



**IMAGING GENETICS
CENTER PRESENTS**

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ON-PERSON VS. IN-PERSON MENTAL HEALTH ASSESSMENT AND INTERVENTION

In this talk I will give live demonstrations of prototypes of some of our wearables and apps to motivate a discussion about how we can work together to advance technology-mediated assessment and intervention of mental health conditions.

The MATTER Lab at the Child Mind Institute (matter.childmind.org) builds wearables, apps, informatics and voice analysis tools to help diagnose, assess, monitor and improve mental health. An example wearable device is our wrist-worn position tracker that records and remotely monitors body-focused repetitive behaviors (such as compulsive hair pulling) and can provide an alert when engaging in a such behaviors (by haptic feedback on the wrist). We have created apps to remotely administer therapies for children with anxiety disorders. We have also built a general-purpose data collection platform to administer surveys of all kinds with drawing tasks, tapping tasks, and audio recordings for voice analysis. All of these data are sent to a secure database and online dashboard for analysis and visualization. The Child Mind Institute is also conducting other data collecting initiatives related to mental health assessment. One is the Healthy Brain Network, an ongoing study that is collecting a rich assortment of modalities, including brain imaging, eye tracking, voice acquisition, video data, and a large battery of mental health tests as well as questionnaires from 10,000 children and adolescents. Another is our M3Q database effort that attempts to tailor a mental health assessment questionnaire to help an individual prioritize the most relevant among thousands of analyzed questions. We will conduct pilot studies of our wearable devices, apps, and questionnaires on our patients and study participants after further development and internal testing. Our work therefore combines a patient network, data collection and analysis, intervention platforms and delivery platforms. This combination will enable us to increase access to relevant treatment options, improve mental health assessment and treatment efficacy and support research programs in mental health globally.



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