

**The Department of Psychiatry**

**Presents**

**The 34<sup>th</sup> Annual  
Albert J. Silverman  
Research Conference**

**"Psychiatry in the  
Age of Generative  
Artificial Intelligence"**



**MICHIGAN MEDICINE**  
UNIVERSITY OF MICHIGAN

**May 22, 2024**





**34<sup>th</sup> Annual  
Albert J. Silverman Research Conference  
Department of Psychiatry**

Rachel Upjohn Building, 4250 Plymouth Road 2<sup>nd</sup>  
Floor Atrium and Garden Level Auditorium Lecture  
via Zoom, [WATCH HERE](#)  
Webinar ID 974 7983 0362 / Passcode 001547

**"Psychiatry in the Age of  
Generative Artificial Intelligence"**

**Wednesday, May 22, 2024**

**Poster Session & Continental Breakfast (2<sup>nd</sup> Floor Atrium)..... 8:00 – 9:45 a.m.**

**Opening Remarks, Introduction of Speakers and Presentations (Auditorium / Zoom)**  
[JOIN](#) - Webinar ID: 974 7983 0362 Passcode: 001547

**Stephan F. Taylor, M.D. ....10:00 – 10:10 a.m.**  
*Albert J. Silverman, M.D., C.M., Research Professor of Psychiatric Disorders, Medical School, Professor of Psychiatry, Associate Chair for Research and Research Regulatory Affairs, Director, Residency Research Track Training Program  
Director, PREP Early Psychosis Clinic, Adjunct Professor of Psychology*

**Elyse J. Thulin, Ph.D. ....10:10 – 10:30 a.m.**  
**"Large Language Models and Other Natural Language Processing Techniques to Study Adolescent Suicidality in School-Based Anonymous Reporting Systems"**  
*Assistant Research Professor, U-M Institute for Firearm Injury Prevention*

**Veronica Perez-Rosas, Ph.D. ....10:30 – 10:50 a.m.**  
**"Language Feedback Generation for Counseling Training"**  
*Assistant Research Scientist, Computer Science and Engineering, University of Michigan*

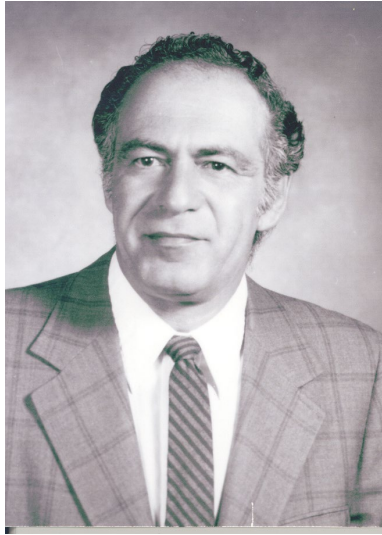
**Chandra Sripada, M.D., Ph.D. ....10:50 – 11:10 a.m.**  
**"Discovering Markers and Mechanisms of Mental Disorders with Natural Language Processing and Daily Thought Sampling"**  
*Professor of Psychiatry, Professor of Philosophy, Director of the Weinberg Institute for Cognitive Science, University of Michigan*

**Johannes C. Eichstaedt, Ph.D. ....11:10 a.m. – 12:00 p.m.**  
**"Measuring and Improving Mental Health Through Social Media and LLMs"**  
*Assistant Professor, Institute for Human-Centered Artificial Intelligence  
Stanford University*

**Announcement of Poster Awards (Auditorium).....12:00 – 12:10 p.m.**

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Reminder: If you've signed up to get a headshot taken, please come to the garden level area in RUB at your specified time.



**Albert J. Silverman, M.D., C.M.  
1925-2002**

Albert Jack Silverman, M.D., C.M. was a noted psychiatrist, neuroscience researcher and former chair of two university psychiatry departments. In 1970, he became chair of psychiatry at the University of Michigan Medical School. He is credited with redirecting the department's research, education, and treatment programs, and leading during a time of great change. During his career, Dr. Silverman sought to bridge the divide between the rising field of neuroscience-based psychiatry and traditional psychoanalysis. After he stepped down from the chair in 1981, he remained on faculty and continued his research and the teaching of psychiatry residents. He retired as professor emeritus in 1990 and continued teaching and conducting rounds until 1997.

Today's event is the 33th in an annual series of research conferences held in the department of psychiatry in Dr. Silverman's honor. A recent generous gift from Mrs. Halina Silverman will assure that the Albert J. Silverman Research Conference will continue in perpetuity as a lasting tribute and legacy for her late husband, an accomplished leader, a fine doctor – devoted to his patients, colleagues and trainees – and a wonderful husband, father and grandfather.

Born in Montreal on January 27, 1925, Dr. Silverman earned his Bachelor of Science and medical degrees at McGill University. It was at McGill that he discovered his interest in the physical underpinnings of psychological phenomena - a field called psychophysiology. After a residency in psychiatry at the University of Colorado Medical Center, he followed his mentor Ewald W. Busse to Duke University, where he became a member of the faculty.

He was naturalized as an American citizen in June 1955, took a leave from Duke, and entered the Air Force that year. During his two and one-half years of service at Wright-Patterson Air Force Base, he completed his board examinations in both neurology and psychiatry. Dr. Silverman led research for the U.S. Air Force on space neuroscience and psychology, which rose from obscurity to prominence literally overnight in 1957 with the launch of Sputnik and the dawn of the space race. In addition to performing key research on physical and psychological responses to G-force acceleration and space travel as chief of the stress and fatigue section of the Aero Medical Laboratory at Wright-Patterson Air Force Base, he helped invent a device that used pilots' brain waves as an oxygen-deprivation warning system.

In a 1991 oral history interview, Silverman recalled his Air Force experience: "This was right at the beginning of space exploration. Just prior to the Russians' putting up Sputnik, we were doing G-tolerance studies with the human centrifuge. We weren't allowed to call them moon trajectories or

anything like that, because the senators were very negative about 'all of this space nonsense.' But in under 24 hours of Sputnik's going up, we got these hurry-up telegrams from headquarters saying, 'What are we doing in space [research]?' So we dusted off all the old technical reports we had been doing anyway, but under non-space names such as 'acceleration in unusual environments.' That kind of vague name now became, 'G-forces necessary for a moon trip,' which now became very kosher." Silverman left the service as a captain in 1957. He returned to Duke, heading the psycho-physiology lab and then the behavior studies lab. In all, his research during this period of his career led to more than 100 publications and presentations.

In 1963, Dr. Silverman went to Rutgers University where he and three other faculty members worked to establish a new medical school. This entailed architectural planning and supervision and hiring the chairs of all departments of the medical school. He became chair of the first psychiatry department at Rutgers where he hired the faculty and worked for seven years. The school later became part of the New Jersey Medical School at the University of Medicine and Dentistry of New Jersey. He also studied psychoanalysis at the Washington Psychoanalytic Institute, graduating in May 1964.

In 1970, he came to the University of Michigan. At the U-M, he set out to bridge the gap between the Mental Health Research Institute, home to noted basic research in the neurosciences, and the psychoanalysis-focused psychiatry faculty. In addition to strengthening the clinical trials program, he helped the U-M implement new clinical treatments and research programs emphasizing psychopharmacology, biofeedback, and stress-neuroendocrine relationships. He also revamped the curriculum for medical students to include more psychiatric training, improved the residency program, and attracted young neuroscientists.

From 1975 to 1976, Dr. Silverman was president of the American Psychosomatic Society, which focuses on the mind-body connection in disease. He served on the National Board of Medical Examiners for many years, including a term from 1984 to 1987 as chair of the committee that designed the behavioral sciences portion of the national medical licensing examination. In addition to the APS and NBME, Dr. Silverman was a charter fellow of the American College of Psychiatrists; a fellow of the American Association for the Advancement of Science, the American Academy of Psychoanalysis and the American College of Neuropsychopharmacology; a former chairman of several committees for the American Psychiatric Association; and an honorary fellow of the American Society of Psychoanalytic Physicians.

"Al was truly a force to be reckoned with, an international leader in the field of psychosomatic medicine, and an important figure in the development of psychiatry at Michigan and beyond into a field that embraces all aspects of the human brain and psyche," says John Greden, M.D., past department chair and executive director of the U-M Depression Center.

Prior to his career in Academic Medicine, Dr. Silverman had an active professional career acting and directing in both theater and radio and continued his activities as an amateur musician and sculptor. Dr. Silverman was a Patron of the U-M University Musical Society; a Friend of the U-M Museum of Art, the U-M Opera, and the U-M Musical Theater; and a Patron of the Detroit Institute of Arts. Memberships also included Beth Israel Congregation, Ann Arbor; Hadassah Associates and B'Nai Brith.

Dr. Silverman is survived by his wife Halina W. Silverman, son Barry Evan Silverman (Nancy), daughter Marcy S. Mullan (John), and four grandchildren: Luke, Mark, Kelly, Erin, as well as a brother Marvin Silverman, M.D. and his family of Ottawa, Canada.

We hold this conference in fond memory of Dr. Silverman – visionary, healer, and friend.

## **Albert J. Silverman Research Conference Lecturers**

- 1990 - Bernard J. Carroll, M.D., Ph.D.  
1991 - Lenore Terr, M.D.  
1992 - Lawrence L. Weed, M.D.  
1993 - Jay Pettegrew, M.D.  
1994 - Larry J. Siever, M.D.  
1995 - Cynthia R. Pfeffer, M.D.  
1996 - Marsel Mesulam, M.D. and Ned Kalin, M.D.  
1997 - Howard Goldman, M.D.  
1998 - Cindy L. Ehlers, M.D.  
1999 - Alan F. Schatzberg, M.D.  
2000 - Carol A. Tamminga, M.D.  
2001 - Ronald Duman, Ph.D.  
2002 - Robert Drake, M.D., Ph.D. and Lisa Dixon, M.D., Ph.D.  
2003 - Mark Olfson, M.D., M.P.H. and Kurt Kroenke, M.D.  
2004 - Gabrielle Carlson, M.D. and Melvin McInnis, M.D.  
2005 - David Spiegel, M.D. and Mark Chesler, Ph.D.  
2006 - Edward Nunes, M.D. and Marc A. Schuckit, M.D.  
2007 - Kathleen Merikangas, Ph.D. and Nick Craddock, M.D., Ph.D., FRCPsych.  
2008 - Lorrin M. Koran, M.D.  
2009 – William H. Coryell, M.D.  
2010 – Eva Van Cauter, Ph.D.  
2011 – Susan Nolen-Hoeksema, Ph.D.  
2012 – William G. Iacono, Ph.D.  
2013 – Wayne J. Katon, M.D.  
2014 – Julian D. Ford, Ph.D.  
2015 – David H. Gustafson, Ph.D.  
2016 – Malaz A. Boustani, M.D., MPH  
2017 – Paul E. Holtzheimer, M.D.  
2018 – Aldo Badiani, Ph.D.  
2019 – Kate Fitzgerald, M.D., M.S. / Cheryl King, Ph.D. / Jonathan D. Morrow, M.D.,  
Ph.D. /  
Courtney A. Polenick, Ph.D. / Maureen A. Walton, Ph.D., M.P.H.  
2020 – Erin E. Bonar, Ph.D. / Gregory L Hanna, M.D. /  
Brian Hicks, Ph.D. / Rebecca Sripada, Ph.D.  
2022 – John C. Fortney, Ph.D.  
Lewei (Allison) Lin, M.D., M.S. / Anne Fernandez, Ph.D.  
2023 – Kimberley Van Orden, Ph.D.  
Lindsay A. Bornheimer, Ph.D., LCSW / Courtney L. Bagge, Ph.D.  
2024 - Johannes C. Eichstaedt, Ph.D.  
Elyse J. Thulin, PhD. / Veronica Perez-Rosas, Ph.D.  
Chandra Sripada, M.D., Ph.D.

**34<sup>th</sup> Annual Albert J. Silverman Research Conference  
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**May 22, 2024**

**University of Michigan Faculty Speaker**



**Elyse J. Thulin, PhD**  
Assistant Research Professor  
Firearm Injury Prevention Center

Dr. Thulin is a Research Assistant Professor with the U-M Institute for Firearm Injury Prevention. Dr. Thulin uses mixed behavioral science and data science methods to understand factors that enhance the risk of firearm-related injury in adolescent and emerging adult populations, including mental health and substance use, variations by intent, gender, and rurality, and ways that technology and online spaces can exacerbate or be leveraged to reduce the risk of harm. Her projects include evaluating student-submitted tips to a statewide Anonymous Report System, which is funded by the Centers for Disease Control and Prevention. Dr. Thulin graduated from the University of Michigan in 2022 with two PhDs, studying Health Behavior Health Education and Computational Science, and completed dual postdoctoral fellowships in Psychiatry at Michigan Medicine and Data Science at the Michigan Institute for Data Science. Before matriculating at UM, Dr. Thulin lived in Kenya and Sierra Leone, managing mixed-methods research projects.

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**University of Michigan Faculty Speaker**



**Veronica Perez-Rosas**  
Assistant Research Scientist  
Computer Science and Engineering  
University of Michigan

Veronica Perez-Rosas is an Assistant Research Scientist at the University of Michigan. She received her Ph.D. in Computer Science and Engineering from the University of North Texas in 2014. She is a member of the Language and Information Technologies group at University of Michigan. Her research interests include machine learning, natural language processing, computational linguistics, affect recognition, and multimodal analysis of human behavior. Her research focuses on developing computational methods to analyze, recognize, and predict human behaviors during social interactions. She has authored papers in leading conferences and journals in Natural Language Processing and Computational linguistics and served as a program committee member for multiple international journals and conferences in the same field.



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**University of Michigan Faculty Speaker**



**Chandra Sripada, M.D., Ph.D.**

Professor of Psychiatry  
Professor of Philosophy  
Director of the Weinberg Institute  
for Cognitive Science

Dr. Sripada's research examines the mechanisms underpinning decision, attention, and executive control, and how these mechanisms go awry in attention-deficit/hyperactivity disorder (ADHD) and substance use disorders (SUDS). He has a special interest in computational methods, machine learning, and multivariate methods.

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**Keynote**



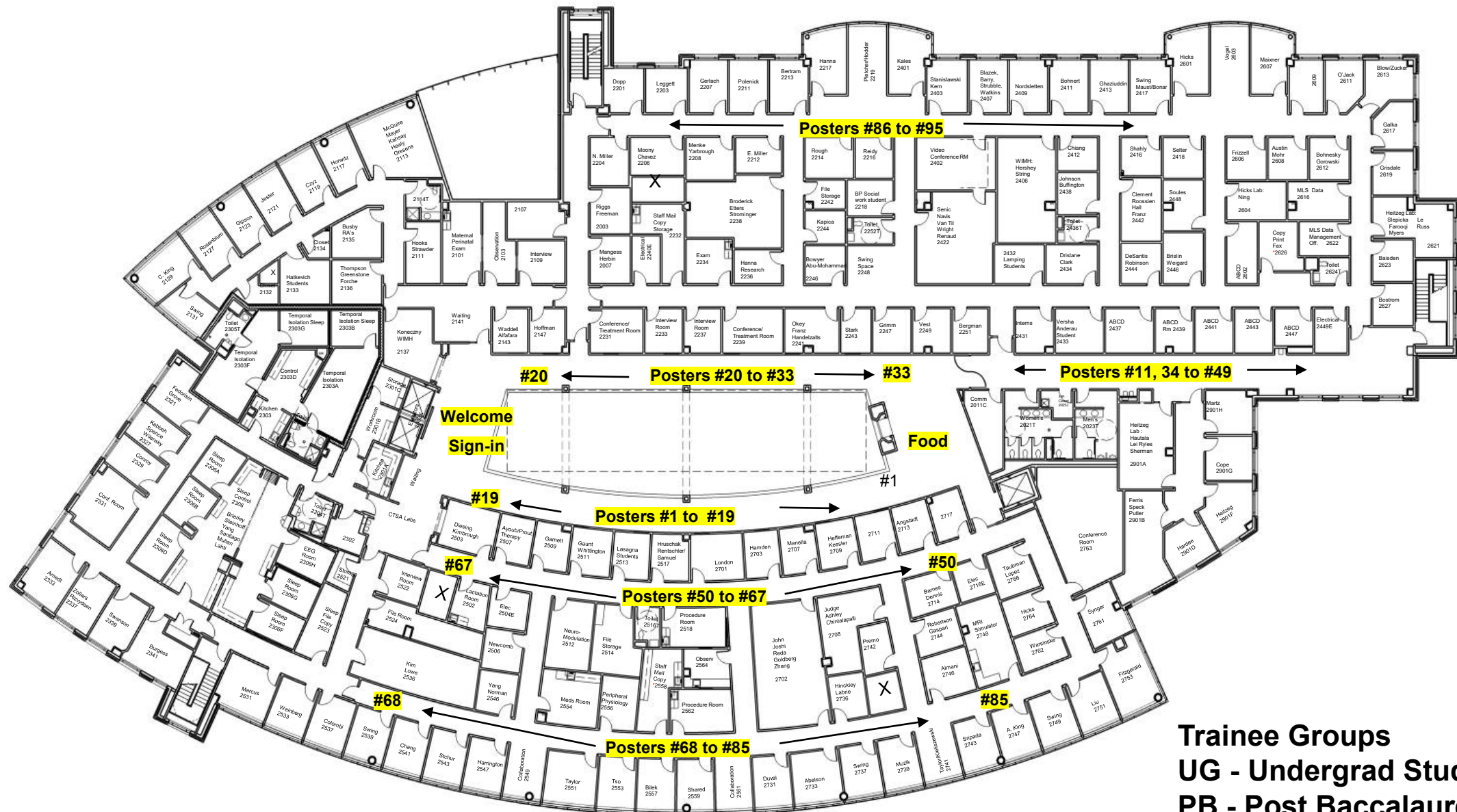
**Johannes C. Eichstaedt, Ph.D.**  
Assistant Professor  
Institute for Human-Centered Artificial  
Intelligence  
Stanford University

Dr. Eichstaedt is a computational social scientist in psychology, an assistant professor in psychology, and the Shriram Faculty Fellow at the [Institute for Human-Centered Artificial Intelligence](#).

At Stanford, he directs the [Computational Psychology and Well-Being lab](#). In 2011, Dr. Eichstaedt co-founded what is now a big data psychology consortium, the [World Well-Being Project](#) at the University of Pennsylvania.

Dr. Eichstaedt uses social media (Facebook, Twitter, Reddit, ...) to measure the psychological states of large populations and individuals to determine the thoughts, emotions, and behaviors that [drive physical illness \(like heart disease\)](#), [depression](#), or [support psychological well-being](#).

**Albert J. Silverman Research Conference 2024**  
**Rachel Upjohn Building Second Level**  
 Poster Location Map



## Trainee Groups

**UG - Undergrad Students 1 - 9**

**PB - Post Baccalaureate 10 - 33**

**G - Graduate 11, 34 - 45**

**PD - Postdoctoral Fellow 46 - 63**

### R/F - Resident/Fellows 64 - 69

## Faculty & Staff 70 - 95

Poster No.	Contact Name	Poster Title	Authors	Trainee Status
1	Alexa Sherman	Self-Reported and Neurocognitive Indicators of Reward-Related Self-Regulation in Adolescents and Young Adults	Alexa Sherman, Katherine McCurry, Mary Heitzeg, Scott Peltier, & Meghan Martz	Undergrad Student
2	Annie Wang	MC3 Perinatal: Increasing Mental Health Support for Perinatal Patients	Annie Wang, Rena Menke, Jordan Charles, Meriam Issa, Maria Muzik (PI)	Undergrad Student
4	Eliza Alushi	Characteristics Associated with Youth Attention-Deficit/Hyperactivity Disorder (ADHD) and Stimulant Treatment in the ABCD Sample	Eliza Alushi, Chandra Sripada M.D., Ph.D., Katherine L. McCurry, Ph.D., Katherine Thorne, B.S., Jillian Hardee, Ph.D.	Undergrad Student
5	Ethan Goldiez	Mouse Digital Phenotyping: A system for recording 24/7 mouse behavior and brain electrophysiology over weeks	Ethan Goldiez, Noah Muscat, Anjesh Ghimere, Pho Hale, Antwan Green, David Kim, Simeone Marino, Deniz Kirca, Nicolette Ognjanovski, Brendon Watson	Undergrad Student
6	Kayla Drifka	Age Effects on Emotional Reactions Following Alzheimer's Disease Biomarker Disclosure	Kayla Drifka, Annalise Rahman-Filipiak, Haley Kohl, Gloria Whitaker	Undergrad Student
7	Lillie H. Birnie	Beyond traditional metrics: A novel method for measuring mood instability in bipolar disorder	Sarah H. Sperry, Lillie H. Birnie, Anastasia K Yocum, Melvin G. McInnis	Undergrad Student
8	Marcel Elkouri	Individual differences in the effects of gene transcription on memory formation	Archita Girmannagari, Marcel L. Elkouri, and Jonathan D. Morrow	Undergrad Student
9	Zaki Khera	Factor Analysis of Alcohol Problems and Associations with Impulsivity in a Sample of Emerging Adults	Zaki Khera, Mariya Churina, Elizabeth Duval, Jillian E. Hardee, Ha R. Jung, & Lora M. Cope	Undergrad Student
10	Alanah NanCoff	Utilizing Telehealth Interventions in a SMART Design to Improve Access and Care for Adults Living with Alcohol Use Disorder	Kelly Fan, Alaa Eissa, Alanah NanCoff, Alyssa Augustiniak, Carrie Bourque, Lyndsay Chapman, Deborah Manderachia, Lewei (Allison) Lin, Erin E. Bonar	Post Baccalaureate
11	Yuyao Liu	Emotional Experience and Neuropsychiatric Symptoms in Older Adults with Cognitive Impairment	Yuyao Liu, Mary-Grace Harlock, Alexander Kaminsky, Benjamin M. Hampstead, Alexandru D. Iordan	<u>Graduate Student</u>
12	Amanda Price	A brief intervention to increase Crisis Line usage among those in Alcohol Use Disorder treatment	Joseph Sciuto, MSW, Hannah Thomas, BA, Amanda Price, MS	Post Baccalaureate
13	Amanda Price	Views of Michigan Army National Guard Soldiers on suicide prevention programs	Kiana Mayer, BA, Joseph Sciuto, MSW, Chelsea Young, BA	Post Baccalaureate
14	Elizabeth Barbour	Examining a Clinical Assumption Regarding the Severity of Suicide Attempts by Patients with Borderline Personality Disorder Features	Barbour, E. V., Cohen, S. M., Saulnier, K. G., & Bagge, C. L.	Post Baccalaureate

Poster No.	Contact Name	Poster Title	Authors	Trainee Status
15	Jordan Bross	Comparing Clinical Diagnosis of Domains of Impairment In Individuals with Mild Cognitive Impairment with the NIH Toolbox-Cognitive Battery Performance	Jordan R Bross, BA, Amanda Cook Maher, PhD, Subhamoy Pal, PhD, Cameron K Perrin, BA , Jonathan M Reader, MS, Arijit K Bhaumik, BA, CCRP, Jordan Fisher BA, BS, Allyson Gregoire, MPH, Carol C Persad, PhD, Benjamin M Hampstead, PhD, and Bruno Giordani, PhD	Post Baccalaureate
16	Jordan Diamond	Applying novel behavioral economic measures to understand opioid-related polysubstance use	Jordan Diamond, Chavez Rodriguez, Maya Campbell, Sahana Lothumalla, Karina Vallejo, Erin Bonar, Jason Goldstick, Maureen Walton, Allison Lin, Lara Coughlin	Post Baccalaureate
17	Julia Smith	Utilizing Ecological Momentary Assessment to explore Emotional Awareness and Regulation in Bipolar Disorder	Julia L. Smith, Victoria A. Murphy, Sarah H. Sperry	Post Baccalaureate
18	Kristina Boynton	Exploring the Relationship of Participant Demographics and Recruitment Method with Participant Retention in a Large Behavioral Trial	Kate Peralta*, Kristina A. Boynton*, Meredith L. Philyaw-Kotov, Carrie A. Bourque, Maureen A. Walton, Erin E. Bonar	Post Baccalaureate
19	Mairead Cain	Exploring Sex Differences: The Interplay of Internalizing, Externalizing, and Alcohol Use in Young Adults	Mairead R. Cain, Calli E. Landon, Jillian E. Hardee	Post Baccalaureate
20	Marie Jung	Facets of Trait Impulsivity and Callous-Unemotional Traits Predict Substance Use in Adolescents and Young Adults	Ha R. Jung, Krisanne Litinas, Ryan T. Klaus, Mary E. Soules, & Lora M. Cope	Post Baccalaureate
21	Mariya Churina	Cues and Contexts: Assessing Fear Learning and Memory in Anxiety and Depression	Mariya Churina, Madelyn Jungbluth, Madeline Vincent, Elizabeth Duval	Post Baccalaureate
22	Mateo Lopez	Eyes Don't Lie: Decoding the Role of Eye Movements and Network Segregation in Object-Location Association Memory Deficits in Amnesic Mild Cognitive Impairment	Mateo Lopez, Anthony Mocer, Annalise Rahman-Fillipiak, Benjamin M. Hampstead, Alexandru D. Iordan	Post Baccalaureate
24	Megan Rush	The Interventional Psychiatry Registry: Development and Implementation of a New Database of Patients with Mood Disorders	Sagar V. Parikh, MD, FRCPC, Steve Bartek, MD, Jennifer Severe, MD, Dan Maixner, MD, Stephan Taylor, MD, Megan Rush, BS, Josh Saunders-Lustick, MA, Jack Weinberg	Post Baccalaureate
25	Melanie Vandersluis	Gender Identity and associations with Mental Health Problems, Substance Use, and Personality in a National Sample of Adolescents and Young Adults living in the United States	Brian M. Hicks, Ph.D., Melanie Vandersluis, B.S., Hannah Roberts, B.A., Elizabeth Johnson, B.A., & Carter Sherman, MSW	Post Baccalaureate
26	Nick Brdar	Suicidal Intent and Subsequent Injury and Intervention Within Transition-Aged Youth and Youth Adults Who Presented to the Hospital Following a Suicide Attempt	Nicholas M. Brdar, Ganesh S. Palaniappan, Hailey G. Prokop, Anna L. Bickersteth, Irmgard G. Pallas, Mubashshir R. Bhuiyan, Nidhi A. Tigadi, Natasha Matta, Sarah M. Cohen, Chloe A. Miner, Andrew T. Wylie, Sara Pasiak, Lindsay A. Bornheimer	Post Baccalaureate

Poster No.	Contact Name	Poster Title	Authors	Trainee Status
27	Nick Brdar	Importance of Community-Focused Dissemination: Findings from an Academic-Community Suicide Prevention Research Partnership	Nicholas M. Brdar, Lindsay A. Bornheimer, Maura Campbell, Nidhi A. Tigadi, Sara Pasiak, Andrew T. Wylie, Carole Hittinger, Katie L. Hoener, Timothy D. Florence	Post Baccalaureate
28	Pia Nair	Self-reported reasons for living among youth seeking emergency care for suicide-related concerns	Pia Nair, Alejandra Arango, Christina Magness, Tayla Smith, Ewa Czyz, John Kettley, Victor Hong, Cynthia Ewell Foster	Post Baccalaureate
29	Rohan Nanwani	Sociodemographic differences in engagement with digital interventions among adults awaiting outpatient psychiatric services	Rohan Nanwani, Elizabeth Mills, Adam Horwitz, Amy Bohnert, Srijan Sen	Post Baccalaureate
30	Sarah Cohen	Acute Alcohol Use and Chronic Alcohol Problems Preceding a Recent Suicide Attempt	Cohen, S.M., Barbour, E.V., Saulnier, K.G. & Bagge, C.L.	Post Baccalaureate
31	Shayla Dailey	A pilot telehealth model to improve treatment access for rural Veterans with substance use disorders	Shayla E. Dailey; Jessica R. Skaff; Deborah Manderachia; Carly Brin; Erin E. Bonar; Lara Coughlin, Lewei (Allison) Lin	Post Baccalaureate
32	Sophia Hovakimian	Affective Correlates of Neurofeedback-Enhanced Cognitive Reappraisal Training	Sophia Hovakimian, Patrick Eagen, Krisanne Litinas, Scott Peltier, David Fresco, Stephan F. Taylor & Stefanie Russman Block	Post Baccalaureate
33	Victor DiRita	Concurrent functional near infrared spectroscopy and 6 degrees of freedom immersive virtual reality in older adults	Victor Di Rita, Allison Ploutz-Snyder, Loryn Davidson, Alexandru D. Iordan, Benjamin M. Hampstead	Post Baccalaureate
34	Abigail Cheesman	Examining Treatment Fidelity in Prolonged Exposure and Cognitive Processing Therapy for PTSD among VA Patients	Abigail J. Cheesman, Rebecca K. Sripada, Dara Ganoczy Peter P. Grau	Graduate Student
35	Andrew Fregenal	Artificial Intelligence as a Screening Method for Consultation-Liaison Psychiatry in Patients Receiving Solid Organ Transplant	Andrew C. Fregenal, Zachary J. Eisner, Andrew White, Amy Rosinski, Lisa S. Seyfried, Michelle B. Riba, Kinza Tareen	Graduate Student
37	Ashley Harrie	Visuospatial performance on Spatial Navigation task and DASB PET correlates in isolated REM Sleep Behavior Disorder	Ashley Harrie BA, Benjamin M Hampstead PhD, Cate Cochren BA, Emily Herreshoff BA, Vikas Kotagal MD, MS	Graduate Student
38	Audrey Stromberg	Mood, Sleep, and Steps: Digital Phenotyping in Bipolar Disorders	Audrey Stromberg, Anastasia Yocum, Amy Bohnert, Srijan Sen, Sarah Sperry	Graduate Student
39	Carly Lasagna	A drift-diffusion modeling investigation of altered self-referential social perception in psychosis and bipolar disorder	Carly Lasagna, Ivy Tso, Scott Blain, Tim Pleskac	Graduate Student
40	Chloe Chen	Social Contexts as a Moderator: Investigating the Impact of Protective Behavioral Strategies on Risky Drinking Among U.S. Young Adults	Chloe Chen, Brooke Arterberry, Jillian Hardee, Megan Patrick	Graduate Student



Poster No.	Contact Name	Poster Title	Authors	Trainee Status
41	Kaitlin Smith	Economic Insights: Evaluating the Preliminary Costs of Remote Behavioral Interventions in Clinical Care	Braden D. Kilpatrick, Kaitlin A. Smith, Meredith L. Philyaw-Kotov, David W. Hutton, Erin E. Bonar, Maureen A. Walton	Graduate Student
42	Kylie Kadey	Delayed Recall is More Strongly Associated with Hippocampal Volume than Both Total Learning and Learning Slope	Kadey, K. R., Patrick Plummer, S. D., Spencer, R. J., & Hampstead, B. M.	Graduate Student
43	Marcel Elkouri	Individual Differences in Emotional Memory Consolidation in Male Rats	Marcel Lignani Elkouri, Menami Yoshida Gordon, Aysia Kay Kinnard, Mercedes Sienna Morin, Lauren Martindale, Ilanis Rodríguez-Torres, Francesca Nicole Czesak, Sara Aton, Jonathan David Morrow	Graduate Student
44	Margo Menkes	Performance monitoring in bipolar and schizophrenia spectrum disorders	MW Menkes, IF Tso, PJ Deldin, MG McInnis, SF Taylor, & T Suzuki	Graduate Student
45	Reni Forer	Centering Cultural Context to Enhance Maternal Mental Health in Esmeraldas, Ecuador	Reni Forer, Rea Hajredini, Akshaya Kannikeswaran, Shelby Hopson, Travis Wigstrom, Natalia Halpern, Angela Johnson, Gwenyth Lee, Itziar Familiar Lopez,	Graduate Student
46	Amelia Mueller-Williams	Characteristics of People Who Report Firearm Suicidal Ideation	Amelia Mueller-Williams, MSW, MPH, PhD, Mark A. Ilgen, PhD, Brian M. Hicks, PhD	Postdoctoral Fellow
47	Brett Schneider	Personalized remote HD-tDCS improves cognition following carbon monoxide poisoning induced amnesia: a case report	Brett S Schneider, Ph.D.; Melvin McInnis, M.D.; Victor Di Rita; Benjamin M Hampstead, Ph.D., ABPP-CN	Postdoctoral Fellow
48	Daijiazi Tang	Social Emotional Learning: Individual Differences in Student Motivation	Daijiazi Tang, Jeffrey Albrecht, Emily L. Bilek, Lucy R Zheng,	Postdoctoral Fellow
49	Daniel Sullivan	Bill Payment Independence in Community-Dwelling Older Adults with Cognitive Deficits	Daniel Sullivan, Ph.D., & Kyler Mulhauser, Ph.D.	Postdoctoral Fellow
50	Devin Tomlinson	Demographic Differences in Receiving Medications for Alcohol Use Disorder: Data from the 2022 National Survey on Drug Use and Health	Devin C. Tomlinson, Lewei A. Lin, Mark A. Ilgen, Lara N. Coughlin	Postdoctoral Fellow
51	Fiona Hobler	Speech and language abilities associated with regional corpus callosum development in children who stutter	Fiona Höbler, Emily O. Garnett, Yanni Liu, Ho Ming Chow, and Soo-Eun Chang.	Postdoctoral Fellow
52	Fiona Molloy	Understanding individual differences in conflict tasks using joint cognitive modeling	M. Fiona Molloy, PhD, Alex Weigard, PhD	Postdoctoral Fellow
53	Hanjoo Kim	The Contrast Avoidance Model in Bipolar Spectrum Disorders: A Preliminary Evaluation of the Evidence	Hanjoo Kim, Melvin G. McInnis, Sarah H. Sperry	Postdoctoral Fellow
54	Jessica Ellem	Relationships between Motivations for Withholding Negative Emotions and Assessments of Mental Health Symptoms, Fertility-Specific Stress, and Resilience	Ellem, Jessica R., Imbesi, Elizabeth A., Barbano, Anna C., Cawood, Chelsea D., Paulson, Julia L., Byrd, Michelle R.	Postdoctoral Fellow

Poster No.	Contact Name	Poster Title	Authors	Trainee Status
55	Joshua Fox-Fuller	Relationships Between NIH Toolbox Cognitive Battery Subtests and In Vivo Amyloid and Tau in People with Amnesic Mild Cognitive Impairment and Dementia of the Alzheimer's Type	Joshua T. Fox-Fuller, Kenneth Petscavage, Ginny Rogers, Robert Koeppe, Roger L. Albin, Alex Iordan, Benjamin M. Hampstead, Annalise Rahman-Filipiak	Postdoctoral Fellow
56	Katie McCurry	Developmental Differences in Reward Response Modulation Using Real-Time fMRI Neurofeedback of the Nucleus Accumbens	Katherine McCurry, Marie Jung, Mary Soules, Callie Vitro, Ryan Lash, Ashley Kim, Krisanne Litinas, Scott	Postdoctoral Fellow
57	Nicole Kubinec	Teacher's Education, Training, and Comfort Level for Providing Academic Accommodations Recommended in Neuropsychological Evaluations of Children with Chronic Health Conditions	Nicole Kubinec, Kim Heinrich, Elizabeth Johnson, Alice Coffey, and Kaitlin McCloskey	Postdoctoral Fellow
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61	Stephanie Hall	Antidepressant Prescriptions Increased For Commercially Insured People With Perinatal Mood And Anxiety Disorder, 2008–2020	Stephanie V. Hall, Andrea Pangori, Anca Tilea, Amy Schroeder, Lindsay K. Admon, and Kara Zivin	Postdoctoral Fellow
62	Valerie Micol	Self-reported daily stressors for caregivers of youth visiting psychiatric emergency departments	Valerie J. Micol, Lauren Zimmermann, Alejandra Arango, Cheryl A. King, Cynthia Ewell Foster, Amanda Jiang, Nadia Al-Dajani, Victor Hong, Ewa K. Czyz	Postdoctoral Fellow
63	Shanley Treleaven	Differential entrainment of neural oscillations during spoken word processing in children who stutter	Yanni Liu, Valeria Caruso, Shanley Treleaven, Erica Lescht, Emily O. Garnett, Amanda Hampton Wray, &	Postdoctoral Fellow
64	Alexandra Kelter	Are Psychiatry Residents Effectively Screening for Firearm Safety Within a Veteran and Non-Veteran Population?	Kennedy S. Werner, MD; Alexandra N. Kelter, MD; Rachel Pacilio, MD	Resident / Fellow
65	Jordyn Tovey	Where do “chemical imbalance” beliefs come from? Considering the impact of different sources of exposure	Hans S. Schroder, Jordyn Tovey, Reni Forer, Elizabeth T. Kneeland, Jason S. Moser	Resident / Fellow
66	Kelly Chen	A case of psilocybin-induced paranoia preceding marijuana-induced psychosis in a 16-year-old male: emerging public mental health considerations of psychedelic use among youth	Kelly Chen MD, Jamarie Geller MD, MA, Laura Andersen MD, MPH	Resident / Fellow
67	Kelly Chen	A case of psilocybin-induced paranoia preceding marijuana-induced psychosis in a 16-year-old male: emerging public mental health considerations of psychedelic substance use among youth	Kelly Chen, MD Jamarie Geller, MS, MD Laura Andersen, MD, MPH	Resident / Fellow
68	Lauren Harris	Changes in Emotion Regulation During the Course of Dialectical Behavior Therapy: Effects on Non-Suicidal Self-Injury and Binge Eating Across Two Samples	Lauren M. Harris, M.S.; Emily R. Weiss, Ph.D.; Margaret T. Davis, Ph.D.; Thomas Alex Daniel, Ph.D.; Victoria R. Hart-Derrick, BA; Chelsea D. Cawood, Ph.D.	Resident / Fellow



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70	Alexandru Iordan	High-definition transcranial direct current stimulation (HD-tDCS) effects on functional magnetic resonance spectroscopy (fMRS)	Alexandru D. Iordan, Jeffrey Stanley, Scott Peltier, Harini Babu, Kayla Rinna, Jasmine Cooper, Julianne Yoon, Patricia A. Reuter-Lorenz, Benjamin M. Hampstead	
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72	Chelsea Wilkins	Pilot implementation of a motivational incentive smoking cessation program for rural Medicaid patients	Chelsea Wilkins, Natalie Bayrakdarian, Frank Dolecki, Lauren Hellman, Isabelle Duguid, Erin E. Bonar, Lara	
73	Danielle Zube	Remote Technology-Based Motivational Interviewing Interventions to Prevent or Reduce Alcohol Use in Adolescents	Rachel Y. Kim, Danielle R. Zube, Carrie A. Bourque, Lyndsay Chapman, Meredith L. Philyaw-Kotov, Maureen A. Walton, Erin E. Bonar	
74	Deirdre Conroy	A single case study of subjective and objective sleep characteristics before and after psilocybin dosing	Conroy DA, McAfee J, Horowitz D, Tarnal V, Hosanagar A, Burgess HJ , Boehnke K	
75	Emily Garnett	Relationship between working memory and auditory rhythm discrimination in adults who stutter	Emily O. Garnett, Bailey Rann, Nicholas Mularoni, Toni Smith, Soo-Eun Chang, J. Devin McAuley	
76	James Garlick	Prolonged Exposure for Primary Care (PE-PC): Training community providers in a brief treatment for PTSD specifically designed for primary care settings	James Garlick, Heather Walters, Margaret Venners, Sheila Rauch, and Rebecca Sripada	
77	Jessica Skaff	Overview of a Novel Telehealth Intervention to Improve Alcohol Use Disorder Outcomes in Adult Primary Care Patients	Matthew J. Rostker, Jessica R. Skaff, Shayla E. Dailey, Deborah Manderachia, Carly Brin, Lewei (Allison) Lin, Erin E. Bonar	
78	Kaitlyn McCarthy	SGM Status and Suicide among ED-presenting Young Adults: The Role of Interpersonal Trauma and Stress	Kaitlyn McCarthy, M.S., Valerie J. Micol, Ph.D., Ewa K. Czyz, Ph.D.	
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80	Lezio Soares Bueno, Jr	Learning and arousal dynamics from motoric and neurophysiologic metrics during a somatosensory task in mice	Lezio S. Bueno-Junior, Anjesh Ghimire, Mingxin Ding, Brendon O. Watson	
81	Lindsay Bornheimer	Suicide Among Individuals with Schizophrenia Spectrum Disorders: A Psychological Autopsy Study	Lindsay A. Bornheimer, PhD; Courtney Bagge, PhD; James Overholser, PhD; Nicholas M. Brdar, BS; Natasha Matta; & Craig A. Stockmeier, PhD	
82	Martha Pennington	The National Dementia Workforce Study	Danielle Norman-Goyette, MSW, Martha Pennington, BA Kristen Zuck, Rachel Tocco, MA, Donovan Maust, MD, MS	

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84	Mike Bourgoise	Matching Recruitment Strategies with the Needs of Chronic Pain Patients Taking Buprenorphine	Bourgoise ML; Matharu HK; Priest WK; Lewis MN, Lin, AL, Ilgen, MA	
85	Molly Simmonite	Medial frontal GABA in psychosis: preliminary results from an ongoing study	Molly Simmonite, Clara J. Steeby, Kristin Mannella, Ivy Tso, Melvin McInnis, Luis Hernandez-Garcia, Scott Peltier and Steve F. Taylor	
86	Naomi Hemphill	Reducing PTSD symptoms in First Responders and Frontline Healthcare Workers Through Trauma-focused Treatment in Employee Assistance Programs	Naomi Hemphill, James Garlick, Sheila A. M. Rauch, Heather Walters, Rebecca K. Sripada	
87	Nasuh Malas	Disparities in the Care of Youth with Agitation or Aggression in the Emergency Department: A Systematic Review and Clinical Guidance	Nasuh Malas MD, MPH, Megan Mroczkowski MD	
88	Nasuh Malas	Defining Child Emergency Psychiatry: Lessons Learned from a National Survey of Current State Practices and Service Delivery Models	Nasuh Malas, MD, MPH; Megan Mroczkowski MD	
89	Nusrat Laskar	Using a Sequential Multiple Assignment Randomized Trial (SMART) to Develop a Stepped Care PTSD Intervention in Federally Qualified Health Centers: Study Protocol for an RCT	Nusrat Laskar; Kayla Longuski; Sheila A.M. Rauch; Jeffery Cigrang; Kyle Possemato; Eric Kuhn; Myra Kim; Heather Walters; Deanne Acton; Inbal Nahum-Shani; Rebecca K. Sripada	
90	Olivia Robinson	Engagement in Telehealth Interventions Designed to Reduce Risk for Opioid Misuse in Adolescents and Young Adults	Olivia E. Robinson, Lindsay M. Sepesi, Meredith L. Philyaw-Kotov, Carrie Bourque, Erin E. Bonar, Maureen A. Walton	
91	Simran Dhaliwal	Lessons Learned from Community Partner Engagement: Enhancing Study Recruitment and Retention	Simran Dhaliwal, Sophia E. Wood, Meredith L. Philyaw-Kotov, Maureen A. Walton, Erin E. Bonar	
92	Xintong Ju	Enhancing Identification of Alcohol Use Disorder through Natural Language Processing	Xintong Ju, MA; Jake Solka, MA; Asher Strayhorn, BS; Erin E. Bonar, Ph.D.; Allison Lin, M.D.; V.G. Vinod Vydiswaran, Ph.D.; Anne C. Fernandez Ph.D.	
93	Zachary Holmes, Alaa Yehia	Screened out: Exploring Screening Characteristics and the Implications of Revising Eligibility Criteria in a Large Behavioral Trial	Zachary Holmes*, Alaa Yehia*, Megan Lavigne, Meredith L. Kotov, Susan Woolford, Joanna Quigley, Golfo T. Wernette, Erin E. Bonar, Maureen A. Walton	
94	Courtney Funk	Feasibility and Acceptability of Collecting Passive Phone Usage and Sensor Data Via Apple SensorKit	Courtney Funk, MPH, Zhuo Zhao, MS, Adam G. Horwitz, PhD, Yu Fang, MSE, Karina Pereira-Lima, PhD, MSc, Srijan Sen, MD, PhD, Elena Frank, PhD	

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## Poster #1

### Title

Self-Reported and Neurocognitive Indicators of Reward-Related Self-Regulation in Adolescents and Young Adults

### Authors

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### Topic

Inhibitory Control

### Abstract

**Purpose:** Adolescents are more likely to engage in high-risk, reward-seeking behavior, including substance use, compared to adults. A key factor believed to contribute to this vulnerability in adolescents is a deficit in self-regulation over reward responding. For example, dual systems models posit a developmental mismatch between the brain's earlier maturing reward system and the more protracted maturation of the cognitive control system that contributes to a weakened capacity for reward-related self-control. However, the extent to which self-report and neurocognitive assessments can be used to measure this developmental difference remains unclear. **Methods:** To address this issue, the present study tested whether a self-reported self-regulation measure versus neurocognitive measure could best predict reward-related self-regulation in a sample of 72 adolescents aged 14- to 16-years-old and 84 young adults aged 25-to-27 years old who participated in the NeuroMod Study. Participants completed a 36-item self-reported Self-Regulatory Inventory (SRI) that assessed perceptions of self-regulation on multiple dimensions. Participants also completed an Emotional Go/No-Go Task where participants were instructed to respond via button press to "go" or "no-go" cues of either happy (i.e., rewarding) faces or neutral faces. **Results:** The young adult group reported significantly higher SRI sum scores versus adolescents (young adults:  $M=134.71(SD=14.35)$ ; adolescents  $M=129.39(SD=129.39)$ ,  $t=-2.17(150)$ ,  $p=.032$ ) and a lower false alarm rate when happy faces were the "go" cue (young adults:  $M=.12(SD=.14)$ ; adolescents  $M=.22(SD=.15)$ ,  $t=4.43(147)$ ,  $p<.000$ ) and when neutral faces were the "go" cue (young adults:  $M=.18(SD=.12)$ ; adolescents  $M=.32(SD=.17)$ ,  $t=5.83(147)$ ,  $p<.000$ ). In logistic regression models, false alarm rate predicted being in the adolescent versus young adult group over and above sex and SRI sum score ( $B=-6.57(SE=1.67)$ ,  $p<.001$ ). **Conclusions:** Our study demonstrates that adolescents show deficits in reward-related self-regulation to a greater extent than young adults. Furthermore, the neurocognitive assessment appeared to be more predictive of age-related differences in reward-related self-regulation.

## Poster #2

### Title

MC3 Perinatal: Increasing Mental Health Support for Perinatal Patients

### Authors

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### Topic

Health Services

### Abstract

According to the APA, pregnant women are sometimes termed “therapeutic orphans” due to the limited therapeutic interventions they receive despite high rates of depression, anxiety, and suicidal ideations during pregnancy. Additionally, up to a quarter of postpartum individuals report depressive symptoms and/or anxiety symptoms. Despite the concerning state of perinatal mental health, medical professionals tend to be undertrained and underprepared when treating perinatal populations. MC3 Perinatal addresses these issues by providing a program involving two components, “care” and “consultation”. Eligible patients are enrolled and provided “care” through 8 psychotherapy sessions with trained Behavioral Health Consultants (BHCs). The patient’s Primary Care Provider is also able to “consult” with a team of perinatal psychiatrists about treatment options for their patient. This creates a network of professionals centered around the patient that can provide therapy, medication support, and other resources. Since 2021, patient enrollment numbers have been tracked, along with consultations with providers. Patient satisfaction was measured with a questionnaire about the program. GAD and PHQ were measured monthly throughout enrollment to track changes in anxiety and depression symptoms. The program has seen immense growth since 2021. As of March 2024, the program is providing counseling services to n=452 pregnant and postpartum women. n=936 obstetric providers have been enrolled with n=2,000 psychiatric consultations provided. Over 90% of participants and providers expressed satisfaction with the program. In the first month of care, clinical anxiety levels dropped on average from 56% to 34%, and clinical level depression from 52% to 32%. MC3 Perinatal offers a solution to the lack of mental health services for perinatal women and allows providers to consult with perinatal psychiatrists in order to provide well-informed care. The next steps are to expand MC3 to reach more perinatal patients and providers.

## Poster #4

### Title

Characteristics Associated with Youth Attention-Deficit/Hyperactivity Disorder (ADHD) and Stimulant Treatment in the ABCD Sample

### Authors

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Undergraduate Student

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### Topic

ADHD

### Abstract

Attention Deficit/Hyperactivity Disorder (ADHD) is a common neurodevelopmental condition known to have many negative impacts on those who experience it. It is critical to understand the underlying factors that are associated with ADHD, in order to improve its diagnosis and treatment processes. Objective: This study aims to better understand the relationships between demographic, psychosocial, and environmental factors and ADHD diagnosis and stimulant treatment across development. Methods: Data on youth participants in the ABCD study is explored using logistic regressions, to analyze the predictive relationships between a variety of covariates and ADHD diagnosis and stimulant usage. Results: In an analytic subsample of unrelated individuals ( $n=8,074$ ), ADHD diagnosis was positively associated with male sex, family history of psychopathology, externalizing and internalizing problems, greater parental educational attainment, greater parental income, school disengagement, parent-reported family conflict. ADHD diagnosis was negatively associated with school involvement, parental monitoring, older interview age, and youth-reported family conflict. Even after accounting for ADHD diagnoses, stimulant use was positively associated with male sex, family history of psychopathology, externalizing problems, positive school environment, school involvement, youth-reported family conflict, younger interview age, and neighborhood safety. It was negatively associated with parental monitoring, Other/Mixed race, Hispanic ethnicity, neighborhood crime, parent-reported family conflict. Conclusion: Our results support the existence of associations between unexplored risk factors and ADHD and stimulant use, pointing to the multidimensional quality of ADHD predictors and the importance of assessing a breadth of variables, in addition to symptomatology in diagnosis and treatment. Keywords: ADHD, stimulants, predictive relationships, psychopathology

## Poster #5

### Title

Mouse Digital Phenotyping: A system for recording 24/7 mouse behavior and brain electrophysiology over weeks

### Authors

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Undergraduate Student

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### Topic

Animal Labs

### Abstract

The neurobiology of phenomena underlying and contributing to stress response and depression are not fully understood. The development of further models and systems to study these in rodents can lead to mechanistic biological explanations that link to possibly translatable behavioral and physiological phenotypes. Here we record behavior and electrophysiology from the brains of mice for weeks continuously and use big-data methods to both derive high-dimensional behavioral phenotypes of stress and to link those to brain electrophysiologic mechanisms. Our strategy was to improve the resolution of behavioral monitoring in rodents over long time periods (weeks) in C57BL6 mice to both develop improved behavioral phenotypes and to link those to brain mechanisms. To do this, we increased both behavioral detail and temporal resolution while recording over weeks. Our system classifies sub-second resolution data into one of dozens of behaviors via automated video analysis combined with instrument-based measurements of eating, drinking, food choice, sucrose preference and wheel running. Our custom system is able to record 16 mice simultaneously, each in a modified version of a standard homecage with 24/7 video and device monitoring. We have also integrated measurement of brain electrophysiology to eventually correlate with behavior.

## Poster #6

### Title

Age Effects on Emotional Reactions Following Alzheimer's Disease Biomarker Disclosure

### Authors

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### Topic

Biomarker Disclosure

### Abstract

Dementia, characterized by cognitive decline affecting the ability to do everyday activities, poses a significant health challenge. Alzheimer's disease (AD), the most common cause of dementia, involves abnormal amyloid and tau protein accumulation detected via positron emission tomography (PET). Elevated amyloid indicates AD brain changes. Although prior research has found minimal mood or anxiety disorder changes following biomarker disclosure, few studies have examined predictive factors for emotional reactions, such as age. This study aims to investigate emotional reactions after learning positive PET amyloid biomarker status among 49 participants 55 years of age and older with Mild Cognitive Impairment (MCI) or Dementia Alzheimer's Type (DAT) as a function of age. Emotional reactions were assessed using the Positive and Negative Affect Scale - Short Form (PANAS-SF) and Impact of Neuroimaging in Alzheimer's Disease (INI-AD) at baseline, immediately post-disclosure, and 6-weeks later. PANAS and INI-AD scores were compared across 2 age groups: 55-70 years and 71+. Analysis focused on data collected immediately following disclosure and at 1-week post-disclosure for amyloid-positive participants. We hypothesize that participants within the ages of 55-70 will display a more negative affect than their older counterparts. The analysis revealed no significant overall difference in psychological reactions for both immediate ( $F_{4,36} = 0.622$ ,  $p = .650$ ) and 1-week ( $F_{4,35} = 1.050$ ,  $p = .396$ ) post disclosure, however, there was a medium effect size between groups (immediate:  $\hat{\eta}^2 = .065$ ; 1-week:  $\hat{\eta}^2 = .107$ ). In summary, there were small, non-significant effects of age for both measures of PANAS and INI-AD. Despite the absence of significant effects of age on psychological measures, these findings emphasize the importance of further research replication with larger sample sizes and diverse study populations. Such endeavors can provide insights into who may be more likely to have negative reactions after learning positive AD biomarker results, allowing for clinicians to better prepare and support these patients. Further research has the potential to enhance patient care and contribute to the broader understanding of the impact of biomarker disclosure.



## Poster #7

### Title

Beyond traditional metrics: A novel method for measuring mood instability in bipolar disorder

### Authors

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### Topic

Mood

### Abstract

Background: Clinical care for bipolar disorder (BD) has a narrow focus on prevention and remission of episodes with pre/post treatment reductions in symptom severity as the “gold standard” for outcomes in clinical trials and measurement-based care strategies. The study aim was to provide a novel method for measuring outcomes in BD that has clinical utility and can stratify individuals with BD based on mood instability. Methods: Participants were 603 with a BD (n=385), other or non-affective disorder (n=71), or no psychiatric history (n=147) enrolled in an intensive longitudinal cohort for at least 10 years that collects patient reported outcomes measures (PROMs) assessing depression, (hypo)mania, anxiety, and functioning every two months. Mood instability was calculated as the within-person variance of PROMs and stratified into low, moderate, and high thresholds, respectively. Outcomes: Individuals with BD had significantly higher mood instability index<sup>s</sup> for depression, (hypo)mania, and anxiety compared to psychiatric comparisons (moderate effects,  $p < .001$ ) and healthy controls (large effects,  $p < .001$ ). A significantly greater proportion of individuals with BD fell into the moderate (depression: 52.8%; anxiety: 51.4%; (hypo)mania: 48.3%) and high instability thresholds (depression: 11.5%; anxiety: 9.1%; (hypo)mania: 10.8%) compared to psychiatric comparisons (moderate: 25.5 - 26.6%; high: 0% - 4.7%) and healthy controls (moderate: 2.9% - 17.1%; high: 0% - 1.4%). Being in the high or moderate instability threshold predicted worse health functioning ( $p < .00$ , small to large effects). Interpretation: Mood instability, as measured in commonly used PROMs, characterized the course of illness over time, correlated with functional outcomes, and significantly differentiated those with BD from healthy controls and psychiatric comparisons. Results suggest a paradigm shift in monitoring outcomes in BD, by measuring mood instability as a primary outcome index.



## Poster #8

### Title

Individual differences in the effects of gene transcription on memory formation

### Authors

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### Topic

Animal Labs

### Abstract

Behavior and brain function are influenced by dynamic changes in gene expression. Histone deacetylases (HDACs) play a significant role in regulating synaptic plasticity and learning and memory by condensing chromatin and repressing gene expression. In this study, we investigated the ability of the HDAC inhibitor sodium butyrate (NaB) to affect individual differences in emotional learning styles. Rats underwent Pavlovian conditioned approach training, and their learned behavioral responses were classified as sign-tracking, i.e. directed toward the stimulus that predicts reward, or goal-tracking, i.e. directed toward the location of impending reward delivery. Following this training, an object recognition test was performed to assess the rats' ability to form new memories after receiving systemic injections of either NaB or saline solutions. Behavioral responses were recorded to calculate a discrimination index between a novel object and a previously encountered object. We found that NaB reduced the ability to discriminate novel from familiar objects among rats that preferentially engage in sign-tracking behavior, indicating impaired memory retention compared to the other experimental groups. These results suggest that NaB differentially affects learning and memory processes depending on individual differences in emotional learning styles.

## Poster #9

### Title

Factor Analysis of Alcohol Problems and Associations with Impulsivity in a Sample of Emerging Adults

### Authors

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### Topic

Substance Abuse

### Abstract

Background: Alcohol use among college students is a growing health concern in the United States, with nearly 30% reporting binge drinking in the past month. The Rutgers Alcohol Problems Index (RAPI) is a commonly used questionnaire that measures problems related to alcohol use. Whereas previous studies have examined the factor structure of the RAPI, results have been inconsistent. Also, they have not examined correlations with other constructs associated with alcohol use, such as impulsivity. Methods: 223 college-aged individuals with varying levels of alcohol use (16–25 years old;  $M=20.5$ ,  $SD=2.3$ , 57.4% female) completed the RAPI and Barratt Impulsiveness Scale-11 (BIS-11). We applied principal components analysis (PCA) with varimax rotation to RAPI items to characterize alcohol problems factors. We then examined correlations between these RAPI factors (as means) and impulsivity factors from the BIS-11. Results: Results suggested six factors based on the number of eigenvalues greater than one. However, visual inspection of the scree plot suggested one factor. The first three factors were interpreted as “over consumption,” “social,” and “personal irresponsibility,” respectively, and explained 42% of the variance. Only one of the remaining three factors was interpretable (“dependence”). BIS-11 total and factor scores were significantly correlated with RAPI factors ( $r_s .15-.40$ ,  $p_s <.001-.028$ ), with the exception of the correlation between RAPI Factor 5 and BIS-11 Attentional ( $r = .13$ ,  $p = .062$ ) and Non-Planning ( $r = .07$ ,  $p = .298$ ) scores. Conclusions: PCA was used to characterize the factor structure of the RAPI in a sample of college-aged individuals. Results were somewhat inconclusive with regard to the number of factors that should be retained. Regardless, we found many significant correlations between RAPI factors and BIS-11 impulsivity factors, extending the prior literature. These results help expand our understanding of the relationship between types of alcohol consequences and impulsivity.

## Poster #10

### Title

Utilizing Telehealth Interventions in a SMART Design to Improve Access and Care for Adults Living with Alcohol Use Disorder

### Authors

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### Topic

Substance Abuse

### Abstract

**Background:** Despite the efficacy of evidence-based psychotherapies like Cognitive Behavioral Therapy (CBT) and Motivational Interviewing (MI), ~90% of people with alcohol use disorder (AUD) do not receive treatment. Treatment rates are even lower among women and Black/African American individuals. This study uses a sequential, multiple assignment randomized trial (SMART) to evaluate combinations of virtually-delivered interventions to improve AUD treatment utilization and reduces disparities. **Methods:** Michigan Medicine patients aged 18-70 are recruited and screened for eligibility. We will enroll up to 400 adults who meet criteria for AUD, internet access, ability to provide informed consent, past month heavy drinking, and no current/recent AUD psychotherapy with planned enhanced representation of women and Black/African Americans. We will compare the impact of interventions that begin with a telephone session (T-engage) versus a virtual portal messaging intervention (P-engage) on alcohol-related outcomes and AUD treatment utilization. Among non-responders to the first-stage intervention, we test step-up to a MI-CBT telehealth program versus an enhanced first-stage intervention. We assess outcomes of AUD treatment utilization and alcohol consumption through 4-, 8-, and 12-month follow-ups. **Results:** To date we have enrolled and randomized N=38 to first stage interventions (60.5% women; 90% White, 5% Black/AA, 5% other race); N=20 T-engage, N=18 P-engage, with 92% engaging. At post-test, 19 have been randomized to Phase 2 conditions (N=3 Enhanced P-engage, N=5 Enhanced T-engage, N=11 MI-CBT; M=6.4 sessions attended per person for MI-CBT); retention is 93% at 4-months, with 8- and 12-month follow-ups initiating soon. **Conclusion:** This SMART presents an innovative approach to enhancing AUD treatment engagement and delivery for non-treatment seeking individuals. Preliminary engagement rates highlight the capacity for telephone and video sessions and patient portals to reach and engage individuals within health systems. Developing this virtual care model may have the potential to significantly improve outcomes for patients with AUD and reduce alcohol-related health disparities. **Funding:** NIAAA R01029808

## Poster #11

### Title

Emotional Experience and Neuropsychiatric Symptoms in Older Adults with Cognitive Impairment

### Authors

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### Topic

Gero

### Abstract

**Objective:** Later-life neuropsychiatric symptoms have been associated with a greater risk of dementia. A recently developed mild behavioral impairment (MBI) diagnostic framework standardizes the assessment of neuropsychiatric symptoms in older adults. However, the links between MBI and emotional experience are unclear. Here, we asked whether deficits in the experience and expression of emotion are associated with MBI.

**Participants and Methods:** We analyzed data from 146 individuals aged 55 or older, with a diagnosis of amnesic MCI or mild dementia of the Alzheimer's type, enrolled in the "Stimulation to Improve Memory" study (R01AG058724; PI Hampstead). MBI was assessed using the Neuropsychiatric Inventory Questionnaire (NPI-Q). Emotional experience was assessed using measures from the NIH Toolbox Emotion Domain covering four subdomains: Psychological Well-Being, Social Relationships, Stress and Self-Efficacy and Negative Affect. We employed regression analysis to explore the relationships among measures within each subdomain and the severity of MBI symptoms. The outcome variable, MBI score, was modeled using a negative binomial distribution, with age, education, and cognitive performance as covariates.

**Results:** Results showed significant associations among measures within the Social Relationships subdomain and MBI scores. Notably, friendship showed a negative association with MBI scores ( $\hat{\beta}=-0.09$ ,  $p<0.001$ ), whereas perceived hostility showed a positive association with MBI scores ( $\hat{\beta}=0.087$ ,  $p=0.026$ ).

**Conclusion:** These findings identify social factors with potential protective (friendship) and risk (perceived hostility) effects for MBI symptoms and underscore the importance of incorporating assessments of social and emotional functioning to better inform interventions aimed at mitigating neuropsychiatric symptoms and enhancing quality of life in older adults with cognitive impairment.

## Poster #12

### Title

A brief intervention to increase Crisis Line usage among those in Alcohol Use Disorder treatment

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### Topic

Suicide

### Abstract

According to SAMSHA, 13.2 million adults had serious thoughts of suicide and 1.6 million made a suicide attempt in 2022. Individuals with Alcohol Use Disorders (AUDs) are more likely to make a lethal suicide attempt. Since rapid access to care is essential, effective strategies are needed to reduce risk among those with AUDs. Key resources, such as the 988 Suicide and Crisis Lifeline, operate 24/7 for individuals experiencing a crisis, however many at-risk individuals do not utilize these services. To help encourage utilization of this potentially life-saving resource, our research team has developed a brief intervention called Crisis Line Facilitation (CLF). Methods and Approach: Data presented was collected during an ongoing randomized control trial of CLF among those in treatment for an AUD. The CLF intervention is designed to be delivered in a single session. CLF addresses three core elements of behavior change: behavioral attitudes, subjective norms, and perceived behavioral control. Participants have direct experience practicing the logistics of making a call to the 988 Lifeline to help counter any negative beliefs about Lifeline use. Results/Conclusion: Data collection and intervention delivery is ongoing, however current survey response trends suggest that participants find CLF helpful and feel the material in the session is relevant. After the CLF session, participants reported feeling more comfortable with calling the line, and reported greater general confidence that they could contact the crisis services. Innovation & Significance to the Field: Enhancing utilization of crisis lines among individuals in treatment for AUDs could have a substantial impact on rates of suicidal behavior in this group. If found to be effective, the CLF approach could be easily expanded to other settings and could, over time, have a meaningful impact on the large number of fatal and non-fatal suicide attempts in those with AUDs.

## Poster #13

### Title

Views of Michigan Army National Guard Soldiers on suicide prevention programs

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### Topic

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### Abstract

Suicide is a significant public health problem, with National Guard (NG) soldiers at elevated risk. While significant resources have been invested in suicide prevention resources, little is known about NG soldiers views on these suicide prevention programs and the likelihood that they would utilize them in a crisis. **Methods and Approach:** Michigan Army NG soldiers were recruited to participate in a study of a brief suicide prevention intervention designed to increased use of crisis services. At baseline, soldiers completed a self-report survey on various topics including opinions on suicide prevention programs and crisis services. Present analyses focus on data from 515 soldiers. **Results/Conclusion:** Despite the universal availability of crisis lines, only 57.1% of NG soldiers reported knowing how to contact the Military Veterans Crisis Line (MVCL), and only 44.3% reported knowing what to expect if they contacted the MVCL. Many soldiers reported the information and resources received from the NG about preventing suicide as adequate (62.3%) and helpful (69.9%). Programs related to mental health, warning signs, and gun safety with family members and friends were seen as potentially helpful by 69.7% of soldiers, and 59.4% of soldiers reported felt these programs would reduce suicide. In addition, 53.8% of soldiers reported that they would utilize an educational program if it were available. Programs offering free gun locks were also endorsed by many soldiers (69.3%), with 59.6% of soldiers reporting they would utilize free gun locks; however, only 32.6% of soldiers felt this program would help reduce suicide. Programs offering lethal means restrictions were the seen as the least appealing. **Innovation & Significance to the Field:** Enhancing utilization of suicide prevention programs among NG soldiers could reduce rates of suicidal behavior in this population. Soldiers reported educational programs education that involve family members and friends could help reduce suicide.

## Poster #14

### Title

Examining a Clinical Assumption Regarding the Severity of Suicide Attempts by Patients with Borderline Personality Disorder Features

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### Topic

Suicide

### Abstract

Suicide attempts are highly prevalent among those with borderline personality disorder (BPD). A clinical assumption of patients with BPD features is that their suicide attempts are not indicative of a strong desire to die and are not medically serious. However, the extent to which patient characteristics (i.e., demographics, psychiatric symptoms) and suicide attempt characteristics (i.e., suicidal intent, actual medical lethality) are related to BPD features among recently hospitalized attempters is unknown. Participants were 170 patients hospitalized within 24 hours of their suicide attempt (M age=36.57; SD=11.19; 57.1% female; 62.8% Caucasian, 31.3% Black, 5.9% other race/ethnicity). The Personality Assessment Inventory-Borderline Features Scale was used to classify participants as having elevated BPD traits (B+; n=124) or having subsyndromal BPD traits (B-; n=46). Suicidal intent was assessed by the Beck Suicide Intent Scale, and lethality of the attempt was determined by the Beck Lethality Scale. Suicide attempt history was determined by self-report (66.4% had a prior attempt). Participants also completed the Alcohol Use Disorders Identification Test (scores  $\geq 8$  indicative of problematic alcohol use in the past year), and the Center for Epidemiological Studies Depression Screening Index-10. B+ and B- groups did not differ on demographics. The B+ group reported significantly higher depressive symptoms ( $t=5.89$ ,  $p<0.001$ ) and problematic alcohol use ( $\bar{t}\pm 3.93$ ,  $p=0.05$ ) than the B- group. Regarding attempt characteristics, the B+ group was more likely to endorse prior suicide attempts than the B- group ( $\bar{t}\pm 14.96$ ,  $p<0.001$ ). Notably, the groups did not differ on medical lethality of attempt ( $t=-1.37$ ,  $p=0.17$ ) or suicidal intent ( $t=0.69$ ,  $p=0.49$ ). Clinical assumptions about the seriousness of suicidal behavior based solely on the presence of BPD features were not supported by our findings. Instead, providers should be aware that recent attempters with and without significant BPD features do not differ on levels of suicidal intent and medical lethality.



## Poster #15

### Title

Comparing Clinical Diagnosis of Domains of Impairment In Individuals with Mild Cognitive Impairment with the NIH Toolbox-Cognitive Battery Performance

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### Topic

Assessment

### Abstract

**Background:** Mild Cognitive Impairment (MCI) represents the phase between age-associated cognitive decline and Alzheimer's disease and related dementias. Examination of MCI is important through the NIH Toolbox-Cognition Battery (NIHTB-CB). We compared MCI patients' performance against impairment categories defined by the clinical diagnosis form of the National Alzheimer's Disease Coordinating Center (NACC) Unified Data Set UDS3. We expected a correspondence between MCI consensus-based clinical deficit areas and NIHTB-CB task performance. **Method:** Retrospective data analysis was conducted on 65 MCI participants (mean age of  $74 \pm 8.3$ , 65% female) from the Michigan Alzheimer's Disease Research Center, who completed UDS3 and NIHTB-CB measures. UDS3 forms include interviews, medical examinations, and neuropsychological testing, with a clinical consensus-based diagnosis form detailing impairments in memory, language, attention, executive, and visuospatial functioning. Four domain impairment groupings with  $\approx 10$  participants were established (Executive Functioning,  $n=10$ ; Memory,  $n=27$ ; Memory+Executive Functioning,  $n=17$ ; and Memory+Language  $n=11$ ) and compared to NIHTB-CB performance. ANOVAs and post hoc tests were conducted. **Result:** Picture Sequence Memory (PSM,  $F=3.3$ ,  $p=0.03$ ) and Pattern Comparison (PC,  $F=4.1$ ,  $p=0.01$ ) yielded significant differences. For PSM, post hoc tests demonstrated higher scores for Executive compared to Memory+Executive (PSM:  $p<0.02$ ) with a trend for Executive versus Memory groups ( $p<0.07$ ). For PC, Memory performed better than Memory+Executive ( $p<0.02$ ) and Memory+Language ( $p<0.04$ ). **Conclusion:** The better memory performance on PSM of the Executive group compared to the two memory impairment groups is consistent. PC was sensitive to clinically diagnosed executive impairment. Lower scores for the Memory+Language group on PC were unexpected. Efficient language functioning may be necessary for complex pattern comparison as dimensions shift. Findings support the validity of NIHTB-CB and suggest the need for research on language demands for executive measures.

## Poster #16

### Title

Applying novel behavioral economic measures to understand opioid-related polysubstance use

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### Topic

Substance Abuse

### Abstract

**Background:** This is a prospective 1-year cohort study following individuals with opioid-involved polysubstance use (PSU) to gain insight into high-risk PSU behaviors, motivations for use, barriers and catalysts for receiving treatment, and behavioral economic (BE) choice preferences. The BE field helps understand individual drivers of substance use in the context of external influences impacting decision-making. With the lack of BE research conducted outside lab-based settings, BE choice preferences among people with PSU behaviors are poorly understood, particularly regarding changes over time. **Methods:** We are recruiting N=400 from the Michigan Medicine database, BuildClinical recruitment, and the Addiction Consult Team at Michigan Medicine. We modified existing BE measures and developed evaluations to reduce participant burden and enhance fit with individual factors related to a person's PSU choice preferences. The resulting BE battery includes: (1) brief delay discounting, (2) hypothetical single and cross-commodity purchase tasks, (3) overdose probabilistic discounting and (4) brief relative reinforcement. We will highlight two BE measures: 1) The Overdose Probabilistic Discounting Task measures the likelihood of using a participant's preferred opioid, whereas prior research defaulted to heroin, based on a changing percentage of risk for overdose death from the same batch of the opioid. 2) The Opioid Hypothetical Purchasing Task compares a number of doses for a chosen opioid that would be purchased with an increasing price per dose under standardized conditions. Adjustments made for these tasks facilitate examination of a participant's judgment and possible trends in risky behavior based on the preferred opioid used. **Conclusion:** BE may provide novel insights into complex PSU choice preferences and how these choices change in different contexts over time. The ultimate goal of this work is to use BE measures to tailor prevention and treatment strategies to reduce consequences from PSU.



## Poster #17

### Title

Utilizing Ecological Momentary Assessment to explore Emotional Awareness and Regulation in Bipolar Disorder

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### Topic

Mood

### Abstract

Individuals with bipolar disorders (BD) often face difficulties with emotional awareness and emotion regulation, which may be associated with impulsivity. However, few studies have examined these relationships in real-world contexts in BD. Individuals with BD (20) and healthy controls (HC) (11) were rated for their mood (HAMD, YMRS) and completed self-reports of impulsivity and emotion regulation (TFI, ERQ). They then completed 28 days of ecological momentary assessment (EMA) surveys, 4 times a day focusing on emotional awareness, regulation, and impulsivity in the moment. We will characterize emotional awareness and regulation in daily life for the entire sample. Then, we will examine whether aspects of emotional awareness and regulation differentially predict impulsivity in daily life. We hypothesize that when individuals have low emotional awareness or fail to regulate their emotions, they will be more likely to report impulsivity in daily life. Research of this nature is a necessary next step in improving outcomes in the daily lives of those with BD as it may allow for improved awareness, self-regulation and less risky behaviors in times of elevated mood.

## Poster #18

### Title

Exploring the Relationship of Participant Demographics and Recruitment Method with Participant Retention in a Large Behavioral Trial

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### Topic

Substance Abuse

### Abstract

**Background** We are conducting an efficacy study (NIDA: UH3 DA050173/050173-02S1) of remote behavioral interventions for preventing and reducing opioid misuse. Emergency department patients aged 16-30 were recruited using in-person and online methods (N = 1155). After randomization and intervention delivery, participants are requested to complete follow-up surveys at 3-, 6-, and 12-months. Continued follow-up participation is essential for maintaining study validity and power. Herein we evaluate whether follow-up retention is associated with participant demographics or recruitment method. **Methods** The analytic sample includes 755 participants whose 12-month follow-up participation ended by March 2024. Retention was measured by the number of follow-ups completed (0, 1, 2, or 3). The sample was categorized using self-reported demographics (age, education, income, public assistance receipt) and recruitment strategy (remote/in-person). Bivariate chi-square analyses examined differences between groups. **Results** Follow-up rates exceeded 88% across timepoints. Overall, 7.2% of participants completed 0 surveys, 3.6% completed 1, 4.8% completed 2, and 84.5% completed all 3 surveys. No significant differences emerged between retention rates and age [ $p = 0.81$ ], income [ $p = 0.30$ ], public assistance [ $p = 0.28$ ], or education [ $p = 0.13$ ]. There were significant differences in retention by recruitment strategy [ $p < 0.01$ ]. When comparing in-person ( $n = 206$ ) to remote recruitment ( $n = 549$ ) respectively, 11.17% vs. 5.65% completed 0 surveys, 5.83% vs. 2.73% completed 1, 6.80% vs 4.01% completed 2, and 76.21% vs. 87.61% completed all 3. **Conclusion** To identify potential barriers to retention, asking about participant access to internet connection and technology during in-person recruitment might be useful in problem-solving future retention challenges, since either technology is necessary for follow-up survey completion. Further analyses should investigate possible strategies to enhance retention methods with those recruited in-person, and to better understand characteristics of those lost to follow-up over time.

## Poster #19

### Title

Exploring Sex Differences: The Interplay of Internalizing, Externalizing, and Alcohol Use in Young Adults

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### Topic

Substance Abuse

### Abstract

**Background:** The relationship between internalizing or externalizing behaviors and alcohol use varies based on sex. Research indicates that males exhibit higher externalizing levels while females exhibit higher internalizing levels, both of which are strongly associated with alcohol use. The AUDIT questionnaire measures hazardous drinking patterns. The USAUDIT – an adapted AUDIT – more accurately reflects U.S. drinking standards, therefore offering greater accuracy when measuring sex-specific risky drinking. This study aims to examine the relationships between internalizing, externalizing, and risky alcohol use in males and females using the USAUDIT. **Methods:** 63 participants (22 males, 41 females,  $M=22.7$  years) completed the USAUDIT and the Adult Self Report (ASR) in an ongoing study. The ASR examines scores for internalizing and externalizing along with individual subscales. We examined the correlation between the scores from the USAUDIT, externalizing and internalizing t-scores, and their subscales in males and females. **Results:** Externalizing scores were positively correlated with USAUDIT scores ( $p<.001$ ,  $r=.54$ ); there was no significant correlation between internalizing and USAUDIT scores. Males exhibited a positive association between the USAUDIT and internalizing ( $p=.04$ ,  $r=.43$ ) and externalizing scores ( $p<.001$ ,  $r=.77$ ), including each externalizing subscale (rule-breaking  $p=.002$ ,  $r=.65$ ; aggressive behavior  $p<.001$ ,  $r=.86$ ; intrusive thoughts  $p=.003$ ,  $r=.63$ ) and the anxious/depressed internalizing subscale ( $p=.004$ ,  $r=.62$ ). Females exhibited a positive correlation between USAUDIT and externalizing scores ( $p=.01$ ,  $r=.39$ ), but there were no significant correlations between USAUDIT and internalizing scores or its subscales. **Conclusion:** These results conflict with prior research, in particular the positive association between anxious/depressed internalizing subscale scores and risky alcohol use in males. This demonstrates the need to examine these relationship deviations and to determine if they stem from the greater accuracy of the USAUDIT or a wider change in sex differences.

## Poster #20

### Title

Facets of Trait Impulsivity and Callous-Unemotional Traits Predict Substance Use in Adolescents and Young Adults

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### Topic

Substance Abuse

### Abstract

**Background:** The transition from adolescence to young adulthood is a time of many developmental milestones, including the maturation of processes involved in emotional/interpersonal functioning and self control. Adolescence and young adulthood also typically mark the initiation of substance use. Impulsivity, callous/unemotional traits, and delay discounting (the devaluing of a reward as the delay to receiving the reward increases) have all been associated with substance use, but few studies have examined their constituent facets or the combination of these key constructs and their associations with substance use. **Methods:** Participants were 78 individuals aged 16–25 years ( $M = 20.2$ ,  $SD = 2.85$ , 53.2% female). They completed the Barratt Impulsiveness Scale 11, Inventory of Callous Unemotional Traits, and an individualized delay discounting task (IDT). For the IDT, participants were asked to make a series of choices between an immediate (smaller) reward and a delayed (larger) reward, allowing for the calculation of a rate of discounting ( $K$ ).  $K$  values were log transformed as is customary in the literature. Substance use was measured as the number of times participants used each of seven substance types in their lifetime. These values were z-scored and then averaged. A multiple linear regression model was used to examine facets of impulsivity and callous/unemotional traits as well as discounting rate as predictors of substance use, with age and socioeconomic status as covariates of no interest. Missing data were handled with multiple imputation, and all reported results are from pooled data sets. **Results:** From the linear regression model, age ( $t = 3.39$ ,  $p = 0.001$ ) and behavioral impulsivity ( $t = 2.41$ ,  $p = .018$ ) were significant predictors of substance use. **Conclusions:** It is important that studies examine multiple aspects of processes undergoing maturation during adolescence and young adulthood, as we have shown that specific facets have been shown to be differentially associated with substance use.

## Poster #21

### Title

Cues and Contexts: Assessing Fear Learning and Memory in Anxiety and Depression

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### Topic

Learning and Memory

### Abstract

People with anxiety demonstrate enhanced threat-related learning and difficulties using contextual information to determine whether they are safe or in danger. While threat-related learning is often studied in anxiety disorders, it is rarely examined in depression, despite high levels of comorbidity between these conditions. Moreover, some evidence suggests that context processing deficits are associated with several psychiatric symptom dimensions, including anxiety and depression. In this study, we examined the relationship between anxiety and depression and participants' context-dependent learning and memory. We hypothesized that higher anxiety and depression would be associated with greater threat reactivity and difficulty utilizing contextual information to modulate threat responses. Fifty adults completed the Depression, Anxiety, and Stress Scale (DASS-21) to assess anxiety and depression symptoms. A contextual fear learning (conditioning, extinction) and memory (extinction recall, fear renewal) task was used to examine cue- and context-based learning and memory. Learning and memory were quantified based on threat expectancy ratings and physiological reactivity (skin conductance response) to the threat compared to the safety cue. Correlation analyses demonstrated that neither anxiety nor depression were associated with threat learning. Higher DASS-depression scores were associated with enhanced threat expectancy during extinction recall (threat cue:  $r(45) = .40$ ,  $p = .005$ ; safety cue:  $r(45) = .42$ ,  $p = .003$ ) and fear renewal (threat cue:  $r(45) = .46$ ,  $p = .001$ ; safety cue:  $r(45) = .56$ ,  $p < .001$ ). There was trend-level evidence indicating participants with higher anxiety symptoms were less able to discriminate between the threat and safety cues during extinction recall ( $r(45) = -.26$ ,  $p = .084$ ) and fear renewal ( $r(45) = -.27$ ,  $p = .067$ ). These results demonstrate that participants with higher anxiety had poorer memory for threat contingencies, while those with higher depression expected threat regardless of the cue or context presented.

## Poster #22

### Title

Eyes Don't Lie: Decoding the Role of Eye Movements and Network Segregation in Object-Location Association Memory Deficits in Amnesic Mild Cognitive Impairment

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### Topic

Imaging

### Abstract

Objective: Remembering objects' locations involves attention and spatial processing pathways and is often impaired in amnesic mild cognitive impairment (aMCI). We investigated whether visual attention, measured using eye-tracking, during object-location association (OLA) encoding is associated with (1) memory performance and (2) functional segregation of the dorsal-attention network (DAN), given its role in goal-oriented, top-down attention. Methods: Older adults ( $n=72$ ) with aMCI encoded 15 OLAs. Eye movements (i.e., number/duration of fixations) were recorded during encoding and classified as occurring on an object (Hits) or other areas of the environment (non-Hits). OLA memory required participants to touch the location of an object on a monitor under free recall (FR), cued recall (CR), and recognition conditions. FR and CR performance were measured as continuous values based on distance between the selected and actual location (i.e., higher values reflect greater error). A subset of 55 participants encoded novel OLAs during functional magnetic resonance imaging, which we used to evaluate functional network segregation. We tested linear associations between eye movements, memory performance, and DAN segregation using Pearson correlations. Results: FR error was inversely associated with non-Hit durations ( $r=-0.3$ ,  $p=0.01$ ). CR error was inversely associated with non-Hits ( $r=-0.33$ ,  $p=0.004$ ), duration of non-Hits ( $r=-0.35$ ,  $p=0.003$ ), and Hits ( $r=-0.28$ ,  $p=0.02$ ). Greater DAN segregation from other associative networks was associated with lower CR error ( $r=-0.3$ ,  $p=0.03$ ) and higher recognition scores ( $r=0.33$ ,  $p=0.01$ ). Finally, exploratory analyses with other associative networks showed greater default-mode and cingulo-opercular network segregation was associated with higher recognition scores for novel OLAs ( $p\leq 0.02$ ) and perceptual controls ( $p\leq 0.05$ ), suggesting less specific roles for these networks. Conclusion: Memory deficits in MCI may arise from altered network level functioning and reduced visual attention to targeted and non-targeted information. Interventions that enhance visual attention or provide top-down strategies to reinforce attention to targeted information may hold promise for enhancing memory.



## Poster #24

### Title

The Interventional Psychiatry Registry: Development and Implementation of a New Database of Patients with Mood Disorders

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### Topic

Mood

### Abstract

**Background** A patient registry is a database containing health information collected systematically from a group of individuals either with a certain condition or with risk factors for a certain condition. Registries can examine the natural course of a condition, help researchers understand different treatments and outcomes, assess quality of care, and more. We report here our progress establishing the Interventional Psychiatry Registry, which consists of patients with mood disorders who undergo interventional psychiatry treatments. We hope to better understand the long-term effects of these treatments, including efficacy, adverse events, and patient trajectories following their treatment. **Methods** The Registry contains longitudinal data of individuals receiving Interventional Psychiatry Treatments. These include ketamine, TMS, ECT, novel clinical treatments for mood disorders, and clinical trials for mood disorders. Over 30 participants will be followed for one year in a pilot of the registry. After an initial baseline visit for two hours, participants are seen for 1 hour every 3 months for additional surveys. The surveys assess various aspects of mental health, including depression, anxiety, impairment, treatment side effects, and sleep. Interviews collect information on medical and psychiatric treatment history, psychiatric conditions, and disability due to mental illness. **Progress** Our team designed the protocol and selected measures to ensure rich data collection while minimizing participant burden. The database was created in REDCap, and measures were tested. The project was submitted to the IRB and has been approved. We are starting recruitment in the Ketamine Clinic, then will recruit from other services. Individuals nearing the end of their acute treatment phase are approached about the study. Three participants have been identified. **Next Steps** Continue to recruit participants from clinical services. If the initial recruitment suggests the project is feasible, the Registry could continue beyond one year.

## Poster #25

### Title

Gender Identity and associations with Mental Health Problems, Substance Use, and Personality in a National Sample of Adolescents and Young Adults living in the United States

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### Topic

Mood

### Abstract

There has been controversy over whether the rates of transgender and gender non-conforming identity have been increasing due to greater social acceptance of minority gender identities. We used national online surveys of adolescents and young adults ( $N = 4519$ ; mean 17.7 years,  $SD = 2.5$  years, range 12-25 years old) living in the United States to estimate rates of transgender and gender non-conforming identity, and examined gender differences in sexual orientation, mental health, substance use, and personality. Transgender and gender non-conforming participants accounted for 2.1% and 3.2% of the sample, respectively. Most of the transgender (94%) and gender non-conforming (84%) participants reported female sex at birth. Transgender (mean  $d = 0.91$ ) and gender non-conforming (mean  $d = 0.90$ ) participants reported much higher levels of suicidality, depression, and anxiety than male and female participants, and transgender participants reported slightly higher rates of substance use (mean  $d = 0.33$ ). In terms of personality traits, transgender and gender non-conforming participants had higher scores on negative emotions (mean  $d = 1.07$ ) and open-mindedness (mean  $d = 0.62$ ) and lower scores on extraversion (mean  $d = -0.67$ ) and conscientiousness (mean  $d = -0.81$ ) relative to male and female participants. Results indicate that rates of transgender and gender non-conforming identity are higher than in older adults, and that transgender and gender non-conforming participants report more mental health problems than male and female participants.

## Poster #26

### Title

Suicidal Intent and Subsequent Injury and Intervention Within Transition-Aged Youth and Youth Adults Who Presented to the Hospital Following a Suicide Attempt

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### Topic

Suicide

### Abstract

Suicide is a leading cause of death for transition-aged youth and young adults (TAY), yet greater understandings are needed regarding the trajectory of suicide thoughts, behavior, and risk for suicide death across childhood, adolescence, and early adulthood. The current study sought to examine relationships between demographic and clinical characteristics among TAY who made a suicide attempt. Using an Electronic Medical Record Search Engine (EMERSE), data were collected from 1,790 individuals 14 to 29 years of age who presented to Michigan Medicine (MM) following a suicide attempt. Demographic characteristics (e.g., race, gender), clinical characteristics (e.g., diagnosis, history of attempt), and details pertaining to their recent suicide attempt (e.g., method, suicide intent) were examined using SPSS28. On average, participants were 18.86 years of age ( $SD=4.19$ ), most often identified as female (68.3%) and white (74%) and had a 7-day length of stay ( $SD=7.27$ ). Approximately 29% of patients only received care in the emergency department, while 37% were admitted to an inpatient psychiatric unit, 7.6% were admitted to a medical unit, and 25.8% were admitted to both medical and psychiatric units. Suicide intent, post-attempt symptoms/injuries, and medical intervention were all significantly associated with longer lengths of stay. Interestingly, there were no significant differences by age in suicide intent, post-attempt symptoms/injury, medical intervention, or length of stay. Findings highlight characteristics of TAY who attempted suicide and emphasize the consistent prevalence of intent, injury, intervention, and length of stay across ages. Future investigations will expand upon our exploratory results to test a longitudinal mediation model of suicide risk and behavior. This research has strong potential to elucidate how risk evolves throughout the transition from adolescence to young adulthood to better inform suicide prevention approaches and tailoring within intervention efforts.

## Poster #27

### Title

Importance of Community-Focused Dissemination: Findings from an Academic-Community Suicide Prevention Research Partnership

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### Topic

Suicide

### Abstract

Suicide is a leading cause of death globally, and despite research and awareness initiatives, death rates continue to increase. A multifaceted approach that includes community and academic partnerships is essential to expand public awareness and education, promote community resources, and ultimately prevent suicide death. As part of a MICHR Promoting Academic and Community Engagement (PACE) Dissemination grant, a research team from the University of Michigan School of Social Work collaborated with Washtenaw County Community Mental Health (WCCMH) to host engaging events, develop informative materials, and facilitate interactive activities to raise awareness, foster dialogue, and promote community. At each event, our team disseminated findings of our ongoing suicide prevention research, gave attendees items including suicide prevention resources (e.g., pamphlets, stickers, pens, and water bottles), and facilitated dialogue and engagement in hopeful art projects. Across our 6 events, we engaged with over 450 attendees who expressed interest and were observed to engage in our suicide prevention dissemination, resource sharing, and community art project. The collaborative design and implementation of our events was an innovative approach to disseminating research findings within a community context, especially given academic research findings are most often disseminated in scholarly journals and conferences. Our academic and community partnership was essential to hosting engaging and effective suicide prevention events, all of which were well-attended and received positive feedback from both academic and community members.

## Poster #28

### Title

Self-reported reasons for living among youth seeking emergency care for suicide-related concerns

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### Topic

Suicide

### Abstract

**Introduction:** Enhancing protective factors such as future orientation and reasons for living (RFL) are recommended crisis interventions. This study aims to 1) describe RFL reported by acutely suicidal youth and 2) explore relationships between RFL, symptom severity, and suicide risk factors. **Methods:** Participants were 118 youth (84.7% White, 56.0% female), ages 11–17 ( $M = 14.64$ ,  $SD = 1.88$ ) presenting to a psychiatric emergency department (ED) with suicide-related concerns. Youth completed the Reasons for Living Inventory for Adolescents (RFL-A) and Interpersonal Needs Questionnaire (INQ-Revised) along with measures of depressive symptoms (RADS-2) and suicidal ideation (SIQ-JR) at baseline, followed by an online follow-up survey two weeks later. **Results:** Aim 1: Youth reported RFL at baseline across five domains: Peer Acceptance and Support ( $M = 4.01$ ,  $SD = 1.63$ ), Family Alliance ( $M = 3.75$ ,  $SD = 1.47$ ), Future Optimism ( $M = 3.49$ ,  $SD = 1.59$ ), Suicide-Related Concerns ( $M = 3.08$ ,  $SD = 1.70$ ), and Self-Acceptance ( $M = 2.74$ ,  $SD = 1.59$ ). Aim 2: Regression analyses indicate significant univariate relationships between RFL and depressive symptoms ( $\beta = -.549$ ,  $p < .001$ ) and suicidal ideation (SI) ( $\beta = -.589$ ,  $p < .001$ ) measured concurrently. When also modeling risk factors (INQ), RFL continued to demonstrate a significant inverse relationship with baseline depressive symptoms ( $\beta = -.228$ ,  $p = .012$ ) and SI ( $\beta = -.266$ ,  $p = .002$ ). Controlling for baseline depression and SI, regression analyses indicate no significant relationships between RFL measured at baseline and depression and SI assessed at 2 weeks. **Conclusions:** Youth-identified RFL were significantly inversely related to clinical severity during a suicide-related ED visit, even when accounting for established suicide risk factors. However, RFL were not related to depressive symptoms or SI 2 weeks later. Incorporating assessment of RFL may enhance risk assessment and safety planning for youth during periods of crisis.

## Poster #29

### Title

Sociodemographic differences in engagement with digital interventions among adults awaiting outpatient psychiatric services

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### Topic

Mental Health

### Abstract

**INTRODUCTION:** With the proliferation of digital interventions and robust evidence for their effectiveness in reducing mental health symptoms, rigorous evaluation of patient engagement with these digital tools is critical. The primary objective of this study was to examine sociodemographic differences in engagement with mobile health applications among adults awaiting outpatient psychiatric services. **METHODS:** Participants were 1147 adults (72.6% women; 77% White; Mean(SD) Age = 36.7(14.3)) with a smartphone, scheduled for outpatient psychiatric services and randomized to a condition that included a mobile app subscription to either Headspace or Silvercloud. This analysis examined application usage over a period of 16 weeks based on gender, race, and age, with features such as number of days and weeks of use, range of days/weeks used, and whether the app was used at all. Zero-inflated negative binomial (ZINB) models and Logistic Regression were used to evaluate the differences in app usage frequency and app usage. **RESULTS:** Women had 1.36x greater odds of using an app relative to men but did not differ in the amount of use among those using the app at all. Among those using the app, Asian (IRR = 0.53) and African American (IRR = 0.65) subjects used an app for fewer days relative to White subjects. The age analysis revealed a lower likelihood of app usage versus non-usage for the very young (18-20 years) and the elderly (70-80 years), but among application users, the number of minutes spent increased with age, with individuals in their 50s and 60s spending the most time on the apps. **DISCUSSION:** There is a significant difference noted in application usage and frequency when compared against sex, race, and age, resulting in select groups that can be targeted for aid to increase intervention usage. Further investigation into barriers to entry for groups with lower engagement can provide insights into potential changes to apps design or delivery approaches.

## Poster #30

### Title

Acute Alcohol Use and Chronic Alcohol Problems Preceding a Recent Suicide Attempt

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### Topic

Suicide

### Abstract

Risk factors for suicide attempts include acute alcohol use (AAU; drinking immediately prior to the attempt) and chronic problematic alcohol use (PAU; a history of problematic drinking). However, it is important to disaggregate acute and chronic alcohol associations with suicide attempt correlates. The aim of the current study was to examine main and interactive effects of acute and chronic alcohol use on clinical and suicide attempt characteristics. Participants included 166 recent suicide attempters presenting to a Level 1 trauma hospital (M age=36.3, SD=12.6; 68.1% female). AAU was coded positive for participants who drank within 6 hours of their suicide attempt (measured by the Timeline Follow Back for Suicide Attempts Interview) and PAU was coded positive for participants with scores > 8 on the Alcohol Use Identification Test. Logistic and linear regression was used to determine the main and interactive effects of AAU and PAU on short proximal suicide contemplation (impulsive suicide attempt), ambivalent suicide intent (somewhat wanted to die vs. wanted to die), quality of life, depression symptoms, and aspects of impulsivity. PAU had a positive main effect on depressive symptoms, negative urgency, and sensation seeking. Interactions between AAU and PAU were identified for quality of life, short proximal suicidal ideation, and ambivalent intent; AAU had a positive relation with outcomes for those who were PAU- but a negative relation to these outcomes for those who were PAU+. No other significant main or interactive effects were identified. These findings highlight the importance of disaggregating acute and chronic effects of alcohol on suicide-related characteristics to inform suicide prevention efforts. Obtained findings highlight the importance of alcohol-suicide interventions aimed at those without PAU who drink intermittently (a group that may be less likely to be targeted for alcohol-suicide interventions).



## Poster #31

### Title

A pilot telehealth model to improve treatment access for rural Veterans with substance use disorders

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### Topic

Substance Abuse

### Abstract

**Background:** This program is a single-arm feasibility and acceptability pilot of a telehealth-delivered psychosocial intervention refined for rural Veterans with untreated substance use disorders (SUDs). **Methods:** Veterans were recruited from the Ann Arbor VA for a two-part remote study: Part 1: Staff outreach to rural and non-rural Veterans with SUDs who are not receiving SUD psychotherapy. Therapists then deliver a patient-centered telehealth Motivational Interviewing [MI] engagement session and up to 8-sessions of MI+Cognitive Behavioral Therapy [CBT]. Participants complete a follow-up assessment. Part 2: Participants who complete >1 Part 1 intervention session were invited to an MI-focused intervention to address barriers to engaging in VA care to address patient-specific needs (e.g., comorbid mental health, ongoing SUD symptoms), with a follow-up assessment of repeated measures. Semi-structured qualitative interviews are completed with both participants and clinician/administrative partners to inform future implementation of this model of care. **Findings/Result:** Part 1 enrolled 25 Veterans, 21 completed at >1 intervention session (68% rural, 32% non-rural). Thirteen completed follow-up; 12 were interviewed. For Part 2, 20 Veterans (70% rural, 30% non-rural) were contacted, thus far, 7 have enrolled, 3 are in progress. Seven have completed Part 2 intervention, and 3 have completed follow-up. Preliminary interview findings highlight differences in SUD treatment experiences and access barriers between rural and non-rural Veterans. Rural Veterans expressed that telehealth has made it easier for them to obtain SUD therapy without the burden of travel. **Conclusions:** This pilot delivers an evidence-based psychosocial intervention via telehealth, while addressing stigma and access barriers to SUD care. Findings can aid in understanding how telehealth-based therapies for SUD can be implemented into VA and other healthcare systems. **Support:** VHA Office of Rural Health



## Poster #32

### Title

Affective Correlates of Neurofeedback-Enhanced Cognitive Reappraisal Training

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### Topic

Imaging

### Abstract

Anxiety disorders are associated with impaired emotion regulation ability. In studies where emotion regulation training is supplemented by real-time fMRI neurofeedback (rt-fMRI-NF), regulatory strategies like cognitive reappraisal have been shown to improve affect in response to negative stimuli. In preparation for a randomized, double-blinded, sham-controlled trial testing rt-fMRI-NF training to the prefrontal cortex in participants with anxiety, we developed and tested a neurofeedback-enhanced emotion regulation task in healthy individuals ( $n = 13$ ). Participants were trained to self-regulate their brain activity in either the dorsomedial (dmPFC,  $n = 7$ ) or the left ventrolateral prefrontal cortex (vlPFC,  $n = 6$ ) during the reappraisal of negative images from the International Affective Picture System. They were instructed to either “look” at the image without altering their emotional response or “reappraise” it in a way that generates fewer negative feelings. Participants received feedback on their performance in the form of a sliding thermometer presented after each reappraise trial. Following the scan, affect ratings of the 90 images were collected using the Self-Assessment Manikin (SAM). Multilevel modeling investigated whether condition (look vs. reappraise) influenced participants’ ratings, and how the level of activation displayed by the thermometers impacted ratings. Additionally, linear models examined whether changes in brain activity from pre- to post-training correlated with ratings. Analysis showed that images viewed during the reappraise condition were rated significantly more positive than those viewed during the look condition. Higher thermometer bars non-significantly corresponded to more positive affect. Percent signal change from pre-to-post training in the dmPFC and vlPFC were marginally associated with greater increase in positive affect, but only in the group trained to regulate the dmPFC. Results suggest that our training model was successful in facilitating reappraisal and improving negative feelings from start to finish, though findings would be better supported with a larger sample size.

## Poster #33

### Title

Concurrent functional near infrared spectroscopy and 6 degrees of freedom immersive virtual reality in older adults

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### Topic

Imaging

### Abstract

Impairments in spatial navigation (SN) present in the earliest stages of dementia of the Alzheimer's type (DAT) and may have greater specificity for Alzheimer's pathology than episodic memory deficits. Thus, developing techniques that allow for the precise characterization of SN capabilities in aging populations enhances the detection of early cognitive change. We present a novel six-degrees-of-freedom immersive virtual reality (iVR) SN paradigm with concurrent functional near-infrared spectroscopy (fNIRS). Six cognitively intact older adults freely explored a custom iVR environment and were instructed to remember distinct images in each room. We acquired fNIRS during the encoding phase using two NIRx Sport2 CW-fNIRS devices. After encoding, we evaluated each participant's ability to navigate back to the images, beginning each trial from a different location in the environment. fNIRS data were analyzed using the Brain AnalyzIR toolbox. We used beta coefficients from all fNIRS channels as measures of effect size in lieu of setting statistical thresholds. For the behavioral analysis, we calculated each participant's total distance traveled during encoding (path length) and used this as a measure of how efficiently they learned the environment. We then calculated the Spearman's rank correlation coefficient ( $r_s$ ) for the association between path length and neuropsychological test scores. No participant reported motion sickness. Total path length during encoding showed inverse correlations with visuospatial ( $r_s = -0.54$ ) and attention ( $r_s = -0.60$ ) index scores from RBANS and positive correlations with Trails A ( $r_s = 0.71$ ) and B ( $r_s = 0.60$ ) completion times. Based on the magnitude of beta coefficients at the group level, fNIRS data showed trends in activation in the left angular gyrus and the pre- and postcentral gyrus bilaterally. Future efforts will integrate machine-learning classification techniques using the several thousand movement data points acquired per participant to elucidate navigational "fingerprints".

## Poster #34

### Title

Examining Treatment Fidelity in Prolonged Exposure and Cognitive Processing Therapy for PTSD among VA Patients

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### Topic

PTSD, Treatment

### Abstract

Previous research suggests that increased treatment fidelity and patient adherence have a positive impact on treatment outcomes for posttraumatic stress disorder (PTSD). The Veterans Healthcare Administration (VHA) offers two first-line, evidence-based treatments for PTSD : Cognitive Processing Therapy (CPT) and Prolonged Exposure (PE). The prevalence of treatment fidelity and patient nonadherence in VHA for these two treatments is an important area to thoroughly examine. We present results from a national sample of Veterans (n = 64,110) with PTSD who sought PE or CPT in the VHA during fiscal years 2017-2019. We examined rates of PTSD treatment non-adherence and inclusion of core therapy elements (indicating treatment fidelity) using generalized linear models. Specifically, we assessed percentage of sessions in PE and CPT that are missing a core component, frequency of patient nonadherence (e.g., homework completion), and the percentage of individuals who received imaginal exposure during the 4th session or later of PE (indicating good fidelity). We also examined factors that could influence treatment fidelity such as age, race, PTSD service connection, and other comorbid mental health diagnoses. Our results indicate age and race were significantly associated with percentage of sessions missing core elements. Patient nonadherence was significantly associated with age, race, PTSD service connection, depression diagnosis, and substance use diagnosis. Additionally, receiving imaginal exposure in the 4th session or later of PE (indicating better fidelity) was also significantly associated with age, race, and PTSD service connection. While these results highlight factors that have an impact on treatment fidelity, we found that 40% of sessions were missing core therapy elements. This indicates many PE and CPT sessions are not being delivered with treatment fidelity at the VHA which could have an impact on treatment outcomes for Veterans with PTSD. Further theoretical and clinical implications will be discussed.

## Poster #35

### Title

Artificial Intelligence as a Screening Method for Consultation-Liaison Psychiatry in Patients Receiving Solid Organ Transplant

### Authors

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### Topic

Consult-Liaison

### Abstract

**Background/Significance:** Proactive psychiatric consultation has been shown to reduce patient length of hospital stay compared to traditional consultation processes. However, the screening processes have historically been time intensive and/or rudimentary. Artificial Intelligence (A.I.) may be able to provide an efficient and comprehensive screening method. Patients receiving solid organ transplants (SOT) are at increased risk for developing psychiatric disease and will likely benefit from earlier identification of psychiatric symptoms. We aim to create an A.I. model of proactive consultation to identify at-risk hospitalized SOT patients. **Methods:** A series of patient characteristics were selected as input variables through literature review and an expert focus group of consultation-liaison psychiatrists. We retrospectively assessed for these predictors in all adult SOT (heart, lung, kidney, and liver) patients admitted between 2010-2023 to the University of Michigan University Hospital, a tertiary care transplant center. A multilayer perceptron neural network was implemented via TensorFlow API in R (ver. 4.3.3). 80% of the cohort was randomly sampled and utilized for model training while the remaining 20% was reserved for validation. The model was configured to output consult likelihood given input parameters of a specific encounter. **Results:** A total of 88,436 inpatient encounters met inclusion criteria. Model accuracy was determined to be 71.6% after 100 epochs of training. Model sensitivity was 89.0% with consult likelihood threshold at 0.5, 71.9% with a threshold of 0.75, and 97.5% with a threshold of 0.25. **Discussion/Conclusion:** With a sensitivity ranging between 71.9% and 97.5% based on parameter choice, the A.I. algorithm was successful at computationally qualifying the contribution of each predictor to the likelihood of requiring a psychiatry consultation during hospital admission. This suggests that we successfully created an A.I. screening process for a transplant population. Future prospective evaluations of algorithm predictivity will provide insight into the integration of A.I. into transplant psychiatry practice.

## Poster #37

### Title

Visuospatial performance on Spatial Navigation task and DASB PET correlates in isolated REM Sleep Behavior Disorder

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### Topic

Imaging

### Abstract

**Objective:** Cognitive decline in visuospatial and executive functioning domains is a feature of isolated rapid eye movement (REM) sleep behavior disorder (iRBD). Disease pathology in the serotonergic system may be responsible for the biological basis of certain features of iRBD. **Background:** Serotonergic system degeneration is seen in the visuospatial cortex in parkinsonian conditions. We hypothesized that serotonin transporter (SERT) positron emission tomography (PET) 11C-DASB distribution volume ratio (DVR) in iRBD participants will correlate with worse performance on a spatial navigation task evaluating visuospatial abilities and executive functioning. **Design/Methods:** 10 adults (mean age =  $72.8 \pm 5.3$ ) with iRBD were enrolled in a cross-sectional PET imaging study. Participants completed neuropsychological testing and a spatial navigation task measuring allocentric and egocentric memory separately. Performance on the spatial navigation task was assessed by the participant's ability to correctly recall the location of landmarks on a two-dimensional map after viewing a walkthrough video of the landscape (allocentric), and their ability to correctly recall the order of turns taken in a walkthrough video of identical hallways (egocentric). Participants also completed 11C-DASB PET imaging to evaluate presence of presynaptic serotonin transporters in various brain regions. We used Spearman's rank order correlation coefficient to evaluate the relationship between performance on relevant neuropsychological tests and DASB DVR in brain regions of interest. **Results:** Performance on these neuropsychology tests and spatial navigation memory tasks do not appear to correlate with serotonergic DASB PET findings in the total cortex, visuospatial cortex, or hippocampus. Although not statistically significant, elevated DASB DVR in the medulla seemed to correlate with worse allocentric performance. **Conclusions:** Correlations between visuospatial dysfunction and medullary DASB elevations may reflect early changes in an interconnected serotonergic network linked to visuospatial cognition. Alternatively, these PET findings might reflect a state vs. trait marker for people with iRBD who are at risk for progression to Dementia with Lewy Bodies.

## Poster #38

### Title

Mood, Sleep, and Steps: Digital Phenotyping in Bipolar Disorders

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### Topic

Mood

### Abstract

Although bipolar disorders (BDs) are a leading cause of disability and death worldwide, few treatment advances have been made, perhaps due to the lack of behavioral phenotyping of day-to-day experiences and symptoms, which are highly heterogeneous. The present investigation examined such dynamics using a rich dataset of active (EMA of daily mood) and passive (Fitbit sleep and steps) ambulatory assessment data in 226 participants with BDs. On average, participants contributed 4.6 months of daily mood ratings and 6.1 months of Fitbit data. Between-person correlations showed positive associations between mood and time in bed ( $r=.33$ ) and daily steps ( $r=.04$ ), as well as between daily steps and time in bed ( $r=.23$ ). However, within-person correlations showed negative associations between mood and time in bed ( $r=-.08$ ) and steps ( $r=-.10$ ). Greater day-to-day variability in time in bed was associated with greater mood instability. Additional sensitivity analyses using Dynamic Structural Equation Modeling will examine the impact of sleep and activity levels on mood to help disentangle between- versus within-person findings. These findings suggest a complex relationship between daily mood, sleep, and activity in BDs that warrants further investigation, identifying subgroups of individuals for whom fluctuations in sleep and activity levels precipitate a meaningful change in mood.

## Poster #39

### Title

A drift-diffusion modeling investigation of altered self-referential social perception in psychosis and bipolar disorder

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### Topic

Psychosis, Bipolar Disorder

### Abstract

Individuals with schizophrenia (SZ) and bipolar disorder (BD) show disruptions in self-referential gaze perception—a ubiquitous form of social perception that is related to symptoms and functioning. However, our current mechanistic understanding of these dysfunctions and relationships is non-specific, meaning various explanations could account for existing data. This study used mathematical modeling to identify cognitive processes driving gaze perception abnormalities in SZ and BD and how they relate to cognition, symptoms, and social functioning. We modeled behavior of 28 SZ, 38 BD, and 34 controls (HC) in a self-referential gaze perception task using drift diffusion models parameterized to index: drift rate (evidence accumulation efficiency), drift bias (perceptual bias), start point (expectation bias), threshold separation (response caution), and non-decision time (encoding/motor processes). Results revealed that aberrant gaze perception in SZ and BD was driven by less efficient evidence accumulation, perceptual biases predisposing self-referential responses, and greater caution (SZ only). Across SZ and HC, poorer social functioning was related to greater expectation biases. Within SZ, perceptual and expectancy biases were associated with hallucination and delusion severity, respectively. These findings indicate that diminished evidence accumulation and perceptual biases may underlie altered gaze perception in patients and that SZ may engage in compensatory cautiousness, sacrificing RT to preserve accuracy. Moreover, biases at the belief and perceptual levels may relate to symptoms and functioning. This underscores the value of using computational cognitive modeling to achieve a more nuanced understanding of the mechanisms of social perceptual processes, like gaze perception, in the study of complex psychopathology.

## Poster #40

### Title

Social Contexts as a Moderator: Investigating the Impact of Protective Behavioral Strategies on Risky Drinking Among U.S. Young Adults

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### Topic

Substance Abuse

### Abstract

Background: Protective behavioral strategies (PBS) refer to actions individuals take to reduce the negative effects associated with drinking alcohol. Drinking in social contexts influences the likelihood of PBS use, but little is known about how the effectiveness of PBS may vary across different social contexts. Methods: Data were from Year 1 (2019) of the Young Adult Daily Life Study. Participants ( $n=481$  people who reported alcohol use on 1026 drinking days) were on average 19.3 years old and primarily female (66%), non-Hispanic white (71%), and a 4-year full-time college student (72%). Participants completed an annual survey and reported alcohol use, PBS, and social contexts on up to 14 daily surveys. Weighted logistic multilevel modeling was used to examine whether the relation between PBS (limiting/stopping [e.g., set a maximum], manner of drinking [e.g., not doing shots], and serious harm reduction [e.g., designated driver]) and binge drinking (females 4+, males 5+) was moderated by social context (alone only, small group, large group). Models controlled for within-person (weekend, day number) and between-person (sex, race/ethnicity, college status) covariates. PBS, small group, and large group were grand-mean-centered at the person-level. Conditional effects are reported for significant interactions. Results: Main effects showed that limiting/stopping PBS ( $OR=0.22$ ,  $p<.001$ ) and manner of drinking PBS ( $OR=0.21$ ,  $p<.001$ ) were associated with lower odds of binge drinking on a given day. Drinking in large groups was associated with greater odds of binge drinking in all models. Significant interactions between limiting/stopping PBS and social context indicated that limiting/stopping PBS were associated with greater reductions in the odds of binge drinking when drinking in a small or large group (compared to drinking alone). Conclusions: Overall, PBS appear to be effective across social contexts and should generally be promoted in interventions for young adult drinking. However, limiting/stopping PBS are especially impactful in social situations when binge drinking is also more prevalent.



## Poster #41

### Title

Economic Insights: Evaluating the Preliminary Costs of Remote Behavioral Interventions in Clinical Care

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### Topic

Substance Abuse

### Abstract

Background: Economic analyses provide critical information about the benefits/costs of implementing interventions in clinical care. As part of a clinical trial, Emergency Department patients (n=1155) reporting past year opioid misuse, or opioid use plus an additional risk factor, were randomized into one of four groups: enhanced usual care resource brochure (EUC), 45-minute remote health coach session (Session), 30-day messaging Portal (Portal), and Session+Portal. Both motivational interviewing-based interventions address substance use, mental health, pain, and overdose prevention. Here, we present preliminary estimates of the total and by-group cost of intervention delivery. Methods: The Heal Prevention Cooperative's Health Economics Work Group advised our team on an activity-based costing approach to estimate delivery costs from the provider perspective. We divided our interventions into specific activities (e.g., screening, Session delivery, portal delivery, suicide risk assessments) and defined management activities (staff training, clinical supervision, program management & site engagement). Study records (e.g., audio recordings, survey length) and expert feedback were used to estimate staff time and supply costs for each activity's clinical components. To quantify labor costs, we categorized intervention staff into O\*NET roles and inputted national wage estimates, including a 30% fringe rate. Results: The total cost to deliver all interventions was \$336,336.87. The Session+Portal accounted for 41% of total costs, with a per participant (PT) cost of \$523.89. The Portal accounted for 35% of total costs, with a per PT cost of \$429.37. The Session accounted for 15% of total costs, with a per PT cost of \$198.26. The cost per PT to deliver the EUC was \$116.75 (9% of total cost). Conclusion: These preliminary results speak to the feasibility of providing these interventions to future patients in health care settings. Next steps include refining our estimates based on expert feedback and conducting a cost-effective analysis to examine intervention return on investment.

## Poster #42

### Title

Delayed Recall is More Strongly Associated with Hippocampal Volume than Both Total Learning and Learning Slope

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### Topic

Assessment

### Abstract

Background: Learning and recall for multi-trial list learning tasks are often measured by the number of words learned over trials (Total Learning; TL) and subsequently recalled following a delay (Delayed Recall; DR). Learning efficiency is often reduced in those with mild cognitive impairment (MCI) and can be quantified as improvement across trials (raw learning slope; RLS) or improvement relative to total improvement possible (learning ratio; LR). Although commonly used, these variables are seldom compared to brain volumes. The hippocampus and entorhinal cortex are among the earliest sites affected as the Alzheimer's disease (AD) process unfolds, and both are implicated in learning and memory. This project compares list learning and recall scores to volume in select brain areas associated with memory encoding and retrieval. Method: Participants were 83 older adults (Mean age=72.9, SD age=7.0; 59% male) diagnosed with MCI. Participants completed the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) and underwent structural MRI. Partial correlations controlling for age and sex related list metrics (TL, DR, LR, RLS) to hippocampal and entorhinal cortex volumes (extracted using FreeSurfer and corrected for intracranial volume). Results: DR showed medium positive correlations with left ( $r=.47$ ,  $p<.001$ ) and right ( $r=.40$ ,  $p<.001$ ) hippocampal volumes. Small positive correlations were also observed between left entorhinal cortex volume and both TL ( $r=.20$ ,  $p=.082$ ) and DR ( $r=.21$ ,  $p=.061$ ). Conversely, LR and RLS showed negligible associations with these brain regions. Conclusions: Among the RBANS learning and memory metrics, DR showed the strongest associations with hippocampal volume. Overall, these results do not support the utility of calculating learning efficiency to estimate volumetric changes in early AD. Additional research is needed to explore the associations between learning slope metrics and earlier markers of AD, such as amyloid and tau burden.

## Poster #43

### Title

Individual Differences in Emotional Memory Consolidation in Male Rats

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### Topic

Animal Labs

### Abstract

Post-traumatic stress disorder (PTSD) is a psychiatric disorder resulting from exposure to trauma. Most Americans will experience a traumatic event in their lifetime, and develop acute fear reactions following the incident. However, about 10% will go on to develop PTSD, experiencing recurring recollection of the emotional event, psychological distress towards trauma-related cues, difficulty concentrating, and nightmares. This suggests 1) vulnerability to PTSD varies among individuals, and 2) PTSD pathology influences emotional memory processes. Identifying individual differences in memory offers a potential solution for why only some individuals develop PTSD. Pavlovian conditioned approach (PCA) training can be used to assess individual variation in emotional memory consolidation. Sign-tracking animals (ST) who approach a predictive cue exhibit less fear in contextual fear memory (CFM) paradigms than GTs, who approach the reward site. Administration of the histone deacetylase inhibitor, sodium butyrate (NaB), enhances fear memory in ST. These results suggest histone modifications underlie individual differences in emotional memory consolidation. Importantly, memory consolidation is a sleep - dependent process well known to modify histone acetylation. We thus hypothesized increasing acetylation using NaB to improve emotional memory consolidation in sleep deprived STs and GTs, and rested STs. STs and GTs rats underwent CFM training, were immediately administered NaB or saline, and subsequently allowed sleep or sleep deprived. Animals were placed in a novel context one day prior to returning to the CFM context. Our results show that sleep deprivation impairs memory in STs and GTs, though NaB does not improve memory performance under any sleep condition. Both sleep deprived STs and GTs express increased fear towards the novel context, but NaB only improves context discrimination in GTs. These results suggest that histone modifications underlie CFM memory in STs and GTs, and sleep deprivation may impair context discrimination.

## Poster #44

### Title

Performance monitoring in bipolar and schizophrenia spectrum disorders

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### Topic

Mood

### Abstract

Individuals with bipolar- and schizophrenia-spectrum disorders (BD; SZ) show cognitive control impairments, which persist into symptom remission and hinder functioning. Performance monitoring aspects of cognitive control include monitoring ongoing behavior and detecting errors. To better understand mechanisms underlying these impairments, we examined electroencephalography (EEG) measures of neural activity during performance monitoring over midfrontal scalp areas in BD, SZ, and healthy control participants (HC). 27 BD, 26 SZ, and 28 HC completed an arrow flanker task during EEG recording. EEG measures of performance monitoring, including error-related event-related potential (error-related negativity [ERN]) and theta-band neural oscillatory activity (power; inter-trial phase consistency [ITPC]) were compared across groups and associations with executive functioning performance were tested. Results include: (1) BD and SZ participants both showed reduced theta-band power relative to HCs, (2) BD participants showed a reduced error-related increase in ITPC, relative to HCs; (3) reduced error-related theta-band activity was associated with poorer executive function performance in the BD group; and (4) ERN amplitudes did not differ by group. Theta-band power was reduced in BP and SZ groups and was associated with executive function performance in the BD group, suggesting its relevance to the cognitive control impairments commonly observed in the illness. The lack of expected ERN reductions in BP and SZ groups, in the context of the theta power findings, suggest non-phase locked power underlies illness-related reductions in theta power.

## Poster #45

### Title

Centering Cultural Context to Enhance Maternal Mental Health in Esmeraldas, Ecuador

### Authors

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### Topic

Women's mental health; global mental health

### Abstract

**Objective:** Depression among women of childbearing age is the single largest contributor to the global burden of mental health disorders. Currently, little research has captured attitudes and thoughts that women in low and middle-income countries have around mental health issues, particularly in rural settings. This project aims to document the mental health experiences of women in the rural Esmeraldas region of Ecuador. **Methods:** Our team of student researchers conducted a secondary analysis of a set of qualitative interviews with 30 women collected in the Esmeraldas region of Ecuador from 2021-2022. An interview guide was developed by a team of anthropologists, who conducted the primary analysis. Interviews focused on gathering thoughts and attitudes about maternal experiences in relation to mental health. Interviews were audio-recorded, transcribed, and translated into English. Analysis included individual review, coding, and thematic analysis using constant comparative analysis. Three teams of two research assistants reviewed and reconciled codes. Thereafter, the full 6-member coding team developed a master code sheet containing significant codes. Thematic analysis was conducted to translate codes into major themes that reflect interpretations of ideas that were frequent across interviews. This study was approved by the University of Michigan Institutional Review Board and completed October 2023-January 2024. **Results:** Ten major themes surfaced. These include 1) inadequate support systems; 2) mental health perceptions; 3) prominent religious and spiritual beliefs; 4) high value of formal education; 5) health challenges; 6) feelings of suffering; 7) community barriers; 8) unemployment and financial insecurity; 9) inaccessible contraception; 10) teenage pregnancy. **Conclusion:** The larger implications of this study relate to understanding factors that contribute to psychosocial experiences of women in rural Ecuador and help identify potential interventions that might address these issues. Investigators will use study outcomes to inform the development of tailored community health interventions for women in the Esmeraldas region.



## Poster #46

### Title

Characteristics of People Who Report Firearm Suicidal Ideation

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### Topic

Suicide

### Abstract

**Objectives.** To describe people who endorse firearm suicidal ideation in terms of associations with gun ownership and experiences, mental health problems, substance use, antisocial behavior, and personality characteristics. **Methods.** Data were collected as part of a national online survey of adults living in the United States ( $N = 1579$ ). Logistic regression and ANOVA models were fit to examine the associations between firearm suicidal ideation and gun ownership and experience, and several mental health, substance use, antisocial behavior, and personality variables. **Results.** The rate of lifetime firearm suicidal ideation was 10.2% ( $n = 161$ ). Firearm suicidal ideation was associated with gun ownership and more experience with firearms, as well as higher levels of depressed mood, anxiety, suicidal ideation, self-harm behaviors, past suicide attempts, alcohol and drug use, antisocial behavior, and intimate partner violence. In terms of personality traits, firearm suicidal ideation was associated with greater negative emotions, desire for power but also feeling powerless, and lower agreeableness and conscientiousness. **Conclusions.** While not common, firearm suicidal ideation is not rare and has a risk profile characterized by high-intensity mental health problems, substance use, antisocial behavior, and personality traits associated with severe externalizing problems and suicide. Firearm suicidal ideation should continue to be studied as a distinct construct given the high lethality of firearms as a method of suicide.

## Poster #47

### Title

Personalized remote HD-tDCS improves cognition following carbon monoxide poisoning induced amnesia: a case report

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### Topic

Neuromodulation

### Abstract

High-definition transcranial direct current stimulation (HD-tDCS) has the potential to improve cognitive functioning in age-related decline, acquired brain injuries, and neurodegenerative conditions. In this case report, we present the first HD-tDCS intervention in a participant (PT60) with severe anterograde amnesia following carbon-monoxide poisoning. The participant underwent two rounds (Round 1: 31 sessions; Round 2: 30 sessions) of HD-tDCS separated by 3 months. We used a multi-electrode montage targeting the left frontoparietal (FPN) network derived from automated meta-analyses (NeuroSynth) of the brain regions involved in memory encoding. We then delivered 3mA of stimulation over two regions (6mA total) guided by electric field modeling to ensure the focality of the stimulation to the target brain regions. After 5 sessions training PT60's spouse to perform HD-tDCS, all sessions were completed remotely under study team supervision via videoconference. Overall, PT60's objective cognitive functioning, particularly immediate memory, improved significantly following Round 1, declined during the 2 months without HD-tDCS, and again improved following Round 2. Subjective informant reports from family and medical personnel followed this same pattern of improvement following each round, including a decline in between rounds. We acquired functional near-infrared spectroscopy (fNIRS) prior to Round 2 and used it to evaluate changes in blood oxygenation during memory encoding using object-location association and face-name association paradigms. Comparing the patterns of  $\Delta$ oxyHb before and after Round 2 revealed increased brain activation in the FPN and decreased brain activation in contralateral prefrontal areas. Overall, this case demonstrates how a user-friendly, personalized approach to HD-tDCS has the potential to enhance cognition and, possibly, neurophysiological functioning following anoxic/hypoxic brain injury.

## Poster #48

### Title

Social Emotional Learning: Individual Differences in Student Motivation

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### Topic

Social emotional learning

### Abstract

Understanding individual differences in student learning engagement and motivation is critical to developing social emotional learning (SEL) programming that supports students' needs, aligning with core principles of diversity, equity, and inclusion for effective learning (Mahoney et al., 2021). The TRAILS SEL program teaches skills grounded in cognitive and behavioral practices, providing activities and adaptations relevant to students' backgrounds, culture, and experiences. This quality improvement project examines whether student demographics (school level, gender, and race) are related to lesson engagement and motivation among 1,093 students. A self-report survey measured demographics, SEL lesson engagement, and motivation (factors: SEL-skills learned, readiness, and intention to use skills). Analyses revealed no significant relationship between school level, gender, and/or race on lesson engagement. However, significant differences emerged for motivation. Compared to high schoolers, middle school students reported higher SEL-skills learned ( $t(648.91)=3.46, p<.001$ ) but lower readiness ( $t(937)=-2.87, p=.004$ ) and intention to use the skills ( $t(937)=-3.36, p<.001$ ). There was a main effect of gender on the SEL motivation factors (SEL-skills learned:  $F(3, 821)=3.72, p=.011$ ; readiness:  $F(3, 820)=3.86, p=.009$ ; intention to use  $F(3, 820)=7.28, p<.001$ ); women had higher readiness and intention to use the SEL skills than did non-binary students ( $ps<.028$ ). Finally, race was associated with SEL-skills learned ( $F(6, 808)=2.97, p=.007$ ) and intention to use ( $F(6, 806)=2.17, p=.043$ ), but not skill readiness; Black students reported higher SEL-skills learned scores than white students ( $p=.002$ ). These findings offer insight into individual differences in SEL motivation among youth receiving TRAILS' SEL curriculum which could support the development of a more inclusive TRAILS SEL program, which in turn, will support students in developing crucial life skills.



## Poster #49

### Title

Bill Payment Independence in Community-Dwelling Older Adults with Cognitive Deficits

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### Topic

Gero

### Abstract

Independent performance of instrumental activities of daily living (iADLs) is paramount for successful aging in place. Complex iADLs such as finance management (e.g., bill payment) are cognitively demanding and susceptible to the cognitive declines of mild cognitive impairment and dementia. It is important to understand risk factors associated with declines in financial management, which may be associated with specific cognitive changes, etiologies, and demographic variables. Data were extracted from 3,609 community-dwelling older adults ( $73.0 \pm 7.1$  years; 53% male) with abnormal cognition from the National Alzheimer's Coordinating Centers dataset. Etiologies included Alzheimer's disease (AD), Lewy body dementia (LBD), frontotemporal dementia (bvFTD), and cerebrovascular disease. The effects of neuropsychological performance (attention, speed/executive, language, visual, memory), cognitive status, and etiology on bill payment independence were tested using ordinal logistic regression. Bill payment was assessed by collateral interview. Covariates included age, sex, race, education, marital status, and number of medications. Overall, better performance in speed/executive (aOR=0.97), visuospatial (aOR=0.98), and memory (aOR=0.97) was associated with reduced odds of being dependent for bill payments. Compared to AD, those with LBD (aOR=2.11) and bvFTD (aOR=1.56) had increased odds of dependence. Black participants had decreased odds of dependence relative to White (aOR=0.50). Results suggest that certain cognitive domains and underlying etiologies may be differentially associated with an individual's ability to manage bill payments independently, while sociocultural factors also contribute. Clinically, providers are encouraged to consider how patients with reduced abilities in speed/executive, visuospatial, and memory may require specific assistance with managing bill payments. Particular attention should be paid to those with LBD or bvFTD.



## Poster #50

### Title

Demographic Differences in Receiving Medications for Alcohol Use Disorder: Data from the 2022 National Survey on Drug Use and Health

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### Topic

Substance Abuse

### Abstract

**Background** In 2022, over 29.5 million Americans aged 12 or older had alcohol use disorder (AUD). Although both psychotherapeutic and medication treatments are similarly effective for AUD, medication for AUD (MAUD) is particularly under-used and little is known about factors associated with MAUD. Our goal is to evaluate demographic disparities in receiving MAUD. **Methods** Using the 2022 National Survey on Drug Use and Health (NSDUH), we evaluated adults with past-year AUD who received treatment for alcohol use in the past year. We evaluated differences in demographic characteristics between individuals who received MAUD and those who received other types of treatment for AUD using a Chi-squared test. **Results** Among individuals with past-year AUD, 7.5% received any treatment for alcohol use, and only 2.1% of those with AUD were prescribed any MAUD. Of these individuals, the majority were white (72.2%), male (64.1%), heterosexual (78.8%), and many individuals were between 35 and 64 years old (49.0%), lived in large metropolitan areas (46.8%) and were living in poverty (24.2%). When evaluating demographic differences between individuals who had received MAUD versus other forms of treatment, we found that individuals who received MAUD were significantly more likely to be older, male, and straight than individuals who received non-medication treatment for AUD. We did not observe significant differences in the distributions of race, poverty, or rurality. **Conclusions** We characterize individuals who received treatment for alcohol use and investigate demographic disparities among individuals who received and did not receive MAUD. Overall, MAUD is vastly underutilized and a major contributor to the AUD treatment gap. Findings point to potential disparities in MAUD receipt specific to marginalized identities and younger adults. These results may inform future research to enhance MAUD initiation among individuals with AUD.

## Poster #51

### Title

Speech and language abilities associated with regional corpus callosum development in children who stutter

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### Topic

Child

### Abstract

The corpus callosum supports the interhemispheric transfer of information as well as the lateralization of specialized functions such as speech and language. During childhood, increased region-specific volumes have been linked to better expressive language abilities and increased leftward language lateralization. In developmental stuttering, atypical laterality of language function and structure has been found among adults who stutter. Yet, how corpus callosum development relates to the language abilities of children who stutter has not been explored. We investigated whether expressive language and speech sound articulation are associated with differences in white matter volume (WMV) of the corpus callosum in preschool- and school-aged children who do (CWS) and do not stutter (CNS). Participants included 74 CWS (28 female) and 75 CNS (36 female), who were part of a larger longitudinal neuroimaging study of developmental stuttering and were scanned up to 4 times (1 visit per year). Volumetric measures of the corpus callosum were derived using FreeSurfer 5.3.0, which automatically segmented individual anatomical images into five equally spaced regions: anterior, mid-anterior, central, mid-posterior and posterior. We found that, at preschool age, higher expressive language scores among male CWS were associated with greater WMV in the mid-posterior and mid-anterior corpus callosum, while higher expressive language scores among male CNS reflected lower WMV in these regions. Among female participants, higher scores in speech sound accuracy were associated with reduced WMV in the mid-posterior corpus callosum among CWS, but increased WMV in this region for CNS. These findings point towards the significant role of age- and sex-specific development of the corpus callosum in regions associated with the interhemispheric transfer of sensory information and communication between premotor and supplementary motor areas, thereby supporting processes of speech motor functioning, as well as speech and language development in childhood.

## Poster #52

### Title

Understanding individual differences in conflict tasks using joint cognitive modeling

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### Topic

Inhibitory Control

### Abstract

Cognitive control is a crucial mechanism for managing mental processes necessary for organizing thoughts and actions to support a broad range of complex behavior, including simple decision making and complex goal-directed behavior. Extensive research shows cognitive control ability changes throughout development and is related to psychopathology. Conflict tasks, such as the Stroop and Simon tasks, are some of the oldest and most widely used tasks for studying cognitive control. Conflict is often quantified within an individual by calculating the response time difference of incongruent (conflict) and congruent trials. However, these difference scores exhibit low test-retest reliability within individuals and low correspondence across different conflict tasks. Previous work indicates formal modeling may address these reliability problems, and parameter estimates from evidence accumulation models, in particular, may be a better predictor of behavior than difference scores. Here, we use a powerful Bayesian joint modeling framework and an evidence accumulation model of conflict to explore similarities in cognitive mechanisms underlying an individual's decision making in conflict tasks. The sample includes 521 individuals (150 retest) from the Self Regulation Ontology Dataset who completed both a spatial Simon task and Stroop task. First, we find model mechanisms for adjusting the decision threshold based on primed location and adjusting the rate of evidence accumulation for incongruent trials are necessary to capture the observed data in both tasks. Second, using the constraint afforded by joint modeling we find an individual's cognitive efficiency, or information processing ability, is correlated across tasks. We do not, however, find evidence of a consistent strategies for exerting top-down control in the presence of conflict or for adjusting response caution considering priming across the two tasks. Finally, we explore the relationship between cognitive efficiency and self-control and discuss the generalizability of these results to other datasets and different cognitive control tasks.

## Poster #53

### Title

The Contrast Avoidance Model in Bipolar Spectrum Disorders: A Preliminary Evaluation of the Evidence

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### Topic

Mood

### Abstract

**Background:** The Contrast Avoidance Model suggests that individuals who are sensitive to negative emotional shifts charge themselves with negative affect to prevent further escalation in response to adverse situations, while the heightened negative affect amplifies positive emotional contrasts when encountering unexpected positive events. In the context of bipolar spectrum disorders (BSDs), individuals may experience more pronounced emotional contrasts. Drawing from the Contrast Avoidance Model, transitions from depression to (hypo)mania can be conceptualized as positive emotional contrasts, potentially heightening pleasure during (hypo)manic episodes. Conversely, the shifts from (hypo)manic to depressive episodes can be viewed as negative emotional contrasts, contributing to the challenges associated with depressive states. While the interplay between the Contrast Avoidance Model and BSDs holds intriguing potential, empirical testing to establish a direct link remains lacking. **Methods:** This study aimed to address this gap by investigating the presence of contrast avoidance traits in BSDs. Utilizing data from a large cohort study (N = 536), we conducted a Kruskal-Wallis test to analyze differences among individuals with BSDs, unipolar depression, and healthy controls. **Results:** Individuals with BSDs demonstrated significantly higher scores in the total, and Discomfort with Negative Emotional Shifts and Avoidance of Negative Emotional Contrasts/Enhancement of Positive Emotional Contrasts factors compared to those with unipolar depression and healthy controls. Although marginal, the bipolar II subtype showed a stronger inclination to avoid negative emotional contrasts compared to bipolar I. **Conclusion:** These findings suggest that contrast avoidance may serve as a psychological mechanism implicated in BSDs. Implications for clinical practice and research are discussed.

## Poster #54

### Title

Relationships between Motivations for Withholding Negative Emotions and Assessments of Mental Health Symptoms, Fertility-Specific Stress, and Resilience

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### Topic

Mood

### Abstract

Fertility challenges are associated with negative outcomes including interpersonal stressors and psychological symptoms (Gerrity, 2001). Although social support is generally protective (Kee et al., 2000), disclosure of infertility may also be associated with higher stress (Slade et al., 2007). Different motivations may exist for non-disclosure. The current study examined non-disclosure using Self-Determination Theory (Deci & Ryan, 1985). Participants (N = 53) from fertility clinics completed assessments of general distress, depressive symptoms, resilience, and domains of fertility-specific stress. All participants endorsed interpersonal non-disclosure related to fertility and completed the Self-Regulation of Withholding Negative Emotions Questionnaire (SRWNE). The SRWNE discriminates between intentional behaviors along dimensions of autonomy (regulated by choice with internal locus of causality) and controlled (pressured or coerced with external determinants) and yields four subscales: External Regulation (ER) associated with externally coercive motivations, Introjected Regulation (JR) denoting partially-internalized motivations to avoid anticipated shame or guilt, Identified Regulation (DR) valuing of self-regulation using strategies that are also valued by interpersonal groups, and Integrated Regulation (TR) in which individuals are self-aware of affect and regulate its expression autonomously. Using bootstrapped Pearson correlations and Cohen's<sup>TM</sup> convention for effect size characterization, ER and JR withholding styles demonstrated positive relationships with general distress and depressive symptoms, fertility related social concerns, and sexual concerns and negative associations with resilience. Relationship concerns were positively associated with ER but not JR styles. In contrast, endorsement of TR motivation was not associated with general stress or depression, but was related to resilience, and lower fertility-specific strains regarding relationship concerns, rejection of childfree lifestyle, and need for parenthood. DR motivation did not yield any significant relationships with global or fertility-specific mental health outcomes. Results of the current study may facilitate conceptualization of self-disclosure regarding infertility and well-being. Further research is needed to evaluate recommendations regarding social support concerning fertility.

## Poster #55

### Title

Relationships Between NIH Toolbox Cognitive Battery Subtests and In Vivo Amyloid and Tau in People with Amnesic Mild Cognitive Impairment and Dementia of the Alzheimer's Type

### Authors

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### Topic

Assessment

### Abstract

**Background:** Previous studies demonstrated that NIH Toolbox Cognition Battery (NIHTB-CB) performance distinguishes between healthy controls (HCs), individuals with amnesic mild cognitive impairment (aMCI), and individuals with dementia of the Alzheimer's type (DAT). We are among the first to evaluate how NIHTB-CB subtest performances and in vivo Alzheimer's disease (AD) pathology are related in people with aMCI and DAT. **Methods:** As part of a larger clinical trial in the Research Program on Cognition and Neuromodulation Based Interventions, 139 participants with aMCI or DAT completed five iPad NIHTB-CB subtests: Flanker, List Sort, Card Sort, Pattern Separation, and Picture Sequence. Participants also completed positron emission tomography (PET) scans of amyloid and tau. Amyloid PET scans were normalized to the centiloid value, and tau PET standardized uptake value ratios were merged into a bilateral meta-region-of-interest based on Braak staging. Stepwise linear regression was used to evaluate the relationship between in vivo AD pathophysiology with NIHTB-CB subtests beyond demographic factors (age and education). **Results:** In vivo amyloid was significantly related to List Sort ( $r = -0.31$ ,  $p < .001$ ,  $r^2 = .09$ ) and Card Sort performance ( $r = -0.25$ ,  $p = .004$ ,  $r^2 = .06$ ), explaining significantly more subtest variance beyond age and education. In vivo tau was significantly related to performance on all NIHTB-CB subtests and explained significantly more subtest variance than demographic factors (Flanker:  $r = -0.25$ ,  $p = .004$ ,  $r^2 = .06$ ; List Sort:  $r = -0.40$ ,  $p < .001$ ,  $r^2 = .15$ ; Card Sort:  $r = -0.32$ ,  $p < .001$ ,  $r^2 = .10$ ; Pattern Separation:  $r = -0.18$ ,  $p = .04$ ,  $r^2 = .03$ ; Picture Sequence:  $r = -0.23$ ,  $p = .01$ ,  $r^2 = .05$ ). **Conclusions:** In vivo AD pathophysiology is related to NIHTB-CB subtest performances in individuals with aMCI or DAT and explains more NIHTB-CB subtest variance than demographic factors alone. This work supports the relationship between NIHTB-CB subtests and in vivo AD biomarkers.

## Poster #56

### Title

Developmental Differences in Reward Response Modulation Using Real-Time fMRI Neurofeedback of the Nucleus Accumbens

### Authors

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### Topic

Imaging

### Abstract

**Purpose:** The protracted maturation of brain regions involved in cognitive control compared to earlier maturing reward-related regions is believed to underlie risky behaviors, including alcohol use. Real-time fMRI neurofeedback (rtfMRI-nf) offers a promising, potentially ecologically valid, and dynamic test of developmental differences in volitional control over reward activation. This study presents data examining the extent to which adolescents and young adults could increase and decrease activation in the nucleus accumbens (NAcc) through rtfMRI-nf. **Methods:** Participants were recruited as part of a community-based NIAAA-funded study. The sample was composed of 53 adolescents (Mean age (SD) age=15.1 (0.79), 56.6% female) and 77 young adults (M (SD) age=25.9 (0.86), 54.5% female). The single-session rtfMRI-nf task comprised four runs (feedback off, feedback on, feedback on, feedback off), with each run consisting of 12 pseudorandomly ordered trials where participants were instructed to use strategies to increase and decrease NAcc activity. NAcc activity was measured across run types. **Results:** A general linear model (GLM) was used to examine associations between peak NAcc activation and cued instruction (increase vs. decrease), run number, and age group (adolescent vs. young adult). We found main effects for cued instruction ( $t=3.88$ ,  $p<0.001$ ) and run number ( $t=-5.18$ ,  $p<0.001$ ) and a significant interaction between cued instruction and age group ( $t=2.44$ ,  $p<0.05$ ), such that young adults showed a greater degree of differential modulation than adolescents. **Conclusions:** Our study is the first to demonstrate that adolescents can self-regulate NAcc activation, but that their control over reward responding is weaker than for young adults. Our findings support rtfMRI-nf as a tool for quantifying individuals' capacity for volitional control over reward responding, allowing for more direct investigations of the role of such capacities and the relevance of developmental processes in substance use risk.



## Poster #57

### Title

Teacher's Education, Training, and Comfort Level for Providing Academic Accommodations Recommended in Neuropsychological Evaluations of Children with Chronic Health Conditions

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### Topic

Assessment

### Abstract

Many chronic health conditions and associated treatments can negatively impact a child's developing nervous system, impacting long-term academic and vocational outcomes. Neuropsychological evaluations identify deficits and provide academic recommendations in children with chronic health conditions. The goal of the present study was to gain an understanding of teacher's 1) preparedness to support the academic and cognitive needs and 2) attitudes toward common educational accommodations recommended in neuropsychological evaluations for children with chronic health conditions. Stratified random sampling was used to sample 280 teachers (76.2% female, Mage = 42.99 years) from schools that represented diverse geographical settings (53.9% rural) and school types (58.4% public school) from all 50 states. Repeated measures ANOVA showed that teacher's level of education ( $F(3.125) = 132.58, p < 0.001$ ), training ( $F(2.738) = 116.12, p < 0.001$ ), and comfort ( $F(2.738) = 116.12, p < 0.001$ ) with providing academic supports to children with chronic health conditions significantly differed between the conditions. Post hoc analyses revealed significantly higher teacher education, training, and comfort with providing support for epilepsy/seizures compared to the other health conditions; significantly higher teacher education, training, and comfort with providing support for traumatic brain injury compared to cancer, sickle cell disease, and congenital heart disease; and greater comfort with providing supports for cancer compared to congenital heart disease and sickle cell disease. Regarding accommodations, bivariate correlations showed that teacher implementation of accommodations was correlated negatively with perceived burden and positively with perceived benefit (all  $p$ 's  $< 0.01$ ). Results suggest that teachers have varying degrees of knowledge and comfort with academic accommodations for different childhood chronic health conditions and they are more likely to implement accommodations with a perceived benefit. Providing additional education on the cognitive and academics needs of chronic health conditions and the benefit of recommended academic accommodations within neuropsychological evaluations may be important for ensuring accommodations are appropriately provided.

## Poster #58

### Title

Functional brain connectivity predictors of prospective substance use initiation and their environmental correlates

### Authors

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### Topic

Substance Abuse

### Abstract

Early substance use initiation (SUI) places youth at substantially higher risk for later substance use disorders. Adolescence is also a critical period for the maturation of brain networks, the pace and magnitude of which are susceptible to influence by the environment surrounding the teen. Here we examined whether longitudinal functional brain connectivity (rsFC) patterns in early adolescence can predict future SUI, and whether these patterns are associated with neighborhood pollution and socioeconomic dimensions. We utilized data from the Adolescent Brain Cognitive Development (ABCD) Study<sup>®</sup>. SUI was defined as first-time use of at least one full dose of alcohol, nicotine, cannabis, or other drugs. We created a control group (N = 228) of participants without SUI who were matched with the SUI group (N = 233) on age, sex, race/ethnicity, and parental income and education. Using a multivariate analysis, we differentiated the SUI and control groups based on rsFC in the years prior to SUI. We found a rsFC signature that was expressed less in the control group compared to the SUI group during the 9<sup>th</sup>–10 and 11<sup>th</sup>–12 age periods. This pattern was expressed more at older ages in both groups, suggesting a pattern of accelerated maturation in the SUI group in the years prior to SUI. In an independent subset of the ABCD data (N = 2,854) and adjusted for family socioeconomic factors, expression of this rsFC pattern was associated with higher air and lead pollutions, but not Area Deprivation Index. In sum, brain functional connectivity patterns in pre-to early-adolescence that are linked to accelerated maturation and environmental exposures can predict future SUI in youth.

## Poster #59

### Title

Self-Reported Executive Dysfunction is Related to Emotional Distress: Findings Among University Students

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### Topic

Assessment

### Abstract

Background: Performance based neuropsychological tests are used to assess executive functions (EF), but self-report rating inventories purport to increase ecological validity by inquiring about EF in everyday life. These sources of information often disagree, largely because subjective self-reports are influenced by emotional distress. Research has seldom explored the degree to which subjective ratings of poor EF correlate uniquely with depression and anxiety versus flattering and unflattering self-reports more generally. This project examined the relationship between self-reported EF on the Behavior Rating Inventory of Executive Function – Adult Version (BRIEF-A) with performances on tests of EF, as well as measures of depression, anxiety, curiosity, and anger. It was hypothesized that BRIEF-A scores would share small correlations with tests of EF, medium correlations with measures of depression and anxiety, and intermediate correlations with anger and curiosity. Method: 151 undergraduate students [80% female; age 21.4 (3.8)] completed the BRIEF-A, neuropsychological tests of EF, and self-report measures of depression, anxiety, anger, and curiosity. Results: The BRIEF-A Behavior Regulation (BRI) and Metacognitive (MI) indices shared a large correlation ( $r=.66$ ), with internal consistencies exceeding .90. No correlation between BRIEF-A indices and neuropsychological performances exceeded .10. Problems reported on the BRI and MI were positively associated with self-reported depression ( $r=.45$ ) and state anxiety ( $r=.29$ ). The MI had a small correlation with state curiosity ( $r= -.21$ ), whereby more metacognitive problems were associated with less curiosity. BRI correlated with state anger at .19. Discussion: The BRIEF-A had good reliability, was poorly associated with objective measures of EF, and was associated with depression and anxiety, more so than with anger and curiosity. It is unlikely self-reported EF reflects generic positive self-regard and is more closely associated with emotional distress. Users of the BRIEF-A should bear in mind the influence of depression and anxiety when interpreting this test.

## Poster #60

### Title

More cutoffs, more problems: A case for logistic regression in clinical assessment

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### Topic

Assessment

### Abstract

**Objective:** Although cutoffs may seem appealing due to their simplicity, they have significant limitations that stem from dichotomizing continuous data. Some researchers have attempted to lessen problems associated with cutoffs (e.g., crude grouping, adjacent scores with opposite interpretations) by presenting multiple cutoff options; however, multiple cutoffs do not resolve these limitations and introduce new problems (e.g., giving users options for selecting a desired outcome). In an attempt address the problems with cutoffs and reflect the true continuum of scores, some have proposed calculating probabilities derived from observed scores. Although this method has advantages over cutoffs, it requires large data sets and introduces new problems such as sample-dependent artifacts leading to unexpected changes in probability across the score continuum. This project highlights the advantages of logistic regression (LR) as an alternative method to cutoffs for guiding clinical interpretation. **Method:** We simulated data for a hypothetical cognitive screener for 200 patients with normally distributed test scores ( $M = 5$ ,  $SD = 2$ , range = 0-10) and a binary outcome measure with binomial distribution (cognitive impairment diagnosis probability = .5). Test scores and diagnosis were constrained to correlate at  $r = .5$ . Diagnosis was regressed on test score using LR, and the log odds were converted into probability of cognitive impairment at each possible score. **Results and Conclusion:** In contrast to cutoffs, LR yielded predictive values that closely resembled the observed (i.e., true) probability of diagnosis across the full continuum of scores. Probabilities derived from LR best addressed the limitations of single and multiple cutoffs. LR also improved upon the strengths of observed probabilities by providing a smooth prediction gradient. In conclusion, predictions based on LR have statistical advantages over techniques based on observed probabilities and cutoffs.

## Poster #61

### Title

Antidepressant Prescriptions Increased For Commercially Insured People With Perinatal Mood And Anxiety Disorder, 2008–2020

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### Topic

Health Services

### Abstract

Perinatal mood and anxiety disorders (PMAD) affect approximately 1 in 5 delivering people during pregnancy or the first year postpartum. Antidepressants are a safe and effective treatment option for PMAD, however literature indicates widespread undertreatment. We aimed to determine whether antidepressant prescriptions for PMAD increased after several professional organizations issued PMAD screening recommendations in 2015 and 2016. This serial, cross-sectional, logistic regression analysis evaluated changes in perinatal, antenatal, and postpartum antidepressant prescriptions among commercially insured people who had a live-birth delivery as well as a PMAD diagnosis during the period 2008–2020. We used an interrupted time series framework to assess antidepressant prescribing trends during the pre-guideline period (2008–2016), immediately after guideline issuance (2017), and during the post-guideline period (2017–2020). For people with antenatal PMAD, the odds of an antenatal antidepressant prescription decreased 3 percent annually from 2008 to 2016 and increased by 32 percent in 2017, and the annual rate of change increased 5 percent for 2017–2020 compared with 2008–2016. For people with postpartum PMAD, the odds of a postpartum antidepressant prescription decreased 2 percent annually from 2008 to 2016 and experienced no significant change in 2017, but the annual rate of change increased 3 percent for 2017–2020 compared with 2008–2016. The PMAD screening recommendations issued in 2015 and 2016 were associated with increased antidepressant prescriptions for PMAD, particularly for antenatal PMAD. These findings indicate that clinical recommendations aimed at improving detection of mental health conditions may also be an effective tool for changing prescribing patterns.

## Poster #62

### Title

Self-reported daily stressors for caregivers of youth visiting psychiatric emergency departments

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### Topic

Suicide

### Abstract

Intro: Emergency Departments (EDs) increasingly provide acute services for adolescents at risk for suicide. Their caregivers are tasked with post-discharge recommendations intended to increase teen safety. Prior research shows caregivers of high-risk youth report high stress levels, which may impact their capacity to support their youth. Relatively little is known about day-to-day caregiver perceptions of stress following a crisis. Methods: Caregiver and adolescent dyads recruited from an ED following the youth's suicide-related crisis were enrolled in a pilot intervention trial (70.27% mothers; youth mean age = 15.03 years). This study examined a control subsample not receiving intervention (N = 37). All caregivers received daily text-message surveys assessing sources of stress for 6 weeks after discharge. They were instructed to choose all that applied (yes/no) out of a list of 16 stressors (N = 1058 observations). Results: Caregivers reported an average of 4.3 unique stressors per day. The most reported stressor was "Health and well-being of my teen", followed by "Having to do too many things," "Cooking and housework," and "Other." Analyses are ongoing to examine whether overall stress ratings are related to number and type of daily stressors, what impacts daily stress (e.g. family support, youth mental health, etc.), and to qualitatively examine stress captured by the "Other" category. Conclusions: Caregivers of high-risk youth reported many daily stressors, with the primary source relating to youth well-being. Given that caregivers are involved in adolescents' post-ED care, an understanding of caregiver experiences following a crisis may inform supportive interventions for these families.

## Poster #63

### Title

Differential entrainment of neural oscillations during spoken word processing in children who stutter

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### Topic

Stuttering

### Abstract

Stuttering, a neurodevelopmental disorder affecting speech fluency, can be temporarily alleviated through external rhythmic cues. However, the interaction between these cues and intrinsic neural oscillations in stuttering remains unclear. This study investigated the impact of rhythmic tones preceding spoken words on perception and explored differences in oscillatory neural activity in children who stutter (CWS). Data from 15 CWS and 40 age- and gender-matched children (aged 7-13 years) who do not stutter (CNS) were analyzed. All participants, English speakers within normal speech and cognitive ranges, completed a spoken word perception task. EEG data from 64 scalp sensors were analyzed in a 1-second period following word onset, focusing on delta (1-3 Hz) and theta (4-7 Hz) bands. Key findings reveal that spoken word perception across participants is notably influenced by preceding rhythmic tones, reflected in changes in delta Inter-Trial Phase Coherence (ITPC). Brain regions involved in speech perception respond differently to the rhythmic effect, evidenced by varied effects among different brain regions in delta and theta powers. Compared to CNS, CWS exhibited distinct neural oscillation patterns during speech perception, characterized by reduced theta power and decreased delta ITPC. Moreover, differences in brain networks engaged in speech perception between CWS and CNS were suggested by interactions between group and brain regions in delta and theta powers. While neural oscillation patterns did not show group differences in rhythmic effects, variations in neural oscillations associated with speech perception could potentially indicate disruptions in predictive timing, affecting speech perception and motor control in CWS. Next steps involve expanding the CWS sample size, integrating covariates such as stuttering severity, age, sex, cognitive/language measures, and socioeconomic status, and implementing source localization techniques.

## Poster #64

### Title

Are Psychiatry Residents Effectively Screening for Firearm Safety Within a Veteran and Non-Veteran Population?

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### Topic

Injury and Violence Prevention

### Abstract

**Methods** The goal of this study was to collect information on firearm safety screening from a psychiatry residency program at a large, academic institution with Veterans Affairs (VA) health system affiliation in the urban Midwest. An optional, anonymous Qualtrics survey was emailed to all psychiatry residents (N=43). Questions pertained to the residents' personal firearm safety screening practices, their attitudes about the quality of education received on this topic, and their level of confidence in performing screenings. **Results** The survey was completed by 86% of residents in the program (n=37). Of respondents, 29.73% were PGY1s, 27.03% were PGY2s, 18.92% were PGY3s, and 24.32% were PGY4s. Overall, 88.24% of psychiatry residents ask patients if there is a firearm at home over 50% of the time. The most common patient factors prompting screening include elevated risk of homicide or suicide (19.75%), history of mental illness or behavioral concerns (16.05%), acute stressor(s) (16.05%), victims or perpetrators of violence (14.81%), and veteran status (14.81%). 76.67% of residents feel that their experience at the VA has better prepared them to conduct firearm safety screenings; however, 35.71% cite concern about damaging rapport with veteran patients as a barrier to conducting firearm safety screenings. 100% of psychiatry residents sampled believe that firearm safety screening should be taught in all residency programs. 87.50% of psychiatry residents who have received training about firearm safety screenings did so while on a psychiatry service. 0% of psychiatry residents report conducting firearm safety screenings during internal medicine, family medicine, pediatrics, or neurology rotations. **Conclusions** Because 45% of veterans own firearms, as opposed to 20% of the public, there is a distinct need to screen for firearm safety in this population [1]. Most residents identify collapse of rapport as a potential barrier, which highlights the need for cultural sensitivity and awareness of the values of veteran communities [2]. There is not a standardized firearm safety curriculum in psychiatry residency, nor formal education on this topic directed towards veterans [3]. A tailored approach to teaching firearm safety screening may better prepare resident physicians to address this issue, especially when caring for specific populations. While this study includes only one psychiatry residency program, it would be worthwhile to explore firearm safety screening curricula across all medical specialties, as at-risk patients frequently make contact with the healthcare system outside the context of psychiatric care. Demand for psychiatrists greatly exceeds supply, and primary practitioners are necessary to close the mental health care gap and address the firearm safety crisis [4,5]. We hope to develop educational initiatives regarding firearm safety screening to share with our primary care colleagues in alignment with the collaborative care model. **References** 1. Cleveland EC, et al. Firearm ownership among American veterans: findings from the 2015 National Firearm Survey. *Inj Epidemiol*. 2017 Dec 19;4(1):33. doi: 10.1186/s40621-017-0130-y. 2. Hoyt T, et al. Firearm Lethal Means Safety with Military Personnel and Veterans: Overcoming Barriers using a Collaborative Approach. *Prof Psychol Res Pr*. 2021 Aug;52(4):387-395. doi: 10.1037/pro0000372. 3. Puttagunta R, et al. What is Taught on Firearm Safety in Undergraduate, Graduate, and Continuing Medical Education? A Review of Educational Programs. *Acad Psychiatry*. 2016 Oct;40(5):821-4. doi: 10.1007/s40596-016-0490-6. 4. Satiani A, et al. Projected Workforce of Psychiatrists in the United States: A Population Analysis. *Psychiatr Serv*. 2018 Jun 1;69(6):710-713. doi: 10.1176/appi.ps.201700344. 5. Titus SJ, et al. Primary care physician and resident perceptions of gun safety counseling. *Proc (Bayl Univ Med Cent)*. 2021 Nov 19;35(4):405-409. doi: 10.1080/08998280.2021.2004532.



## Poster #65

### Title

Where do “chemical imbalance” beliefs come from? Considering the impact of different sources of exposure

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### Topic

Mood

### Abstract

The etiology of depression remains a subject of debate and exploration among researchers, mental health practitioners, and the scientific community. While multidisciplinary approaches which integrate biology, social determinants, and individual psychology offer promising avenues for understanding, there persists a common belief among lay people that depression can be attributed largely, if not solely, to chemical imbalances in the brain. Accumulating research suggests that while acceptance of the "chemical imbalance theory" may alleviate self-blame among depression sufferers, this belief may conversely impede treatment processes and undermine hope for recovery. Despite this, limited research exists on the sources through which individuals are exposed to this theory and the corresponding impacts. In this study, we surveyed 1,252 college students to assess their beliefs about depression and their exposure to the chemical imbalance theory. Common reported sources included classrooms, the internet/media, other individuals, and healthcare providers. Our statistical analysis revealed a notably robust association between learning about the chemical imbalance theory from healthcare providers and endorsing its validity. Specifically, a regression analysis found that exposure to the chemical imbalance theory from healthcare providers predicted endorsement of the chemical imbalance belief ( $B = .14, p < .001$ ) over and above all other sources of exposure. Importantly, this correlation persisted even after controlling for potential influencing variables such as depression symptoms, history of depression diagnosis, and engagement in mental health treatment, including prescribed psychotropic medication or psychotherapy. These findings underscore the significance of healthcare providers in shaping beliefs about depression and highlight the need for further investigation into the impact of disseminating this theory.

## Poster #66

### Title

A case of psilocybin-induced paranoia preceding marijuana-induced psychosis in a 16-year-old male: emerging public mental health considerations of psychedelic use among youth

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### Topic

Child

### Abstract

A 16-year-old male with a psychiatric history of unspecified anxiety disorder and unspecified psychotic disorder was brought to the psychiatric emergency department (ED) by police for experiencing paranoid and persecutory delusions after smoking marijuana. He reported that his delusions began after ingesting psilocybin for the first time a year prior. His paranoia then worsened with escalating marijuana use in the subsequent months to cope with anxiety. One month prior to ED presentation, he had been admitted to an outside inpatient psychiatry unit after ingesting marijuana and experiencing similar delusions. In the ED, urine drug screen was positive for cannabinoids, and vital signs and basic labs were otherwise unremarkable. He was psychiatrically admitted for suspected substance-induced psychosis. Medical workup for first-episode psychosis including MRI brain was unremarkable. During admission bupropion was discontinued, and fluoxetine was started for Generalized Anxiety Disorder. His treatment also included motivational interviewing for marijuana use disorder. Upon discharge he showed improved reality testing although some paranoia remained, and he was contemplative about sobriety from marijuana and psilocybin. This case highlights increasing rates of psychedelic use among youth as a public mental health concern. Psychiatric providers should be informed about trends, risks, and legal implications of psychedelic use in youth, especially as they become more accessible and gain attention for potential therapeutic applications in adults.

## Poster #68

### Title

Changes in Emotion Regulation During the Course of Dialectical Behavior Therapy: Effects on Non-Suicidal Self-Injury and Binge Eating Across Two Samples

### Authors

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### Topic

Psychotherapy

### Abstract

Dialectical Behavior Therapy (DBT) has demonstrated effectiveness in reducing self-damaging behaviors associated with emotion dysregulation, including non-suicidal self-injury (NSSI) and binge eating. It has been hypothesized that the effects of DBT on NSSI and binge eating are the result of improvements in emotion regulation; however, the extent to which changes in emotion regulation account for reductions in these behaviors is unclear. The present study leverages two unique clinical samples to examine the degree to which changes in emotion regulation abilities influence changes in the frequency of NSSI and binge eating over the course of DBT. Participants included 189 Veterans receiving outpatient DBT and 117 civilians enrolled in a DBT Intensive Outpatient Program. Analyses examined changes in emotion regulation, binge eating, and NSSI over the course of treatment, as well as the extent to which NSSI and binge eating frequency were influenced by changes in emotion regulation. In the Veteran sample, DBT led to improvements in emotion regulation abilities and significant reductions in NSSI and binge eating; however, changes in emotion regulation did not account for observed reductions in NSSI or binge eating. In the civilian sample, the effects of DBT on emotion regulation, NSSI, and binge eating were nonsignificant. Our findings suggest that emotion regulation may not be the only mechanism through which DBT exerts its effects on NSSI and binge eating. The effects of DBT on emotion regulation and self-damaging behaviors may vary based on factors such as treatment setting, time in treatment, and clinical severity of the sample.

## Poster #69

### Title

Werther and Papageno Effects in Media: Examining Social Transmission across Time, Technology, and Teens

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### Topic

Suicide

### Abstract

To date, suicide remains the second leading cause of death in youth globally prompting discussion on factors affecting adolescents, and particularly, social media. Research has repeatedly examined whether an association exists between Internet use and suicidality, but these studies are often inconclusive and limited in their generalizability. What may be of greater benefit is focusing on the way suicidality is transmitted across media and how this can be perceived by adolescents, as this can help shift a harmful message into a productive conversation. Literature has proposed two principles to be aware of when analyzing the aftermath of suicide reported through media: The Werther Effect, which demonstrates that suicide mortality increases following highly publicized suicide events, and The Papageno Effect, which indicates that media can have a suicide preventive effect when highlighting non-suicide alternatives and helpful resources, especially for individuals in crisis. Examples of the Werther Effect can be seen in the months following celebrity death by suicide (e.g., Robin Williams, Kate Spade, Anthony Bourdain) as well as in the aftermath of Netflix's release of 13 Reasons Why. Meanwhile, the Papageno Effect can be clearly illustrated through the Vienna subway studies and Logic's 1800 song popularity. Understanding who is most susceptible to the Werther versus Papageno effect is essential to determine how to reduce suicide rates. Viewing suicide through the Werther & Papageno lens also has direct implications for journalists and the media at large as it reinforces the moral responsibility that exists when reporting on death. Above all, this information offers valuable insight for developing evidence-based tools & programs that can shift susceptible audiences from experiencing one effect to the other.

## Poster #70

### Title

High-definition transcranial direct current stimulation (HD-tDCS) effects on functional magnetic resonance spectroscopy (fMRS)

### Authors

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### Topic

Neuromodulation

### Abstract

**Objective:** Transcranial direct current stimulation (tDCS) is a promising noninvasive, non-pharmacological intervention for Alzheimer's disease and related dementias (ADRD). It is believed that tDCS modulates cortical excitability via primary effects on neurotransmitters such as glutamate (Glu)—the main excitatory neurotransmitter in the brain. However, the link between Glu and brain activity, and the influence of tDCS on this relationship, is largely unknown. Recent advances in proton functional MR spectroscopy (1H fMRS) have enabled the in vivo evaluation of Glu during task performance. Using a newly developed 1H fMRS protocol, we examined whether HD-tDCS influences the dynamics of Glu release during the performance of an ecologically relevant object-location association (OLA) memory task. **Participants and Methods:** Eleven cognitively unimpaired older adults first completed a baseline and then a post-stimulation session where they received either 2mA of active HD-tDCS (central anode at F5) for 20 minutes (n=5) or sham (n=6), using a randomized double-blind design. Single-session HD-tDCS was followed immediately by 1H fMRS and fMRI scans. During scanning, participants first encoded and then retrieved 40 OLAs in alternating runs. We focused on the left lateral prefrontal cortex (LPFC), a site primarily activated by OLA encoding tasks. **Results:** Preliminary analyses identified increased Glu concentration in the left LPFC during OLA encoding post-HD-tDCS relative to baseline, for the active compared to sham group ( $t=2.65$ ,  $p=0.026$ , Cohen's  $d=1.61$ ). There were not significant differences during the retrieval task ( $p>0.8$ ). **Conclusion:** These results suggest that HD-tDCS alters neuronal excitability by increasing Glu concentration in the brain. In addition, the metabolic effects of HD-tDCS may vary with the engagement of task-relevant neural mechanisms. Characterizing these neurobiological mechanisms helps provide indices to measure neural compensation and/or restoration that are critical for developing personalized treatments in ADRD.

## Poster #71

### Title

Comparative mortality risks in two independent bipolar cohorts

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### Topic

Health Systems

### Abstract

**Aim:** To compare mortality rates in those with bipolar disorder (BD) against other common causes of mortality in both a research cohort and replicated in medical records. **Methods:** Observational data from the Prechter Longitudinal Study of Bipolar Disorder (PLS-BD) of 1128 participants including 281 controls was analyzed using logistical regression to quantify mortality rates in comparison with common comorbidities and causes of death. **Outcome and treatment measures,** including ASRM, GAD-7, PHQ-9 and medication use were used to stratify and compare those with bipolar disorder (BD) that are alive or deceased. A larger cohort of 10,735 BD patients with 7,826 controls (no psychiatric diagnosis) from the University of Michigan Health (U-M Health) clinics was used as replication, observational secondary data analysis. Comorbidities and causes of death were examined as well in this observational secondary data analysis using logistical regression. **Results:** The mortality rates are significantly higher between those with BD and controls in both PLS-BD and UM Health cohorts. Those with BD and are deceased have a higher percentage of elevated depression measures but show no difference in mania or anxiety measures nor medication use patterns. While there were some differences between the cohorts, general findings were in concordance. A diagnosis of BD increases the odds of mortality greater than many common causes of mortality, being older than 60-years of age and even a history of smoking. **Conclusion:** BD was found to increase odds of mortality significantly and beyond that of other common causes of disease, including a history of smoking. This finding was replicated in an independent sample. The novel aspect of this study is twofold. First, using the ongoing, observational medical record data as a replication cohort after using a deep phenotypic research cohort. Even in a greater than 10-fold increase in patients for replication, original findings prevailed. Secondly, this is the first time examining having bipolar disorder against other common causes of death, including smoking. The results provide a call to action and advocate for increased public policy attention for those with bipolar disorder.

## Poster #72

### Title

Pilot implementation of a motivational incentive smoking cessation program for rural Medicaid patients

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### Topic

Substance Abuse

### Abstract

**Background:** Smoking cigarettes is the leading cause of preventable death in the United States. People living in rural areas smoke cigarettes at higher rates than their urban counterparts. Medicaid beneficiaries are more likely to smoke than those with private insurance. Motivational incentive-based cessation treatments more than double cessation compared to average quit attempts, but have not been widely implemented, in part due to patient and provider burden of frequent in-person visits. **Methods:** To address limited access to motivational incentive-based treatments and associated disparities in smoking and related consequences, we conducted a pilot implementation project of Incentives2Quit (I2Q) for rural Medicaid recipients. Adult patients (N=37) participated in the 5-week remotely-delivered I2Q program which included daily motivational text messages tailored to their reasons for quitting and current smoking status, and received monetary rewards when they engaged with the Michigan Tobacco Quitlink, I2Q app, and provided biochemically-verified [via exhaled breath carbon monoxide (CO)] evidence of smoking cessation. After the program, patients provided feedback via online survey. **Results:** All patients recommended the program and found incentives helpful. Most (91%) found the tailored motivational text messages helpful. Patients noted strengths including: messages, incentives, consistency, and multiple levels of support. During the final week of the program, 73% of submitted samples indicated non-smoking (CO  $\leq$  6 parts/million). By the end of the program, 77% of patients had reduced their CO and 61% had quit. **Conclusions:** Preliminary evidence indicates feasibility of providing the I2Q program to Medicaid beneficiaries living in rural areas. Patients found I2Q to be acceptable and appealing. Initial outcomes are promising, with similar quit rates and reduced CO to those seen in large scale clinical trials, raising the possibility that motivational incentives may maintain effectiveness via remote-delivery, in real-world settings, and with rural patient populations.

## Poster #73

### Title

Remote Technology-Based Motivational Interviewing Interventions to Prevent or Reduce Alcohol Use in Adolescents

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### Topic

Substance Abuse

### Abstract

**Background:** Given the consequences associated with adolescent (ages 12-17) alcohol use and binge drinking, there is a need to develop preventative interventions. We are currently testing the comparative efficacy of two remote approaches (interactive computer programs with and without text messages) on reducing/preventing youth alcohol consumption and associated consequences. Here, we describe each intervention and provide early data on participant engagement. **Methods:** Our program and text message interventions are rooted in the “Why, How” model of Motivational Interviewing, and were adapted from prior work demonstrating efficacy of the computer intervention among 14-20 year-olds with risky drinking. We refined the interventions based on feedback from youth advisors to modernize the program content. This program takes ~45 minutes and includes infographics, prompting youth to interact in a social media-style. For those randomized, text messages are sent twice daily for eight weeks based on program responses. Topics for both interventions include strategies for stress reduction, alternate activities to substance use, and boosting self-esteem, but do not mention participants’ own use of substances to protect confidentiality. **Results:** Of the 101 youth enrolled as of March 15th, 2024, 83.17% have completed the program, averaging 4.95 days between enrollment and completion. Of the remaining 17 (16.83%) that have not completed, 8 are in progress and 9 did not complete the program within 30 days. Youth ages 12-14 (N=12) averaged 9.58 days from enrollment to completion while ages 15-17 (N=72) averaged 4.18 days. **Conclusions:** Our findings suggest that remote tech-based interventions may be a promising way of sharing health information about alcohol and mental health, particularly for older teens. If found to be effective, these interventions may be used in primary care settings as standardized preventive care with low clinical burden. **Support:** PCORI Contract ID #: AU-2022C1-25631



## Poster #74

### Title

A single case study of subjective and objective sleep characteristics before and after psilocybin dosing

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### Topic

Pharmacology

### Abstract

**Introduction:** Psilocybin in concert with assisted psychotherapy may be a safe and effective treatment for multiple medical conditions and psychiatric disorders. We report on sleep in a 63-year-old African American female with fibromyalgia. This is the first participant to complete an ongoing clinical trial testing psilocybin assisted psychotherapy in people with fibromyalgia. No previous studies to our knowledge have examined sleep characteristics in fibromyalgia pre and post psilocybin dosing. **Methods:** The treatment protocol involved two, four-hour preparatory psychotherapy sessions prior to dosing, two dosing sessions (dose of 15mg at both session), and 4 integration psychotherapy sessions after dosing. Psychotherapy did not target sleep specifically and there was no sleep specific therapeutic intervention besides assessments. Doses of psilocybin were two weeks apart. Prior to dosing the participant completed the Functional Status Questionnaire (FSQ), the PROMIS-Sleep Disturbance (SD) 8b, and the STOP BANG questionnaire. The participant also wore a FitBit Charge 5 and completed sleep diaries for 2 weeks pre and post dosing. **Results:** The fatigue item in the screening FSQ indicated a “moderate problem” waking up feeling unrefreshed for the past 3 months and the participant scored a 5 on the STOP BANG (intermediate risk of obstructive sleep apnea). Pre-dosing the participant scored a PROMIS SD T score of 48.4 (population mean=50). The average Pre-dose Fit Bit determined sleep schedule was 23:25 to 05:48, total sleep time (TST) was 5.8 hours, and the sleep efficiency (SE%) was 90.8%. Pre-average subjective sleep quality on the sleep diaries was 5.1/10 (0= worst to 10 = best). After dosing the FitBit sleep schedule was 21:29-04:49, TST increased to an average of 6.5 hours while sleep efficiency was maintained at 90.0%. Subjective sleep quality on the sleep diaries only slightly improved to 5.5/10. **Conclusion:** Psilocybin in this one study participant with unsatisfactory sleep may have led to a longer total sleep time and shift to earlier sleep times as assessed with wrist actigraphy. **Data collection** in this clinical trial is ongoing. **Support:** The study was supported by departmental funds from the Anesthesiology Department at the University of Michigan as well as a grant from Tryp Therapeutics.

## Poster #75

### Title

Relationship between working memory and auditory rhythm discrimination in adults who stutter

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### Topic

Stuttering

### Abstract

Children and adults who stutter show poorer auditory rhythm discrimination than adults who do not stutter, especially for complex rhythms that don't have a consistently marked beat (Wieland et al., 2015; Garnett et al., 2023). This suggests that stuttering may involve a deficit in internal generation of a periodic beat, known as the internal beat-deficit hypothesis (Alm, 2004; Garnett et al., 2023). Entrainment models of short-interval assume that rhythm discrimination leverages an oscillatory mechanism that is entrained by the beat of the to-be-discriminated rhythms whereas interval models of timing assume that rhythm discrimination is based on an interval-by-interval comparison of the rhythms (McAuley & Jones, 2003). If individuals who stutter rely to a greater degree on interval-by-interval duration comparisons to discriminate rhythms than beat-based timing, a stronger relationship between working memory and rhythm discrimination performance might be expected for adults who stutter (AWS) compared to adults who do not stutter. To test this hypothesis, the current study examined the relationship between working memory and rhythm discrimination in AWS and adults who do not stutter (controls). Data was combined from three different datasets where participants performed the same rhythm discrimination and working memory tasks across all datasets. The relationship between working memory and rhythm discrimination was then examined in AWS and controls. As hypothesized, AWS showed a stronger relationship between working memory and rhythm discrimination compared to controls, and group differences in working memory and/or rhythm discrimination do not explain these findings. As predicted by the internal beat-deficit hypothesis and consistent with entrainment models, AWS do not appear to engage beat-based timing mechanisms to the same degree as controls. Rather, our findings support greater reliance on an interval timing mechanism (and, consequently, working memory) for AWS in rhythm discrimination compared to controls.



## Poster #76

### Title

Prolonged Exposure for Primary Care (PE-PC): Training community providers in a brief treatment for PTSD specifically designed for primary care settings

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### Topic

PTSD

### Abstract

Posttraumatic stress disorder (PTSD) is a debilitating and costly mental health issue. Despite the serious consequences of untreated PTSD, only 30% of individuals with PTSD receive treatment in a given year. Prolonged Exposure (PE) therapy is a first-line treatment for PTSD with substantial data supporting its efficacy. However, because of its time-intensive nature and substantial training/supervision requirements, few community-based clinics offer Full PE or other evidence-based trauma-focused treatments. Thus, most individuals with PTSD do not have access to first-line PTSD treatment. In response, our team has adapted PE into a brief, 4-6 session format (PE for Primary Care; PE-PC) and demonstrated the efficacy of this adapted intervention. Since PE-PC was developed to bring PTSD intervention into the Primary Care setting where most people receive their mental health care, there is now a need to train more primary care-based mental health providers in the delivery of PE-PC. The PE-PC training protocol has been developed for VA and community providers. Our team's initiative is to train community providers in PE-PC. Training consists of a 7 hour didactic session and weekly 30-minute group consultation calls for 4 months. Consultation includes discussion of cases and PTSD symptom tracking via PCL-5 scores. Trainees who have participated in four months of weekly consultation and have successfully completed the protocol with at least two training cases will be certified in PE-PC. Currently, 66 civilian providers have been trained and certified in PE-PC. Our team continues to offer the training and an additional 19 providers are expected to be certified in the by May 2024.



## Poster #77

### Title

Overview of a Novel Telehealth Intervention to Improve Alcohol Use Disorder Outcomes in Adult Primary Care Patients

### Authors

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### Topic

Substance Abuse

### Abstract

**Background:** Only 7.6% of adults who had a past-year alcohol use disorder (AUD) received treatment, with even fewer receiving evidence-based psychosocial treatments, namely Cognitive Behavioral Therapies (CBT) and Motivational Interviewing (MI). Prior efforts to increase treatment uptake have focused on primary care-based screening, brief intervention and referral to treatment (SBIRT) for AUD, but these have not resulted in substantially increased treatment uptake. Non-treatment seeking primary care patients may vary in their drinking goals but can still achieve recovery via reductions in drinking risk levels. Thus, expert consensus recommends developing new models of care to better engage the spectrum of patients. We are evaluating a novel telehealth-delivered (TeleTx) outreach-based MI-CBT treatment model among untreated adult primary care patients with AUD. **Methods:** This is a randomized controlled trial (RCT) of a TeleTx intervention (MI-based engagement session + 8-session MI-CBT) versus the Enhanced Usual Care (EUC) control among patients with untreated AUD aged 18-75. We aim to enroll N=300 from Michigan Medicine and the Ann Arbor VA. We will examine these primary outcomes: AUD treatment utilization and alcohol consumption. **Results:** To date, we have enrolled and randomized a total of 103 participants randomized to MI-CBT (N=53) and EUC (N=50). N=49 EUC participants completed their condition; N=50 participants assigned to MI-CBT completed the engagement session with retention as follows: 100.0% at session 1, 85.0% at session 4, and 68.0% at session 8. Follow up retention is 96.1% at 3-months, 95.0% at 6-months, and 96.4% at 12-months. **Conclusions:** This harm-reduction approach to AUD treatment is the first of its kind to specifically focus on engaging non-treatment seeking primary care patients in telehealth-delivered care. **Funding:** NIAAA R01029400

## Poster #78

### Title

SGM Status and Suicide among ED-presenting Young Adults: The Role of Interpersonal Trauma and Stress

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### Topic

Suicide

### Abstract

Sexual and/or gender minority (SGM) individuals are at a higher risk to experience interpersonal trauma (e.g., Bond et al., 2021), more severe depression, hopelessness (e.g., Salentine et al., 2020; Wyman Battalen et al., 2020), and suicidal ideation (SI) than their cisgender and heterosexual counterparts (e.g., Ramchand et al., 2022). Yet, the interplay between SGM status and interpersonal trauma as precipitating factors for SI, hopelessness and depression remains unclear. The extent to which SGM status and interpersonal trauma are associated with baseline clinical factors (hopelessness, depression, suicide attempt history) and post-discharge SI were examined among high-risk young adults. The sample (N = 106) was predominantly female (81.1%), White (80.2%), and self-identified as SGM (60.3%), with an average age of 20.9 years (range 18-25), presenting to an emergency department (ED) with recent SI and/or suicide attempts. Most of the sample reported at least one lifetime interpersonal trauma event (81.1%). Post-discharge SI was assessed daily for 8 weeks after discharge; baseline variables were assessed at index ED visit. SGM status significantly predicted hopelessness, regardless of lifetime (B = 2.065, p = .02) or recent trauma history (B = 1.928, p = .02). Recent trauma moderated the relation between SGM status and depression (b = -4.645, p = .04); non-SGM individuals who experienced recent trauma and SGM individuals who did not experience recent trauma reported more severe depression. While SGM status did predict suicide attempt history (p > .05), SGM status did significantly predict more severe post-discharge SI, regardless of lifetime trauma (B = -0.259, p = .04). Lifetime trauma moderated the relation between SGM status and post-discharge SI; non-SGM individuals with lifetime trauma reported higher SI (B = 0.373, p = .001), while SGM individuals with lifetime trauma reported lower SI (b = -0.622, p = .05). Findings suggest SGM status is a risk-factor for more severe hopelessness and post-discharge SI, regardless of trauma history. Interpersonal trauma history was not directly associated with baseline clinical outcomes or post-discharge SI. This may be due to limited variability of trauma history in the sample. Recent trauma moderated the relation between SGM status and depression, while lifetime trauma moderated the relation between SGM status and post-discharge SI. These unexpected moderating effects may be explained by a blunting phenomenon. SGM individuals who are repeatedly exposed to interpersonal trauma and stress may be less reactive to such experiences, and therefore become less reactive to daily distress associated with outcomes like SI and depression.



## Poster #79

### Title

Psychiatry Consultation to Primary Care Providers Associated with Increased Treatment Access for Adolescent Depression

### Authors

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### Topic

Child

### Abstract

**Purpose:** Youth in the United States are experiencing mental health concerns at an unprecedented level. Child Psychiatry Access Programs (CPAPs) offer an innovative approach to close the gap between the need for care and insufficient mental health workforce. This study examined whether primary care provider (PCP) consultation with a CPAP, Michigan Clinical Consultation & Care (MC3), predicted greater access to treatment for adolescents with moderate to severe depression symptoms. **Methods:** A retrospective chart review was conducted of primary care visits for adolescent patients with first-time positive scores on the Patient Health Questionnaire (PHQ-9). Descriptive statistics and logistic regression were used to examine if patients whose PCP utilized MC3 psychiatric consultations had improved access to depression treatment compared to those that did not.

**Results:** 479 patients reported PHQ-9 scores indicating moderate to severe depression symptoms. Compared to non-MC3 consult patients (n = 409), MC3 consult patients (n = 70) had higher odds of being prescribed antidepressant medications (OR, 2.16; 95% CI [1.11 - 4.22], p = .05), four times higher odds of having a primary care follow up visit to monitor depression symptoms (OR, 4.56, 95% CI [2.56 - 8.14], p <.001) and higher odds of accessing mental health therapy (OR, 2.14; 95% CI [1.13 - 4.05], p = .05). **Conclusion:** Use of MC3 consultations was associated with increased utilization of evidence-based depression treatments including medication, therapy, and follow-up care. Greater adoption of models such as MC3 may increase the capacity for addressing mental health needs in children.

## Poster #80

### Title

Learning and arousal dynamics from motoric and neurophysiologic metrics during a somatosensory task in mice

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### Topic

Animal Labs

### Abstract

Learning in rodents can be analyzed on two timescales: task acquisition over training sessions and arousal fluctuations within training sessions. How do variations in motoric and neurophysiologic activity relate to behavioral performance over these timescales? We examined this in mice performing a whisker-based sensory discrimination task. Mice were trained for 12-14 daily sessions, each lasting approximately one hour to capture spontaneous performance fluctuations. During these sessions, we simultaneously tracked response and reward rates, alongside wheel running, pupil size, eyelid aperture and sensory cortical activity – here termed “non-performance variables”. Non-performance variables not only predicted arousal states on an individual subject basis but also evolved throughout training. In particular, these non-performance variables were predictive of “impulsive”, “disengaged”, or “attentive” states, which had been determined a priori based on response rate and correctness. Our results imply that each subject follows a unique learning-arousal trajectory, marked by changes in behavioral and physiologic variables not directly controlled by task contingencies. These findings improve our understanding of performance variations and implicit task acquisition in rodents, and contribute an analytical framework for behavioral and physiologic monitoring of task performance, including in humans.

## Poster #81

### Title

Suicide Among Individuals with Schizophrenia Spectrum Disorders: A Psychological Autopsy Study

### Authors

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### Topic

Suicide

### Abstract

**Background:** Suicide is a leading cause of death among people with Schizophrenia Spectrum Disorders (SSDs) and psychosis symptoms, with a 15 to 20 year decrease in average life expectancy for individuals in this population. While this is a critical public health concern, there is a lack of research among SSD samples involving suicide death and psychological autopsies are an underutilized methodology that can be useful in research to inform suicide prevention efforts. **Methods:** Psychological autopsies were completed for adults with psychosis symptoms who died between 1989 and 2017 in a Midwestern region of the United States. Causes of death were determined to be suicide (n=26), natural (n=26), and accidental (n=5). Data were collected from medical records of the deceased, as well as from interviews with next-of-kin for additional clinical and historical information. Data were analyzed in SPSS28. **Results:** On average, those who died by suicide were younger, more educated, and more often employed than those who did not die by suicide. Those who died by suicide were also more likely to be in a first episode of psychosis, have diagnosis of schizoaffective disorder, and a history of suicide attempt and recurrent suicide ideation as compared to those who did not die by suicide. Furthermore, the majority of those who died by suicide used a firearm. Pertaining to depression, several symptoms including low mood and anhedonia, were more prevalent amongst those who died by suicide than those who did not die by suicide. **Conclusions:** Findings reinforce existent literature on risk factors and highlight the role that both psychosis and depressive symptoms play in suicide risk. Clinical implications point towards the need for attention to symptoms of depression among individuals with psychosis, implementation of lethal means restriction, and integration of suicide prevention efforts within early psychosis intervention programming.



## Poster #82

### Title

The National Dementia Workforce Study

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### Topic

Gero

### Abstract

Background: A crucial public health challenge facing the US is preparing an effective workforce to care for the growing population of persons living with dementia (PLWD). In 2020, over 6 million Americans had Alzheimer's disease or a related dementia, and that number will grow to 14 million by 2060. Unfortunately, the US healthcare system is poorly equipped to meet the complex physical and psychosocial care needs of PLWD, and there is significant variation in care delivery across practice settings. The National Dementia Workforce Study (NDWS) was established in Fall 2023 through a five-year, \$81 million cooperative agreement with the National Institute on Aging to generate the knowledge to help address this crisis. Methods and Future Directions: NDWS will field the first large-scale surveys of the professional dementia care workforce to help researchers better understand this diverse workforce that has enormous influence on quality and costs of care for PLWD. Starting Summer 2024, annual surveys in four key practice settings—community clinicians, nursing home staff, assisted living staff, and home care staff—will generate insights into training, compensation, care practices, working conditions, and worker outcomes. To facilitate research with the survey data, the surveys can be linked with administrative and other data (e.g., Medicare claims or Nursing Home Compare). Altogether, the NDWS surveys and data infrastructure will provide an unprecedented data resource for researchers to answer critical questions about the ways that workforce factors impact care and outcomes for PLWD. In addition, the data will allow researchers to better understand workforce issues such as employee burnout and turnover. Finally, NDWS will encourage use of this novel data infrastructure through a pilot funding program. In the face of this looming public health crisis, the NIA-funded NDWS will be an invaluable data source to shape care of PLWD for years to come.

## Poster #83

### Title

Utilizing Group Medical Visits for Bipolar Disorder: Patient Survey of a Novel Clinical Service Model

### Authors

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### Topic

Health Services

### Abstract

Background Group Medical Visits (GMV) (a.k.a. Shared Medical Appointments) is a newer model of care that typically involves two clinicians providing individual patient care within a group of patients with a similar disorder, including group psychoeducation and illness self-management skills. **Methods** The Bipolar Group Medical Visits (GMV) program includes bipolar I and bipolar II patients obtaining psychiatric medical care exclusively within this model. One psychiatrist and one resident hold 90-minute sessions with a maximum of 5 participants. Attendance is based on clinical need. Thirty-nine patients who attended GMV in the past two years were invited to complete a questionnaire covering patient satisfaction, clinical value of GMV model, benefits/challenges for users, and their current bipolar treatment. **Results** Twenty-four out of 39 (61.5%) patients responded. Respondents were ages 26 upward, with 44% above 65 years, 91% Caucasian and 57% male. Seventy-five percent had attended 4+ sessions in the past year. Respondents reported high satisfaction on the Client Satisfaction Questionnaire (Average score: 30.29 out of 32). The most common challenge reported was the time and length of the group appointment (4 and 2 mentions, respectively). Quantitative results included: (1) 83 % reported additional value from receiving care in the group, (2) 71% felt supported by other group members, (3) 71% claimed easier access to care with the group, and (4) 71% learned new strategies/information from other group members. **Conclusions** Respondents reported GMVs exceptionally satisfying as a clinical service with unique benefits compared to individual care and provided ways to improve the program.

**Poster #84****Title**

Matching Recruitment Strategies with the Needs of Chronic Pain Patients Taking Buprenorphine

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**Topic**

Participant Recruitment Strategies

**Abstract**

The Persist Study is a randomized controlled trial conducted at the University of Michigan and the Ann Arbor VA studying skill-based approaches to managing pain in people with opioid use disorder (OUD) who are newly prescribed buprenorphine. The study was initially developed and approved in 2019 to recruit potential participants using in-person, local, community-based recruitment methods. Initially, participants were exclusively recruited at Michigan clinics with active buprenorphine providers. Developments, such as the onset of COVID-19, limited participant engagement and led the study to adapt different techniques to meet recruitment needs. Limitations with in-person participant communications, based on safety, led to the development of online recruitment through chart reviews and targeted website advertising. The potential for increased engagement through online measures led to broadening recruitment strategies from a local to a national effort. Initial eligibility criteria mandated that participants initiated prescribed buprenorphine within the 3 past months; however, recruitment challenges led to expanding this window to 6 months. Enacting these strategies increased average monthly recruitment from one participant in 2020 joining the study monthly to five participants monthly in 2021-2023.

## Poster #85

### Title

Medial frontal GABA in psychosis: preliminary results from an ongoing study

### Authors

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### Topic

Imaging

### Abstract

**Background:** Multiple lines of evidence support the hypothesis that abnormalities of the gamma aminobutyric acidergic (GABAergic) system play a role in psychosis. Magnetic Resonance Spectroscopy (MRS) can quantify regional GABA concentrations non-invasively and has revealed differential patterns of regional medial frontal cortex (MFC) GABA alterations in patient groups with psychosis. In schizophrenia, reduced GABA concentrations have been observed in mid- and posterior MFC, whereas increased GABA in more rostral regions of MFC has been shown in bipolar disorder. In addition, lower GABA concentrations in MFC are associated with higher levels of negative affect and poor tolerance for stress - traits which are frequently present in individuals with psychosis. Here, we present a preliminary analysis from a large, multimodal dataset, investigating regional MFC GABA concentrations in schizophrenia and bipolar disorder, as well as exploring relationships between these regional GABA concentrations and levels of negative affect. **Methods:** Participants included 25 patients with schizophrenia spectrum disorders (schizophrenia, schizoaffective disorder and psychotic disorder not otherwise specified; 15 women, 10 men), 21 bipolar I patients with a history of psychosis (13 women, 8 men), and 34 demographically matched healthy control participants (17 women, 17 men). All patient participants were on stable doses of psychotropic medication. To estimate GABA, MRS data was acquired using a MEGA-PRESS sequence, from three distinct voxels in MFC—the posterior medial frontal cortex, the rostral anterior cingulate cortex, and the dorsomedial prefrontal cortex. MRS data were preprocessed and modelled using the Gannet 3.3 toolbox, and GABA estimates were corrected for voxel tissue composition. Participants also completed the 9-item version of the Psychological Stress Index (PSI9), a self-report measure of sensitivity to stress, on the same day as the MRS session. **Results:** Interim analysis revealed there were no significant differences between groups in any of the three MRS voxels. In the healthy control participants, lower GABA concentrations in rostral anterior cingulate cortex exhibited the predicted association with higher PSI9 scores ( $r = .41$ ,  $p = .03$ ). There were no significant relationships between PSI9 and GABA estimates in the posterior medial frontal cortex or dorsomedial prefrontal cortex, or in either of the patient groups in rostral anterior cingulate cortex. **Conclusions:** Our findings are in line with previous evidence supporting a link between higher levels of negative affect and lower GABA concentrations in the medial frontal cortex, although we have so far failed to find group differences in GABA concentrations. Surprisingly, we did not find evidence of a relationship between negative affect, measured as stress sensitivity, in patients with psychosis. These results are, however, preliminary and data collection is ongoing.

## Poster #86

### Title

Reducing PTSD symptoms in First Responders and Frontline Healthcare Workers Through Trauma-focused Treatment in Employee Assistance Programs

### Authors

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### Topic

Posttraumatic stress disorder

### Abstract

Healthcare workers (HCWs) and first responders experience chronic trauma exposure, resulting in elevated rates of posttraumatic stress disorder (PTSD) symptoms, compared to the general population. Since the onset of the COVID-19 pandemic, Employee Assistance Programs (EAPs) have expanded their offerings to support HCWs. However, EAPs operate on a brief treatment model, and do not have the capacity to provide evidence-based treatments for PTSD such as Prolonged Exposure (PE); a time-intensive treatment that requires specialized training. To address this problem, our team has adapted PE from a 12-session format into a 4-6 session format (PE for Primary Care; PE-PC) and demonstrated the efficacy of this adapted treatment in active-duty military. The overall objective of this project is to determine the effectiveness and identify key barriers and facilitators of implementation for PE-PC in healthcare system and first responder EAPs. To accomplish our objective, we will randomize 360 HCWs and first responders who present with clinically significant PTSD symptoms to PE-PC or EAP Treatment As Usual delivered by EAP counselors, and assess outcomes at 6-weeks, 3 months, and 6 months post randomization. We are actively recruiting across 5 healthcare system and first responder EAPs, and 20 counselors have received PE-PC training. To date, 19 participants have been enrolled and randomized. The collection of outcome assessment data is currently ongoing with participants in various post-randomization timepoints. This Hybrid Type 1 effectiveness-implementation trial will test the effectiveness of PE-PC and gather data on implementation through process evaluation and implementation mapping, a systematic procedure for selecting implementation strategies to address identified barriers. Conducting this hybrid trial directly addresses NIMH's strategic objective to conduct hybrid effectiveness-implementation studies that go beyond examining the effect of interventions on symptomatic outcomes and address questions regarding how organization-level factors impact clinical outcomes, implementation, and scalability. This advancement will open new horizons for treating PTSD in frontline HCWs, first responders, and other vulnerable populations that do not have ready access to traditional sources of behavioral healthcare.

## Poster #87

### Title

Disparities in the Care of Youth with Agitation or Aggression in the Emergency Department: A Systematic Review and Clinical Guidance

### Authors

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### Topic

Child

### Abstract

**Objective:** This systematic review aims to summarize the current state of research literature on disparities in the care of youth with agitation and aggression in the Emergency Department (ED), including referral, assessment, diagnosis, use of pharmacologic interventions, and utilization of restraint and seclusion. **Method:** This study used the preferred reporting items for systematic reviews and meta-analyses (PRISMA) 2020 checklist searching PubMed and PsycINFO databases (May 1, 2013-May 5, 2023) for studies that reported disparities in the care of youth with agitation or aggression in the Pediatric ED. **Results:** Disparities in the care of youth with agitation or aggression in the ED have been documented for race, sex, age, developmental status, and insurance status. There is no data on disparities in ED-based care of youth with agitation or aggression based on gender identity and/or presentation, sexual orientation, socioeconomic status (SES), systems-involvement (including child welfare, foster care, juvenile justice), or language proficiency. **Conclusion:** While there is some data on disparities in the care of youth with agitation or aggression the ED documented for race, sex, age, developmental status, and insurance status, further work in this area is needed. Actionable steps to address mental health disparities in the pediatric ED are discussed.

**Poster #88****Title**

Defining Child Emergency Psychiatry: Lessons Learned from a National Survey of Current State Practices and Service Delivery Models

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**Topic**

Child

**Abstract**

**Objectives:** The field of child and adolescent emergency psychiatry has been minimally characterized with a lack of clarity of current models of care, services offered, staffing approaches and care delivery. In light of the significant rise in pediatric mental health emergencies, we sought to characterize the current models of care and service delivery models of care through an international survey of health systems and their approaches to Child and Adolescent Emergency Psychiatry. **Methods:** A 42-item survey, modeled on surveys developed by Shaw et. al. in 2006 and 2016, assessed best practices and service delivery in Child and Adolescent Emergency Psychiatry. Participants were elicited from 11/8/2022-11/18/2022 via emails sent to the professional listservs of the American Academy of Child and Adolescent Psychiatry, the Academy of Consultation-Liaison Psychiatry, and the American Association for Emergency Psychiatry. **Results:** Seventy-three participants volunteered to complete the survey representing sixty-one sites. The majority of respondents identified as child psychiatrists (51%), followed by child emergency psychiatrists (33%), pediatric emergency physicians (16%), and emergency psychiatrists (12%) with the remaining 14% of respondents either being general psychiatrists or having other specialty roles in child psychiatry such as consultation-liaison psychiatry or inpatient psychiatry. Geographic representation included the United States, United Kingdom, Canada, and Switzerland. A majority of respondents were urban (N=44, 90%) and in an academic center with a dedicated Children's Hospital (N=33, 67%). Twenty-eight respondents (57.1%) had direct access to inpatient psychiatric care, while 21 respondents (43%) did not have access. Thirteen respondents (50%) responded that access to inpatient psychiatric beds impacted the ED/hospital length of stay and boarding. **Conclusions:** Survey findings will provide an opportunity, empowered by data, to make more informed decisions about service models and care delivery related to child and adolescent psychiatric emergencies. This study will also inform and guide future research, quality improvement and program development related to the nascent yet rapidly growing field of child and adolescent emergency psychiatry.



## Poster #89

### Title

Using a Sequential Multiple Assignment Randomized Trial (SMART) to Develop a Stepped Care PTSD Intervention in Federally Qualified Health Centers: Study Protocol for an RCT

### Authors

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### Topic

Health Services

### Abstract

Access to PTSD treatment is scarce among low-income individuals, one third of whom are treated in Federally Qualified Health Centers (FQHCs). FQHCs do not have the capacity to provide all patients with resource-intensive first-line treatments such as Prolonged Exposure (PE). To better utilize resources, our team has developed low- and medium-intensity interventions that can effectively treat PTSD. However, some patients still require a higher level of care. Using the Sequential Multiple Assignment Randomized Trial (SMART) design, 430 participants will be randomized to begin with either Clinician-Supported PTSD Coach (CS PTSD Coach; low intensity) or Prolonged Exposure for Primary Care (PE-PC; medium intensity). After four sessions, participants' symptoms are reassessed. Early responders drop down in treatment intensity. Slow responders are re-randomized to continue in their current treatment path or step up to full PE. This design will identify the best beginning treatment and the most effective second-stage strategy. Recruitment for this study began in June 2022. We have currently enrolled 99 participants. In this poster, we will describe study procedures and unique considerations for conducting a SMART in FQHCs with embedded providers. Elucidating the most efficient and effective treatment sequence for PTSD patients in low-resource settings is crucial to ensuring that more patients receive effective treatment with parsimony of resources.



## Poster #90

### Title

Engagement in Telehealth Interventions Designed to Reduce Risk for Opioid Misuse in Adolescents and Young Adults

### Authors

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### Topic

Substance Abuse

### Abstract

**Background:** Opioid misuse among adolescents and young adults (AYAs; ages 16-30) is a growing public health concern. We are conducting a 4-arm trial (NIDA: UG3/UH3 DA050173/050173-02S1) to assess the efficacy of remote behavioral interventions in preventing/reducing opioid misuse/opioid use disorder (OM/OD) among AYAs. Here, we explore the components of each intervention and examine participant (PT) engagement. **Methods:** From January 2021 to March 2024, we recruited 1,155 Emergency Department AYA patients at risk for OM/OD. Enrolled PTs were randomly assigned to an intervention group: 1) BI+Portal (n=285): health coach-delivered brief intervention (BI) and 30-day portal messaging with health coaches (Portal); 2) BI+Enhanced Usual Care (EUC: resource brochure; n=285); 3) EUC+ Portal (n=295); or 4) EUC+EUC (n=290). Topics covered in each intervention include: goals/strengths, mental health, sleep, opioid use, and other substance use. We bivariate examined differences in intervention engagement rates (average # of portal messages, BI length) between intervention groups and PT age (16-20, 21-25, 26-30), gender (Female, Male, Other), and race (White, Black/African American, Other). **Results:** Intervention completion/engagement rates in each condition exceeded 91%. On average, BIs spanned 50.82m (BI+EUC= 53.64m; BI+Portal= 49.16m). Length of BIs did not differ significantly by condition, gender, age, or race group. On average, PTs sent 11.51 messages (Portal+EUC=12.05; BI+Portal=10.90) and received 17.21 messages (Portal+EUC=17.49; BI+Portal=16.90). Mean number of messages sent/received did not differ significantly across gender, age, or race groups. **Conclusion:** Our findings suggest that health-coach directed brief interventions and portal messaging may be engaging and viable means to provide accessible education, resources, and support to diverse AYAs at risk for OM/OD.

## Poster #91

### Title

Lessons Learned from Community Partner Engagement: Enhancing Study Recruitment and Retention

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### Topic

Substance Abuse

### Abstract

**Background** Implementation of effective recruitment and retention strategies are critical for ensuring representation and validity in clinical trials. As part of a large behavioral trial (#AU-2022-C1-25631) targeting alcohol misuse among pediatric patients and their caregivers, our team is conducting biannual advisory board meetings to gain valuable perspectives on the feasibility of study procedures. This poster describes our findings from these meetings regarding hybrid recruitment strategies and follow-up retention methods. **Methods** Advisory board (AB) members were recruited using targeted ads and emails sent by the UConnect study team via partnerships with the UM Adolescent Health Initiative and the study's clinical partners. Each AB consists of ~8 stakeholders and lasts for 1.5 hours. Youth earn \$75 via virtual Amazon gift card, while caregivers and healthcare partners earn \$100. In August 2023 and January 2024, the study team facilitated AB meetings, separated by group (youth, caregivers, healthcare), with questions focused on recruitment and retention strategies. **Results** Consensus across ABs was to contact youth via text and social media in the evenings to avoid school conflicts, with positive responses to increasing incentives with each survey completion. Healthcare partners suggested that parents may be more likely to enroll if made aware of the study procedures, benefits, and long-term goals, while youth may be primarily interested in monetary incentives. When recruiting at clinics in-person, healthcare partners recommended approaching teens privately to avoid pressure from caregivers and issues concerning confidentiality. Caregivers suggested flexibility in completing surveys at their convenience, with reminder contacts containing a survey link for easy access. **Conclusion** This participatory approach has been extremely valuable to the study's conduct. Much of the feedback received from stakeholders has been implemented and appears to enhance recruitment and retention rates. Future AB meetings will be used to enhance study procedures, strengthen follow-up completion, and ensure participant preferences.

## Poster #92

### Title

Enhancing Identification of Alcohol Use Disorder through Natural Language Processing

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### Topic

Substance Abuse

### Abstract

**Introduction:** Alcohol use disorder (AUD) is a significant public health issue, that steadily increased in prevalence over recent decades. Despite the availability of effective AUD treatments, fewer than 10% of individuals in need receive them, highlighting the need for innovative solutions to identify individuals with unmet treatment needs. **Methods:** We evaluated two approaches to identifying potential AUD amongst primary care patients from Michigan Medicine using electronic health records (12/01/2020-12/01/2022): 1) AUD diagnostic codes, and 2) Natural language processing (NLP) to identify text indicating risky alcohol use. The ASCEND study recruited 85 NLP-positive participants, for comparison with a demographically matched sample screened for AUD during recruitment for an ongoing trial (N=100). Both groups were assessed for current AUD symptoms and related variables to evaluate the effectiveness of NLP vs. diagnostic codes alone. **Results:** Relative to a gold standard comparator (Alcohol Symptom Count  $\geq 2$  as AUD positive), NLP had a lower positive predictive value (PPV=0.2) than diagnostic codes (PPV = 0.41). However, NLP identified substantially more potential AUD cases (N = 48,262) compared to diagnostic codes (N = 820), representing approximately 29 times more true positive cases. **Discussion:** NLP represents a promising method to identify individuals with undiagnosed AUDs from electronic health records, offering a novel method for detecting patients who may benefit from treatment. Despite the lower PPV compared to diagnostic codes, the NLP's broader case capture rate, especially among those individuals lacking AUD diagnostics, signifies a critical advancement. These identification methods should be supplemented with additional screening and assessment due to the high rate of false positives. This work demonstrates that by leveraging generative AI in psychiatry, we can more accurately and comprehensively utilize patient data to identify individuals with undiagnosed, yet treatable, disorders.

## Poster #93

### Title

Screened out: Exploring Screening Characteristics and the Implications of Revising Eligibility Criteria in a Large Behavioral Trial

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### Topic

Substance Abuse

### Abstract

**Background:** Our team is engaged in a comparative effectiveness study testing two computer-based interventions to mitigate alcohol use (AU) and related behavioral risk factors among adolescents, particularly those from minoritized groups. Despite substantial efforts involving remote recruitment, enrollment rates initially fell short of projections, prompting a reevaluation of eligibility criteria (EC). This presentation will provide an overview of our screening data to inform potential changes in EC to enhance study recruitment and impact. **Methods:** Recruitment of pediatric patients from Michigan Medicine clinics began in October 2023. After obtaining youth assent and parental consent, adolescents self-administer a survey assessing demographics and health behaviors to determine study eligibility. EC stipulates participants (PTs) be ages 12-17, self-report past year AU, and have a phone capable of receiving text messages. **Results:** As of March 2024, 578 PTs have screened with 118 (20.4%) eligible to enroll. Among those screened, 20.9% reported past-year AU. Although fewer PTs screened report at least monthly cannabis (6.1%) or nicotine use (4.7%), among those who meet EC, these rates are much greater (23.7 and 17.8%, respectively). Additionally, 32.4% of those screened reported peer AU, while 68.6% of eligible PTs reported peer drinking. Roughly one-fourth of screened PTs met clinically significant cut-offs for depression (13.8%) or anxiety (28.5%). Depression and anxiety prevalence was higher among PTs meeting EC (19.5% and 43.2%, respectively), although most PTs meeting clinical cut-offs did not meet EC. **Conclusion:** While the majority of PTs reporting cannabis and nicotine were eligible, exclusion rates were notable among youth endorsing behaviors that often predate AU. Despite enrollment challenges, screening data and feedback from community partners underscore the potential efficacy of adapting EC to enhance recruitment. Future inquiry may also explore the impact of revised EC on the enrollment of minoritized groups.

## Poster #94

### Title

Feasibility and Acceptability of Collecting Passive Phone Usage and Sensor Data Via Apple SensorKit

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### Topic

Assessment

### Abstract

Privacy is a growing concern in mobile health research, particularly regarding passive data. Apple SensorKit provides a novel platform for collecting phone and wearable usage and sensor data, however the acceptability and feasibility of collecting these sensitive data to research subjects remains unknown. We piloted SensorKit with a large sample (n=1164) of first-year U.S. medical residents as part of the longitudinal Intern Health Study. Findings demonstrate that successful enrollment and retention rates can be achieved in a longitudinal e-Cohort study that collects SensorKit data, however, not all racial groups were equally likely to opt in. We found that trainees who identified as Asian (42.9%) and races underrepresented in medicine (URiM) (43.6%) were significantly less likely to enable SensorKit compared to their White peers (55.1%). To our knowledge, this study is the first to evaluate SensorKit enrollment and retention rates in a national e-Cohort Study, and to identify the possibility of racial bias in the collection of sensor and phone usage data. While there is significant potential for these methods to improve health outcomes, our findings suggest that these opportunities must be balanced against privacy concerns and individuals' willingness to participate in these types of programs as well as equity implications.

## Poster #95

### Title

Investigating the Efficacy of Synthetic Psilocybin in Reducing Symptom Severity in Treatment-Resistant Depression

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### Topic

Mood

### Abstract

Background: COMP360 is COMPASS Pathfinder Limited's proprietary formation of synthetic psilocybin, a serotonergic psychedelic. In previous studies, a single administration of psilocybin therapy has exhibited rapid, long-lasting effects in symptom reduction for patients with treatment-resistant depression (TRD). In a study conducted in patients with Major Depressive Disorder, a second dose of COMP360 elicited improvement in patients who had little response to the initial administration three weeks prior<sup>3</sup>. The effectiveness of two administrations in TRD will be the primary question of this study. We will investigate the efficacy of one and two administrations of COMP360 in doses of 25 mg, 10 mg, or 1 mg for reducing symptom severity in TRD. Methods: We will conduct a randomized, double-blind, controlled study of 25 mg and 10 mg of COMP360 against a 1 mg COMP360 control in patients with TRD to assess the efficacy of the drug in symptom reduction. Oral administration is accompanied by non-directive, collaborative psychological support sessions before, during, and after dosing. Clinicians will spend six hours with participants to ensure that the acute effects of COMP360 have passed. A second dose of COMP360 will be administered to all patients three weeks after the first. While participants will be asked to not take new treatments for depression after the first dose, participants who do so will be allowed to continue the study in an effort to reflect real-world clinical practice. Additionally, while exposure to a psychedelic will largely be considered an exclusionary criterion for this study, up to ten percent of the participant population will be accepted disregarding this, given that the exposure was not within the twelve months before screening or during the current depressive episode. We have begun recruitment for this study, and thus far we have enrolled one participant. Results: We will primarily be interested in analyzing the change from baseline in the Montgomery-Åsberg Depression Rating Scale (MADRS), a clinician-rated scale for depression severity<sup>3</sup>. Changes from baseline in depression-related disability and functional impairments will be measured using the Sheehan Disability Scale (SDS), and the EuroQoL 5-Dimensional 5-Level system (EQ-5D-5L and EQ-VAS). The Five-Dimensional Altered States of Consciousness Scale (5D-ASC) will be used to measure changes in mood, perception, and impressions of self on the five dimensions of oceanic boundlessness, anxious ego dissolution, visionary restructuralization, auditory alterations, and reduction of vigilance. Other systems like the PHQ-9 and CGI-S will be implemented for additional evaluation. Statistical analyses will make up for the intercurrent treatment discrepancy by implementing a treatment policy strategy in which the mean difference in change from baseline will be assessed regardless of whether the participants began new treatment. Additionally, we will address the challenges for individuals participating in such a complex study and the challenges of recruiting for this study. Conclusion: This study aims to investigate the efficacy of COMP360 as an episodic treatment to decrease severity of symptoms in TRD. Previous studies have shown its efficacy after a single administration. We will further investigate the efficacy of a second dose. Components of our analyses will provide insight into the effectiveness in a realistic clinical practice setting. Future studies may examine the efficacy of psilocybin therapy in tandem with specific existing treatments.