

Models Of Community, Research, And Policy Partnerships Needed To Impact Perinatal Mental Health Outcomes in the US

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Leading causes of disease burden in the world ; Lancet 2016

Cause	% of DALYs accounted for:
1. Cardiovascular disease	13.5%
2. Mental Illness	11.2%
3. Common Infections	10.2%
4. Cancer	8.1%

Depression & Childbearing Prevalence

Depression in Pregnancy	14% ¹
Postpartum Depression culturally ²	10%-15%, cross-
Postpartum Blues	50%-85% ³
Postpartum Psychosis	1-2/1000 ³

1. Evans J, et al. *BMJ*. 2001;323:257-260; 2. O'Hara M, Swain A. *Int Rev Psychiatry*. 1996;8(1):37-54. 3. Gale & Harlow. *J Psychosom Obstet Gynaecol*. 2003;24(4):257-66

Impact of Antenatal Depression on Health and Functioning of Mother and Infant

Low birth weight, premature delivery, and small for gestational age infants (Steer et al., 1992; Kelly et al. 2002, Hoffman et al., 2000)

Weight loss associated with depression-fetal growth (Wisner et al. 1999)

Pre-eclampsia (Kurki et al, 2000)

Elevated cortisol, reduced dopamine in neonates (Lundy et al., 1999)

Increased fetal activity and infant neurobehavioral dysregulation (Field et al., 2006; Dieter et al., 2001)

Inadequate prenatal care (Kelly et al., 1999)

Risk for postpartum depression (Beck, 2001)

Postnatal and Maternal Depression has been found to relate to:

less affectionate and responsive to infant cues (Broth, Goodman, Hall, Raynor, 2004)

problems with breastfeeding (Field, Hernandez-Reif, & Feijo, 2002)

Infant irritability (Zuckerman et al., 1990)

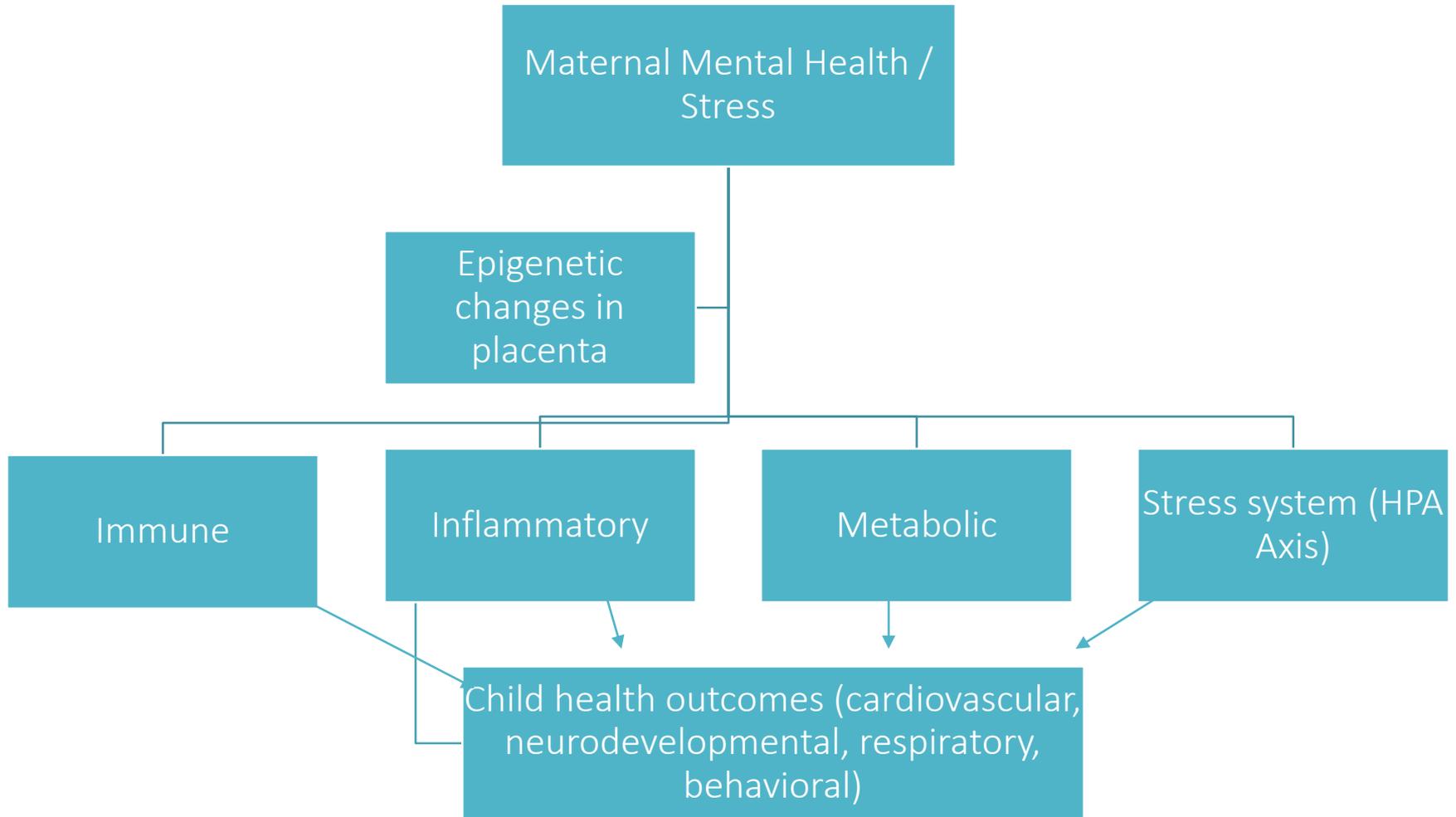
delayed linguistic and cognitive development (Alpern & Lyons-Ruth, 1993; Leadbeater & Bishop, 1994)

conduct and substance abuse problems (Downey & Coyne, 1990; Bearslee & Wheelock, 1994)

inadequate preventive care (Leiferman, 2002)

greater use of Pediatric ED and missed outpatient pediatric appointments (Flynn et al, 2004)

Prenatal Maternal Health Programs Genetic Expression of Children and sets pathway of lifelong health



The problem: Prevalence and burden of perinatal mental health remains largely unchanged

Most women do not get detected or treated

Many receive inadequate treatment

Treatment outcomes remain a problem

Acceptable interventions and models of care do exist but are not widely available, paid for, or used

Problem: Continued

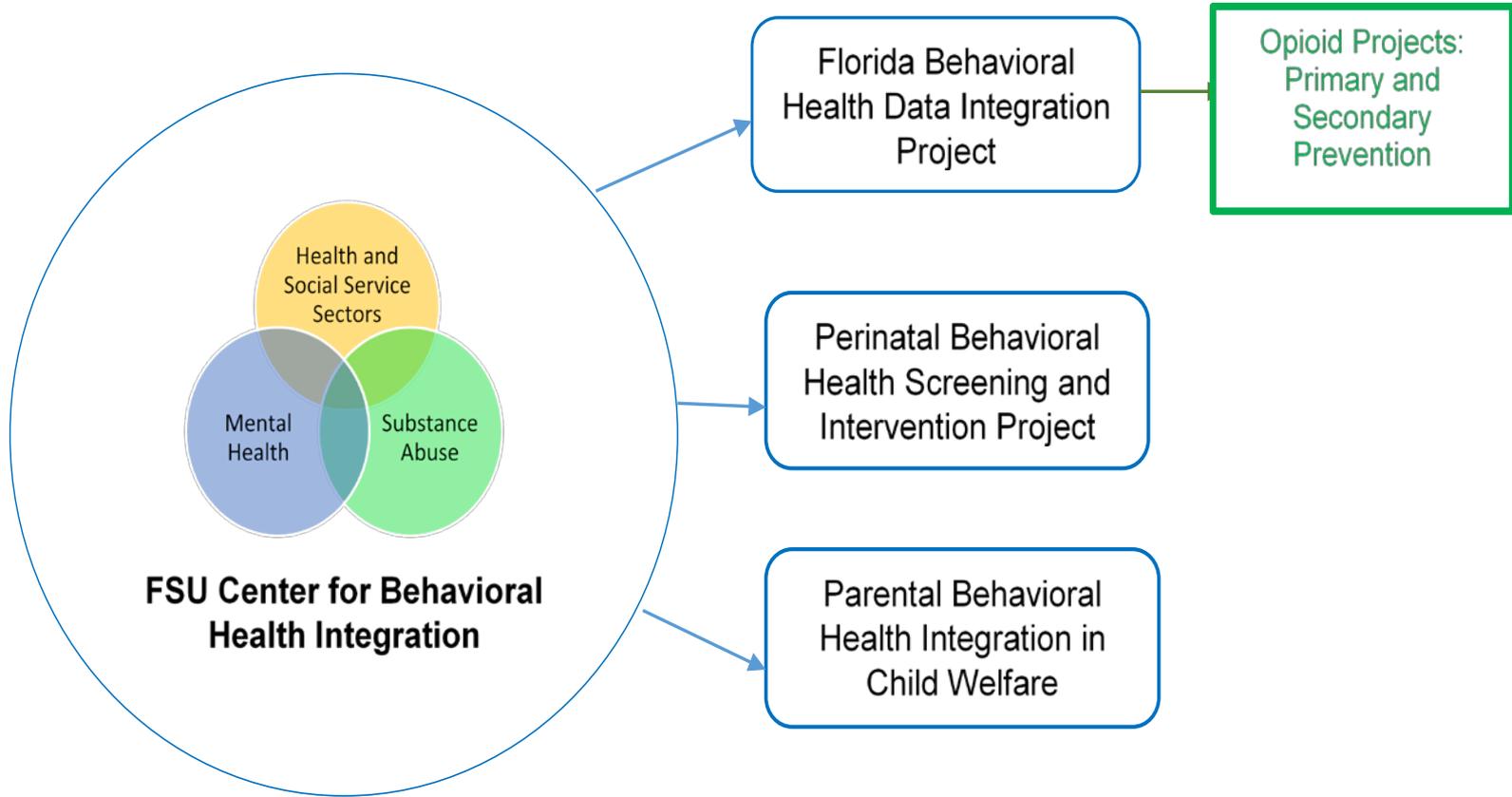
- The US has seen little translation of perinatal mental health findings to clinical care, policies and vital outcomes in most communities.
- Dissemination of research has been limited in part due to lack of coordination among researchers and between researchers and policy-makers.

FSU Center for Behavioral Health Integration

Co-Directors: Drs. Patricia Babcock and Heather Flynn

The mission of the FSU Center for Behavioral Health Integration is to strengthen the capacity of the College of Medicine to serve as an innovation leader for the state by leading and conducting research, clinical and policy programming and education/training related to behavioral health. Center activities emphasize primary care and behavioral health care-related policy, research, and data center for the state, health plans, providers and other organizations to provide guidance for the integration of behavioral with primary care services. The overall goal is to significantly improve outcome associated with under-addressed behavioral health disorders in Florida and nationally.

In order to achieve its mission, the Center enhances collaboration with other professions interested in integrated health care; identify and promote the use of best practices for integrating health care services; improve clinician training; improve data integration and analytics; and provide assistance to Florida's health care providers in integrating health care.



Forming and leveraging stakeholder and research partnerships to enhance impact

1. Local MMH Coalition
2. Statewide MMH Collaborative
3. National Research Network

Local efforts to partner toward improved perinatal MH outcomes: The Leon Country Maternal Mental Health Coalition

- Formed in 2014
- Consists of 21 members; quarterly meetings

The Mission is to **facilitate community collaboration** and to serve as a forum for the exchange of ideas, information and resources to help identify and treat women with depression by linking them to quality services and treatment while supporting research that leads to **community awareness, education, action and outcomes**, including poor infant outcomes.

Relationships built with several agencies and organizations

Healthy Start Coalition

Whole Child Leon

North Florida Women's Care

NAMI Tallahassee

Big Bend Mental Health Coalition

Parents, and Community Together (PACT)

Capital Area Infant Mental Health Coalition

Tallahassee Memorial Health

Apalachee Center

Florida Health Equity Research Institute

Big Bend 211

Florida Department of Health

Florida Department of Children and Families

Dr. Janet Bard-Hanson	211 Big Bend
Dr. Jay Reeve	Apalachee Center
Sharon Ross– Donaldson	The Center for Health Equity
Dr. Joedrecka Brown	FSU COM
Claudia Blackburn	Florida Department of Health & FSU COM
Debra Danforth	FSU COM
Marie Bryant	South City Neighborhood Association/ Whole Child Leon
Dr. Karla Schmitt	Nursing and Public Health
Kyle Crews	Health Information Exchange Networks
Pat Stephens	National Alliance on Mental Illness
Erin Ryals	North Florida Women’s Care
Catherine Munroe	Patient Representative & Apalachee Center
Connie Styons	Tallahassee Memorial Women’s Pavilion
Courtney Atkins	Whole Child Leon
Megan Deichen	Social Work, Doctoral Student
Sandy Glazer	Capital Area Healthy Start
Bill Hambsh	North Florida Women’s Care
Kellie Mercer	Capital Regional Behavioral Health
Amy Kimmel	Doula and patient representative
Jennifer Beaupied	TPCA Behavioral Health Counseling

Example of community engagement towards action (n=300)

- 1) Education / Training / Outreach
- 2) Services / Resources
- 3) Research

What are the most important gaps / problems in addressing perinatal depression?

What are possible, doable solutions?

Maternal Mental Health Gaps: Themes Identified from Community and Focus of the Coalition

Education, Training, Professional Development

Awareness / Combat stigma

Perinatal Mental Health Training for front-line professionals

Evidence-based treatment capacity for providers

Clinical Services

Improved screening, linkage and care coordination

Continuity of care, system of care

Focus on maternal health in child settings

Research

Improving technological interventions

Best practice models of care - implementation

Testing personalized interventions

Summary of MMHAB Accomplishments

Education/ training

- Hosted open community awareness meetings
- Participation in all relevant local conferences
- Evidence-based treatment presentations at Clinical centers
- Creation of fact sheets for patients and providers
- Creation of toolkit for women and providers
- Reaching out to health professions at FSU (Nursing, Medicine, Psychology, Social Work)
- Planning trainings for community at various levels (awareness, clinical skills)

Summary of MMHAB Accomplishments

Research

- Submitted several state and federal grants
- Pilot study in 6 obstetrics sites completed
- Database capacity established
- Standard research screening tool (n=4,000) piloted in Florida and Nationally in 8 women's health sites
- FSU joined the National Network of Depression Centers
- NIMH grant submitted with Whole Child Leon

ACTNOW: Perinatal Depression Pilot Project



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ACTNOW

Advancing Care and Treatment to Enhance Outcomes for Women

Ioannis (Alex) Malidelis

The ACTNOW study is meant to be an **exploratory research project** to test an **electronic screening tool** to determine whether it can increase the rate of screening and access to treatment for female patients in the primary care setting.



Advancing Care and Treatment to Enhance Outcomes for Women

Tell Us About Yourself

Are you Hispanic / Latino (a)?

- Yes
- No

What is your race or ethnic identity?

- White or Caucasian

You're almost done. Just a few more questions...

What are the major influences on your mood currently? (Check all that apply)

- Feeling alone; not enough support
- Significant anxiety
- Significant stress with basic needs such as housing, food, transportation
- Conflict / communication with partner; significant other
- Recent loss
- Not being able to do things that make you feel better
- Very poor sleep most nights
- Cannot identify anything specific

How can your prenatal care clinician be of most help to you as far as your mood, stress, emotional health?



Patient Profile

Ms. Melissa Fine is a **HIGH RISK** for perinatal depression based on:

- History of depression or anxiety disorder
- A score of moderate to severe for range of current symptoms
- On the item "Thinking that you would be better off dead or that you want to hurt yourself in some way", she indicated: **More than half the days**

Recommendations

Based on the high risk level for Ms. Melissa Fine, consider the following treatments:

Referral Suggestions

- Treatment is indicated; either anti-depressant, psychotherapy, or both.

Survey Responses

- Health Insurance:
 - A private health insurance plan (from employer or workplace; purchased directly; through a state or local government program or community program)
- Major contributors to mood:
 - Significant anxiety
 - Significant stress with basic needs such as housing, food, transportation
 - Very poor sleep most nights
- Kind of help she stated that she needs / prefers:
 - I would like to talk with other women with similar stressors
 - I would like to learn how to relax my mind / body

Finish

Conclusions

The tool was practical to administer in a primary care setting, easy for patients to understand and clinicians were satisfied

The tool detected expected rates of depression, anxiety and low rates of treatment use

Common influences on mood included problems with sleep and relaxation

Treatment preferences were largely behavioral

Summary of MMHAB Accomplishments

Clinical / Service

- Created Online mental health resource list
www.med.fsu.edu/mentalhealth
- Maternal depression screening added to developmental screening days
- Training in treatment engagement for healthy start
- Creating local chapter of Postpartum Support International
- Completed survey of services / capacity among partners
- May – Maternal Mental Health Month

Creation and dissemination of MMH Toolkit

www.mothersmentalhealth.org

MENTALHEALTH

Council of the Big Bend



Action Plan

Evaluate

Engage

Expand

Educate



**MENTAL
HEALTH**
Council of the Big Bend

Mental Health

- Mental health rates in the region are at or slightly above national prevalence estimates
- Utilization of mental health services appears lower than national rates
- Mental health and need for quality treatment is a significant concern among residents
- Clear need for better coordination of primary care and mental health specialists
- Psychiatric prescribers are particularly challenging to access
- Need to engage residents of underserved neighborhoods to determine best way to access services



**MENTAL
HEALTH**
Council of the Big Bend



**Florida Maternal
Mental Health
Collaborative**

The Florida Maternal Mental Health Collaborative (FLMMHC): Mission and Vision

Co-Chairs: Heather Flynn, Lauren DePaola, Lina Acosta Saandal

Mission: The Florida Maternal Mental Health (MMH) Collaborative brings together statewide partners to close the critical gaps in perinatal mental health education, policy, prevention, treatment, and outcomes for women and their families.

Vision: Every woman in Florida and her family will receive the help and support they need for optimal maternal mental health and well-being.

FLMMHC Workgroups

1. Research
2. Policy
3. Community Awareness / Advocacy
4. Clinical and Service Capacity / Training / Education

FLMMHC Goals

1. To increase statewide [awareness](#) of perinatal mental health as an underserved medical issue and to eliminate stigma surrounding mental health.
2. To improve statewide [capacity to treat](#) perinatal mental health and substance abuse with accessible and evidence-based treatments, and to [improve payment for services](#), coordination of care among health and service professionals.
3. To ensure that an array of health professionals have the [education and training](#) to effectively screen, treat, and manage perinatal mental health conditions.
4. To [advocate](#) for improved maternal mental health and substance abuse outcomes at the policy and individual level
5. To target efforts specifically for [vulnerable groups of women and families](#) (e.g., Medicaid, low income) to ensure that women and their families receive culturally tailored support and resources to address [holistic and psychosocial](#) needs.

FLMMH Collaborative Steering Committee

Carol Brady	Florida Association for Healthy Start Coalitions
Sarah Checcone, Esq	Postpartum Society of Florida
Elicia Coley	Agency for Health Care Administration (Quality Bureau)
Isadora Delvecchio	March of Dimes
Maureen Fura	Advocate
Ute Gazioch	Florida Department of Children and Families
Mimi Graham, EdD	FSU Center for Prevention and Early Intervention Policy
Karen Harris, MD	ACOG District XII Chair
Mary Beth Jones MD	Agency for Health Care Administration (Quality Bureau)
Brian Kirk	March of Dimes
Alma Littles, MD,	FSU College of Medicine and Florida Medical Association
Dixie Morgese	Healthy Start Coalition of Flagler and Volusia Counties
Jennifer Moyer	Advocate
D. Jeffrey Newport, MD	University of Miami Miller School of Medicine

Celeste Philip, MD	Surgeon General and Secretary of the Florida Department of Health
Sharon Ross-Donaldson, LCSW	The Center for Health Equity, Inc.
Kay Roussos-Ross, MD	University of Florida
Tommy Schechtman, MD, MSPH	Past President Florida Chapter of the American Academy of Pediatrics
Kelly Sciba	Executive Director Florida Commission on the Status of Women
Leisa Stanley, PhD	Healthy Start Coalition of Hillsborough County
Fatimah Tahil, MD, MPH	Amerigroup Florida
Erica Floyd Thomas	Agency for Health Care Administration
Maureen Whelihan, MD	ACOG District XII State Legislative Chair and Section 5 Chair
Melanie Brown Woofter	Interim President/CEO, Florida Council for Community Mental Health

FLMMHC Selected Accomplishments

- Three statewide perinatal mental health conferences
- Targeted media campaign for lawmakers
- Introduction of SB 138 : Florida Families First Act
- Hundreds of members throughout Florida
- Creating statewide resource/ referral directory
- Submitted \$3.2 million HRSA grant with FLDOH to build statewide perinatal programming to Florida
- <https://www.flmomsmatter.org/>

The need for network-based research: What can we learn from other illnesses / conditions?

We have seen a 63% reduction in deaths from heart disease over 4 decades, a 90% reduction in death rates from the most common childhood cancers, and the official relabeling of HIV and some cancers as “chronic disease”

Risk factors for CVD have been identified and used for prevention and personalized treatment – standard assessment of metrics

Slow translation from research to practice – reverse this – Learning healthcare systems (IOM)

Give more people today yesterdays treatments?

Women and Mood Disorders Network

Emory University

Sherryl Goodman, Ph.D.
Diana Simeonova, Ph.D.

Florida State University

Heather Flynn, Ph.D.
Shermeeka Hogans-Mathews,
MD

Harvard – Brigham and Women's

Geena Athappilly, M.D.
Jill Goldstein, Ph.D.
Florina Haimovici, M.D.

Harvard – Massachusetts General

Hadine Joffe, M.D., M.Sc.

Johns Hopkins University

Jennifer Payne, M.D.
Mary Kimmel, M.D.

Michigan State

University/PineRest

Megan Zambiasi, M.A., L.L.P.,
L.P.C.

MUSC

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Mayo Clinic

Katherine Moore, M.D.
William Bobo, M.D., M.P.H. (JAX)

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Lisa Christian, Ph.D.
Tamar Gur, M.D.

Stanford University

Natalie Rasgon, M.D., Ph.D.
Katherine Williams, M.D.
Heather Kenna, M.A.

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Sandra Weiss, Ph.D., DNSc.
Ellen Haller, M.D.

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Julie Hyman, M.D.
Danielle Johnson, M.D.

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Sona Dimidjian, Ph.D.
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UMASS

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University of Michigan

Sheila Marcus, M.D.
Kate Rosenblum, Ph.D.
Maria Muzik, M.D.
Cathie Spino, Ph.D.

University of Minnesota

Helen Kim, M.D.
Mary Kimmel, Ph.D.

University of Pennsylvania

Neil I Epperson, M.D.
Lisa Hantsoo, Ph.D.

University of Texas - Houston

Giovana Zunta-Soares, M.D.
Isabelle Bauer, Ph.D.
Sudhakar Selvaraj, M.D., Ph.D.

University of Washington

Nancy Grote, Ph.D.

VA Commonwealth University

Susan Kornstein, M.D.

The Women & Mood Disorders (W&MD) Task Group: Goals Overview

Near term goal: To build a research network infrastructure and specifically to establish, develop and demonstrate collaborative research capacity. The first step is a focused research agenda that may be strengthened by the diversity and interdisciplinary nature of the group.

W&MD Research Agenda based on (1) clear gaps in knowledge, (2) high public health importance and (3) need for a network-based approach.

Longer term goal: We will be a national resource for research on women's depression and sex differences and will serve the community through education, research and improvements in clinical care and influence on public policy.

Brief W&MD Accomplishments

- numerous presentations at scientific conferences
- four publications
- two funded NIH grants, and two additional grants under review
- Recently completed Phase I of a pilot aimed to demonstrate the feasibility of utilizing standard assessment of mood and related clinical factors across multiple sites and settings

Flynn, H., Spino, C., Guille, C.,
Deligiannidis, K., Maki, P., Jahnke, J.,
Rosenblum, K., Epperson, N., & Weiss, S.
(2017). A collaborative, network-based
approach to advance women's depression
research in the U.S.: Preliminary findings.
Journal of Women's Health.

W&MD Standard Tool Multisite Pilot (n= 1316)

Women's Health and Mood Screening Questionnaire

Institution	Setting	Data Collection Process*	Sample Size (%)
University of Michigan	Obstetrics	Clinicians administered	67 (5%)
UMASS	Reproductive Psychiatry Clinic	Clinicians administered	159 (12%)
University of Pennsylvania	Reproductive Psychiatry Clinic	Clinicians administered	46 (3%)
Florida State University	Obstetrics and Gynecology Clinic	Research staff administered	596 (45%)
MUSC	Obstetrics and Gynecology Clinic	Clinicians administered and research staff collected	356 (27%)
UIC	Women's Health Outpatient Clinic	Research staff administered	49 (4%)
UCSF	Neonatal Intensive Care/Obstetrics	Research staff administered	60 (5%)

Variable	%
Lifetime history of depression	46%
PHQ9 ≥ 10	14%
GAD7 ≥ 10	15%
Ever diagnosed with depression	31%
Ever diagnosed with anxiety	24%
Most common symptoms of depression	tired/little energy, trouble sleeping, and poor appetite/overeating
Most common symptoms of anxiety	becoming easily annoyed/irritable, worrying too much, and feeling nervous or on edge

Overall Goals

Test the feasibility and utility of a revised screening questionnaire that can be used for network-based grants

Examine preliminary research questions that can enhance progress in the field

Enable further mining of the data based on research interests of specific investigators

Examples of Research Questions to be Answered with Core Questionnaire

Do the prevalence of symptoms or symptom profiles of women differ across age groups or reproductive stages?

How are women's history of mental illness, their treatment history, or their sociodemographic context associated with potentially different symptom profiles?

Do symptom profiles differ across the clinical settings where women are being seen?

14 Participating Sites

University of Pennsylvania

Emory

University of Texas

University of Michigan

Mayo Clinic

University of California, San Francisco

Medical University of South Carolina

University of Iowa

University of Massachusetts

Florida State University

Ohio State University

Hofstra Northwell Health, NY

Virginia Commonwealth

Brigham & Women's Hospital

Grants and Contracts Resulting

CDC Development of a Statewide Opioid overdose prevention program in Florida: submitted by FLDOH –; \$1.5 million 9/18-8/21 - Submitted 5/15/2018

NIMH Development of a personalized navigation model to improve rapid pediatric behavioral health care engagement total requested \$ 659,500 dates 4/19-3/22. Submitted June 2018

Sage Pharmaceuticals: Development of a Statewide Maternal Mental Health Resource Directory in Florida request \$113,055 – one year project. Submitted 7/17/2018

HRSA Development Of A Sustainable Screening And Treatment Model To Improve Maternal Mental Health Outcomes In Florida 9/18-9/23 - \$1.5 million submitted 8/2/2018

FLDOH Florida Research Program to Improve Tobacco and Substance use total requested: \$499,985 submitted 8/8/2018

CDC RFQ Clinical Decision Support Integration for Opioid Misuse in Healthcare Settings. Submitted Aug 2018

Pending:

FLDOH. Implementation of Pediatric Behavioral Health Integration. Amount requested = \$285,000 year 1 (2 years requested)

Funded:

NIMH R21 (Hajcak, PI) EEG correlates of reward in pregnancy.

State of Florida - Institute for Child Welfare – Parental Behavioral Health Integration in Child Welfare. (9/2017-11/2018)

National Network of Depression Centers- Pilot Grant