Uncovering the Biological and Genetic Factors Associated with Perinatal Mood Disorders

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INTRODUCTION

- Perinatal mood disorders are frequently severe, commonly remain undiagnosed or untreated, and often demonstrate unsatisfactory treatment response.
- Risk factors are based largely on personal and family history, but prediction remains very imprecise.

OBJECTIVE

- Uncover the underlying biological processes and changes in 'omic measurements associated with diagnosis and with major mood changes in order to identify precise targets for therapy.

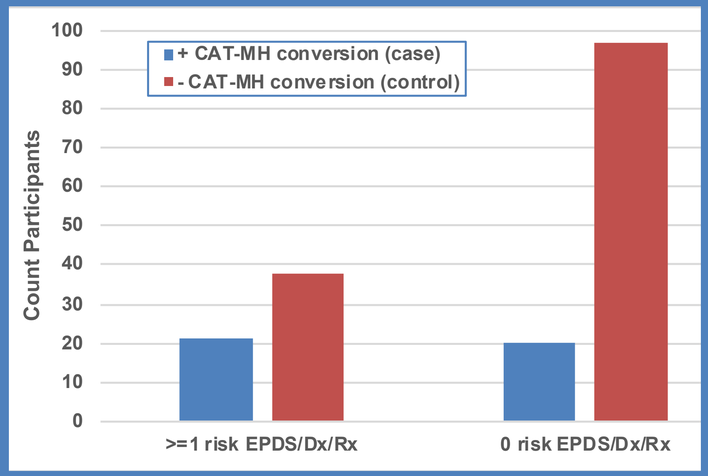
METHODS

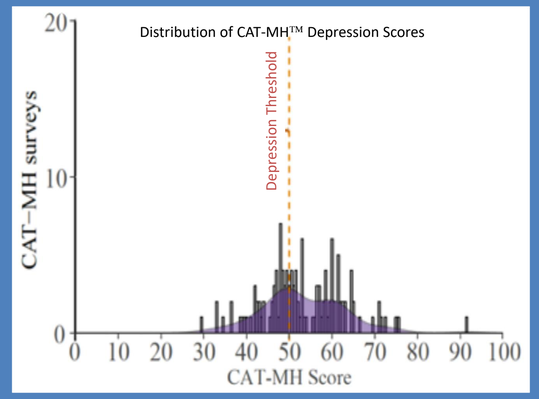
- Currently we have studied 236 women, enrolled at 16-32 weeks of gestation and longitudinally followed from the time of enrollment until 24 months postpartum.
- Biospecimens were collected:
  - At three pre-defined fixed time-points during antepartum, at partum, and postpartum care
  - Coinciding with mood shifts, indicated by clinical alerts from repeated **Computerized Adaptive Testing-Mental Health™ (CAT-MH™)** surveys
- CAT-MH™ uses computerized adaptive testing technology to test for depression, mania, and suicidality. It has been validated in the perinatal population.
- Surveys can be completed remotely via computer, tablet, or phone.

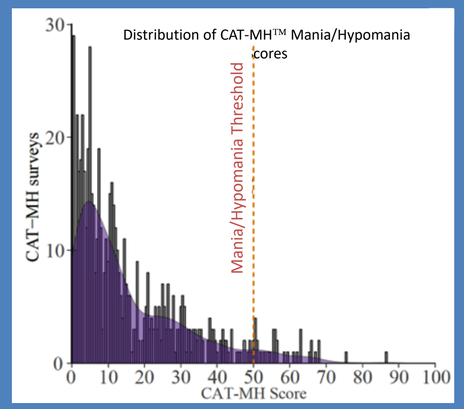
RESULTS

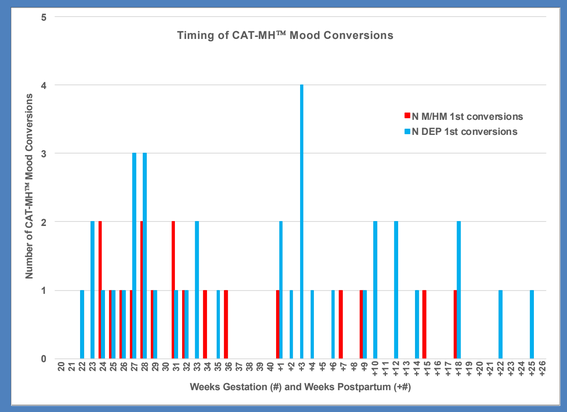
Among our initial 236 participants:

- 52 participants experienced a CAT-MH™ indicated mood transition: 34 depressive, 10 hypomanic/manic, and 8 mixed.
- Participants who experienced a mood transition had a higher probability of being single, utilizing public aid, carrying multiples, and delivering preterm.
- Women who were "at-risk" before enrollment (previous elevated EPDS, diagnosis of mood disorder, prescription of psychiatric medications) were more likely to have a CAT-MH™ identified mood conversion (36% compared to 17%).









CONCLUSIONS

We are generating high-throughput multiomics data and preliminary analyses from participants who experienced mood transitions and epidemiologically-matched participants who remained euthymic throughout the study. Ultimately, we will identify and integrate multiomic signatures associated with perinatal mood disorders in particular, as well as with significant mood changes. Research staff are continuing to enroll new patients.

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