



# IMPACT-MH All- Investigator Meeting 4 | 29 | 2026





# Individually Measured Phenotypes to Advance Computational Translation in Mental Health (IMPACT-MH)



IMPACT-MH USES BEHAVIORAL MEASURES AND COMPUTATIONAL METHODS TO DEFINE NOVEL CLINICAL SIGNATURES THAT CAN BE USED FOR INDIVIDUAL-LEVEL PREDICTION AND CLINICAL DECISION MAKING IN MENTAL DISORDERS.



The Individually Measured Phenotypes to Advance Computational Translation in Mental Health (IMPACT-MH) consortium was established with a goal to harness the power of big data to address the complexity and heterogeneity of mental disorders, ultimately improving patient care and outcomes. The consortium includes eight U01 and five UF1 awardees known as Research Partners from thirteen institutions across the country, and a U24 awardee located at Yale University, New Haven, CT.

The IMPACT-MH Data Coordination Center (DCC) is a partnership between Yale University, Mayo Clinic, University of Pennsylvania, and NIH/NIMH to bring together informaticians, data scientists, and mental health specialists to facilitate data collection, harmonization, and curation to improve health outcomes.

# Agenda

11:00 – 11:15

## WELCOME

- Dr. Kahn (PREDiCTOR)
- Dr. Pacheco (NIMH)
- Dr. Xu (Yale DCC)

11:15 – 12:00

## Session 1: Modeling

- Dr. Guillermo Cecchi (PREDiCTOR)
- Dr. Meredith Wallace (PPSN)

12:00 – 12:45

## Session 2: AV

- Dr. Cheryl Corcoran (PREDiCTOR)
- Dr. Moriah Thomason (REACH)
- Dr. Trevor Cohen (HALO)

12:45 – 01:45

## LUNCH

Lunch boxes available in Seminar Room A

01:45 – 02:30

## Session 3: Digital Phenotyping

- Dr. Justin Baker (PREDiCTOR)
- Dr. Justin Tauscher (HALO)
- Dr. Laura Germaine (TRACC-MH)

02:30 – 03:15

## Session 4: EHR

- Dr. Roy Perlis (JASPer-MH)
- Dr. Hua Xu (DCC)

03:15 – 03:30

## COFFEE BREAK

03:30 – 04:30

## Breakout Sessions

04:30 – 04:50

## Summary Breakout Sessions

- 5 mins/group

04:50 – 05:00

## Overall Summary | Next Steps

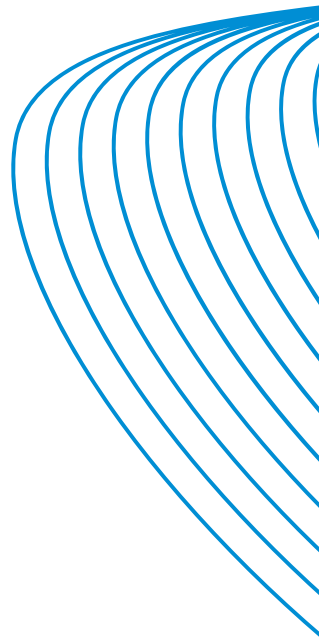
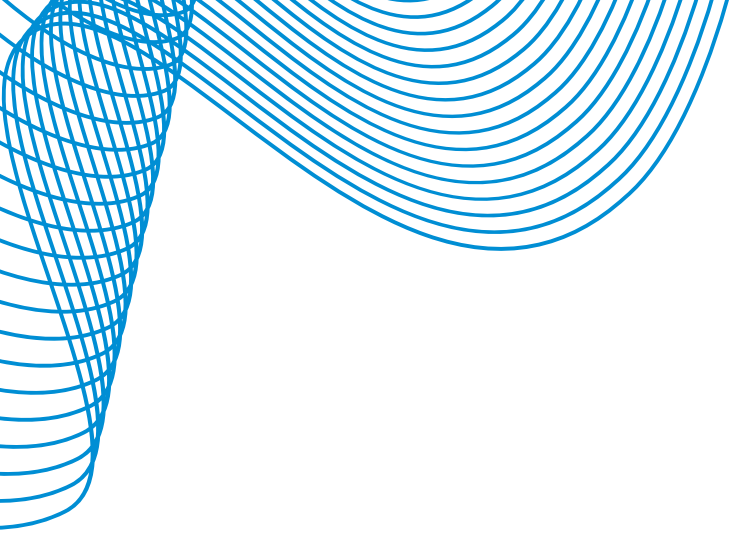
- Dr. Jenni Pacheco (NIMH)

05:00 – 06:30

## RECEPTION

# Breakout Sessions

- **Pediatrics/Development**
  - Dr. Lauren Shuffrey (REACH)
  - Dr. Adrian M. Soehner (PPSN)
  - Dr. Maria Jalbrzikowski (PPSN)
- **Psychosis/Schizophrenia**
  - Dr. René Kahn (PREDICTOR)
  - Dr. Cheryl Corcoran (PREDICTOR)
- **Translation of findings to clinical practice/care**
  - Alysa Doyle (JASPer-MH)
  - Lara Foland-Ross (ACE-D)
- **Transdiagnostic Issues**
  - Sarah Karalunas (PREDICT-NP)
  - Sarah Morris (NIMH)
- **Analytical (CDEs)**
  - Polly Painter (DCC)
- **Flexible additional session (TBD)**
  - Jenni Pacheco (NIMH)



# The IMPACT-MH Projects

## 01

### ACE-D

This project aims to optimize, validate, and deploy a clinical cognitive signature derived from behavioral measures, enabling scalable individualized assessments to guide personalized prognosis and treatment selection for depression.



**Leanne Williams**  
Contact PI  
Stanford School of Medicine



**Olusola A. Ajilore**  
MPI  
University of Illinois



**Jun Ma**  
MPI  
University of Illinois

## 02

### ARTEMIS

This project seeks to develop clinically actionable strategies for predicting suicide risk. It aims to determine who is most likely to experience clinically meaningful increases in risk, identify the tools and behavioral markers most sensitive to detecting transitions between risk states, and establish when these shifts are likely to occur.



**Jessica Turner**  
Contact PI  
Ohio State University



**Melanie Bozzay**  
MPI  
Ohio State University



**Jay Fournier**  
MPI  
Ohio State University



**Scott Langenecker**  
MPI  
Ohio State University



**Ivy Tso**  
MPI  
Ohio State University

# 03

## COMPASS

The project aims to incorporate passive behavioral tracking, active behavioral tasks, genomics, surveys, electronic health records (EHRs) and other administrative data to develop predictive models of differential response to digital interventions and clinic-based treatments among individuals seeking mental health care.



**Amy B. Bohnert**  
Contact PI  
University of Michigan



**Lars Fritsche**  
MPI  
University of Michigan



**Srijan Sen**  
MPI  
University of Michigan

# 04

## DUKE-PMA

This project aims to enhance, deploy, and rigorously validate the Duke Predictive Model of Adolescent Mental Health (Duke-PMA), which leverages a novel clinical signature from affordable and accessible measures to identify youth at high risk for psychiatric illness in primary care. The work will optimize the model's portability, actionability, feasibility of implementation, and predictive performance to ensure the highest standards of transparency, quality, and equity.



**Jonathan Posner**  
Contact PI  
Duke University



**Matthew M. Engelhard**  
MPI  
Duke University

# 05

## HALO

The project aims to apply advanced computational methods to analyze smartphone-captured behavioral task data as well as other novel data streams to generate clinical signatures predictive of individual differences in severe negative outcomes among individuals with hallucinations.



**Dror Ben-Zeev**  
Contact PI  
University of Washington



**Trevor Cohen**  
MPI  
University of Washington

# 06

## IMPACT-Y

This project aims to identify predictive markers of symptom change using assessments readily deployable in real-world settings, including EHRs, traditional clinical measures, computational behavioral tasks, short gamified measures of mood and reward, spoken narrative data for natural language processing analyses, and transdiagnostic outcome measures. Longitudinal data will be collected over two years from 2,400 individuals, enriched for psychopathology across a broad spectrum of traditional diagnoses, and analyses will seek to identify a minimum set of measures with maximum added clinical value, examine longitudinal clinical trajectories, and identify subgroups with different clinical outcomes over 2-years.



**Christopher J. Pittenger**  
Contact PI  
Yale University



**Godfrey D. Pearlson**  
MPI  
Yale University



**Sarah Yip**  
MPI  
Yale University

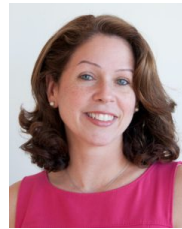
# 07

## JASPer-MH

This project proposes to integrate EHR data, neuroscience-based cognitive tasks, brief symptom inventories, and self-reports of psychosocial functioning to enhance the prediction of longitudinal neuropsychiatric and functional outcomes among transition-age youth (18-20).



**Roy H. Perlis**  
Contact PI  
Massachusetts  
General Hospital



**Alysa E. Doyle**  
MPI  
Massachusetts  
General Hospital

# 08

## PPSN

This project aims to establish sleep signatures that predict transdiagnostic mental health problems in youth by recruiting a diverse cohort of 1,200 children (ages 10-13) presenting with a range of sleep disturbances in pediatric primary care.



**Adriane M. Soehner**  
Contact PI  
University of  
Pittsburgh



**Maria Jalbrzikowski**  
MPI  
Boston Children's  
Hospital /  
Harvard Medical  
School



**Meredith J. Wallace**  
MPI  
University of  
Pittsburgh



**Dana McMakin**  
MPI  
Florida International  
University

# 09

## PREDICT-NP

This project seeks to define novel, deployable behavioral phenotypes (emphasizing cognitive and emotional transdiagnostic measures) and to develop and evaluate diagnostic and prognostic prediction models for children aged 7–17 who present with common psychopathologies characterized by dysregulated attention, behavior, and emotion.



**Bonnie J. Nagel**  
Contact PI  
Oregon Health & Science  
University



**Sarah Karalunas**  
MPI  
Syracuse University

# 10

## PREDICTOR

The project aims to leverage rich behavioral datasets from routine clinical visits and smartphones, including verbal and nonverbal communication during clinical interviews, EHRs, smartphone passive monitoring, and audio diary entries, to develop baseline and longitudinal clinical signatures to predict clinically relevant outcomes, i.e., treatment disengagement, ER visits and hospitalizations, among young help-seeking individuals.



**René S. Kahn**  
Contact PI  
Icahn School of  
Medicine, Mount Sinai



**Cheryl M. Corcoran**  
MPI  
Icahn School of  
Medicine, Mount Sinai



**Guillermo Cecchi**  
MPI  
Icahn School of  
Medicine, Mount Sinai

# 11

## REACH

This project aims to develop scalable, AI-driven methods for the timely detection and intervention of externalizing disorders in infants by integrating multimodal data—spanning social, video, behavioral, cognitive, and survey measures—with a parent-administered smartphone/web-based screening tool, using advanced computer vision and machine learning approaches.



**Moriah E. Thomason**  
Contact PI  
New York University



**Lauren C. Shuffrey**  
MPI  
New York University



**Magdalena Janecka**  
MPI  
New York University

# 12

## SPARC-XP

This project aims to develop risk models to predict neurodevelopmental outcomes by age 8 in children exposed to maternal infections during pregnancy, using machine learning approaches and EHR data.



**Andrea Goldberg Edlow**  
Contact PI  
Massachusetts  
General Hospital



**Alysa E. Doyle**  
MPI  
Massachusetts  
General Hospital



**Roy H. Perlis**  
MPI  
Massachusetts  
General Hospital



**Colin George Walsh**  
MPI  
Vanderbilt  
University

# 13

## TRACC-MH

This project seeks to advance clinical prediction for individuals with serious mental illness by integrating novel, scalable cognitive measures that can be delivered in diverse settings and in ethnoracially diverse populations, thus improving prediction of mental health outcomes and strengthening clinical decision-making.



**Laura Thi Germiné**  
Contact PI  
Albert Einstein College  
of Medicine



**Kerry J. Ressler**  
MPI  
McLean Hospital



**Agustin G. Yip**  
MPI  
McLean Hospital

# 14

## DCC

The IMPACT-MH Data Coordinating Center (DCC) serves as the technical backbone of the initiative, gathering and harmonizing the data across our thirteen research partners. The DCC works to harness the power of big data to address the complexity and heterogeneity of mental disorders, ultimately improving patient care and outcomes.



**Hua Xu**  
Contact PI  
Yale University



**Cui Tao**  
MPI  
Mayo Clinic



**Yong Chen**  
MPI  
University of  
Pennsylvania



**Polly Painter**  
MPI  
Yale University

---

ACE-D | ARTEMIS | COMPASS | DUKE-PMA | HALO | IMPACT-Y | JASPer-MH |  
PPSN | PREDICT-NP | PREDICTOR | REACH | SPARC-XP | TRACC-MH | DCC | NIMH

