduced speech, lack of emotional expression, diminished ability to begin and sustain activities, decreased ability to find pleasure in life, and social withdrawal, are closely related to real life functioning in patients with schizophrenia. Currently available antipsychotic medications have limited efficacy for negative symptoms, creating a need for effective pharmacological treatments.

This is the first study to report the beneficial effect of berberine for negative symptoms of schizophrenia. The researchers are planning to conduct additional studies with a larger sample, a longer follow up time period, and different dose options to further evaluate the efficacy and safety of berberine treatment in this patient population.

Multiple studies conducted by UMass MIND have reported that inflammation plays an important role in the development of schizophrenia. Berberine, a compound found in several plants, has been used in Chinese and Ayurvedic

Li M, Qiu Y, Zhang J, Liu Y, Zhao Y, Ja Q, Fan X, Li J. Improvement of adjunctive berberine treatment on negative symptoms in patients with schizophrenia. *European Archives of Psychiatry and Clinical Neuroscience*, 2022; 272, 633-642. PMID: 35037116.

CURRENT STUDIES: ACTIVELY RECRUITING!

Study #1: Substance Use Study

The purpose of this study is to see whether Brexpiprazole, an FDA-approved antipsychotic medication for schizophrenia treatment, may help reduce substance abuse in individuals with schizophrenia or schizoaffective disorder. Study participation is three months, with weekly meetings.

Study #2: Drama Therapy

The purpose of this study is to see whether participating in drama therapy can help reduce symptoms of Serious Mental Illness. This consists of meeting in a group setting facilitated by Drama Therapists and constructing a play to promote recovery that will be performed publicly. The current cohort is in conjunction with Genesis Club of Worcester.

Study #3: Nutrition Intervention Program

The purpose of this study is to assess the feasibility of a mindfulness-based nutrition program focused on promoting healthy eating knowledge, attitudes, and behaviors in patients with serious mental illness.

Our studies are conducted at 26 Queen Street, Worcester, MA 01610. You will be compensated for your time being involved in any study. If you are interested or would like more information about any of our studies, please call 508-856-MIND (6463) or email MIND@umassmed.edu

CONTACT US



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