Perinatal Mental Health: Racial Disparities and Rural Mental Health Needs
Disclosures

- Nothing to disclose.
Chrissy: ‘I have postnatal depression’

MODEL CHRISTY TEIGEN says she’s ready for the haters who think she’s “whiny entitled girl” after she revealed she suffers from postnatal depression (PND), also known as postpartum depression. Plenty of people in my situation have no help, no safety and no access to medical care. I can’t imagine not being able to go to the doctors that I need, she writes in an essay for Glamour magazine.

The 31-year-old, who’s known for her goofy personality and perfect lifestyle with singer-husband John Legend, says she was diagnosed a few months after giving birth to their daughter, Luna, in April last year. “Before this, I had never – in my whole entire life – had one person say to me, ‘I have postpartum depression.’

She says she associated it with people who didn’t like their babies or felt if they had to them. “I didn’t have anything remotely close to those feelings… so I didn’t think I had it.”

Instead she suffered from “emotional loss of appetite and fits of crying”. “I couldn’t figure out why I was so unhappy,” she says. “I had a great life, I have all the help I could need, John, my mother, who lives with us, a nanny. But postpartum doesn’t...”

Ivanka Trump reveals struggle with postpartum depression

By Susan Scott, CNN

Updated 1:41 AM ET, Thu September 21, 2017

“Ivanka Trump revealed she had postpartum depression in an interview with Dr. Oz.”

“The emotions are insane”

Serena
Depression During and After Pregnancy Can Be Prevented, National Panel Says. Here’s How.

The task force of experts recommended at-risk women seek certain types of counseling, and it cited two specific programs that have been particularly effective.

What You and Your Family Need to Know About Maternal Depression

A government panel’s new recommendations could bring hope to many women at risk for the condition. Here is what the group said and how you can use the information.

Feb. 12, 2019

Captoria Porter of Bolingbrook, Ill., has seven children ages 11 to two months and experienced no depression during or after her first five pregnancies. But during her sixth, things were different: “I was really sad. I didn’t want any company.” Nolis Anderson for The New York Times
PERINATAL MENTAL HEALTH DISORDERS

• Perinatal mental health disorders are the leading causes of maternal morbidity and mortality.
  – Perinatal Depression
  – Perinatal Anxiety
  – Bipolar Disorder
  – Perinatal Psychosis

• Perinatal Depression = 8-20%
  – not all providers discuss
  – ~50% any treatment

UNTREATED PERINATAL DEPRESSION

• NEONATAL RISKS
• OBSTETRIC RISKS
• INFANTS & CHILDREN
• POSTPARTUM/MATERNAL

MATERNAL MENTAL HEALTH DISPARITIES

- PLACE
- RACE
- AGE
- ETHNICITY
- INCOME
- MORTALITY

Identifying Depression through Early Assessment (IDEA) Research Team

IDEA Mission: Our mission is to improve maternal health through early identification of risk factors during pregnancy and the postpartum period.

Our research team is interested in identifying major risk factors associated with depressive disorders for women. We are particularly interested in collaborative care approaches for identifying and assessing depressive symptoms in health care settings to improve health outcomes for women over the life course. Our research is of interest to health care providers, policy makers, academic researchers, patient advocacy groups, and has been published in peer-reviewed journals such as Women & Health, General Hospital Psychiatry, Ethnicity & Health and Archives of Women’s Mental Health.

Meet the Research Investigators

Funded Projects:

Perinatal Depression Database Registry in a Public Health Clinic to examine Racial Differences in Perinatal Depression funded by the Campus Research Board
Immediate Postpartum Depression and Risks by County of Residence

• Methods
  – Electronic Medical Records
  – 10,450 postpartum women
  – Edinburgh Postnatal Depression Scale
    • Cut point 9/10 (range 30)
  – Rural/Out-of-State 8-11%, Suburb 8.5%
## Multivariate regression of suicidal ideation during immediate postpartum (n=10,450)

<table>
<thead>
<tr>
<th>Variables</th>
<th>Fully Adjusted Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
</tr>
<tr>
<td></td>
<td>95% CI</td>
</tr>
<tr>
<td><strong>Race/Ethnicity</strong></td>
<td></td>
</tr>
<tr>
<td>White</td>
<td>1.0</td>
</tr>
<tr>
<td>Native</td>
<td>1.19 (.44-3.18)</td>
</tr>
<tr>
<td>Black</td>
<td>1.52 (1.13-2.05)</td>
</tr>
<tr>
<td>Asian</td>
<td>1.08 (.78-1.49)</td>
</tr>
<tr>
<td>Latina</td>
<td>0.46 (0.31-0.69)</td>
</tr>
<tr>
<td>Other</td>
<td>1.15 (.92-1.44)</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td>.97 (.96-.99)</td>
</tr>
<tr>
<td><strong>Health Insurance</strong></td>
<td></td>
</tr>
<tr>
<td>Private</td>
<td>.54 (.45-.65)</td>
</tr>
<tr>
<td><strong>County of Residence</strong></td>
<td></td>
</tr>
<tr>
<td>Suburban Illinois</td>
<td>1.0</td>
</tr>
<tr>
<td>Rural Illinois</td>
<td>1.33 (1.08-1.64)</td>
</tr>
<tr>
<td>Outside state</td>
<td>2.09 (1.44-3.01)</td>
</tr>
<tr>
<td><strong>Parity</strong></td>
<td></td>
</tr>
<tr>
<td>First</td>
<td>1.31 (1.15-1.50)</td>
</tr>
<tr>
<td><strong>Previous pregnancy loss</strong></td>
<td>1.02 (.91-1.13)</td>
</tr>
<tr>
<td><strong>Days postpartum</strong></td>
<td>1.53 (1.39-1.69)</td>
</tr>
<tr>
<td><strong>Any Diabetes</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1.56 (.93-2.60)</td>
</tr>
<tr>
<td><strong>Suicidal Ideation</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>22.65 (16.86-30.43)</td>
</tr>
<tr>
<td><strong>Any Psych Treatment</strong></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>2.62 (2.15-3.18)</td>
</tr>
</tbody>
</table>

OR: risk ratio, CI: confidence interval, *p<0.05
Depression During Pregnancy & Postpartum by Rurality

• Methods
  – PRAMS
  – 17,229 perinatal women
  – 14 states
    – “During your most recent pregnancy, did you have any of the following health conditions” (Depression, Yes/No).
  – Rural 23%, Urban 20%
### Logistic Regression Models of Depression During Pregnancy & Postpartum by Rurality Adjusted for State Fixed Effects

<table>
<thead>
<tr>
<th></th>
<th>Model 1: Adjusted Analysis of Maternal Depression</th>
<th>Model 2: Adjusted Analysis of Maternal Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rural</td>
<td>1.21 (1.05, 1.41)*</td>
<td>1.13 (0.97, 1.32)</td>
</tr>
<tr>
<td>Urban</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>1.63 (1.33, 1.99)***</td>
<td>1.32 (1.07, 1.63)***</td>
</tr>
<tr>
<td>Hispanic</td>
<td>0.89 (0.75, 1.07)</td>
<td>0.71 (0.58, 0.87)**</td>
</tr>
<tr>
<td>Other</td>
<td>1.21 (0.99, 1.48)</td>
<td>1.13 (0.91, 1.40)</td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>1.00</td>
<td>1.00</td>
</tr>
<tr>
<td>17 yrs. or less</td>
<td>2.25 (1.41, 3.61)***</td>
<td>1.74 (1.05, 2.88)*</td>
</tr>
<tr>
<td>18-19 yrs.</td>
<td>1.58 (1.17, 2.13)**</td>
<td>1.28 (0.94, 1.75)</td>
</tr>
<tr>
<td>20-24 yrs.</td>
<td>1.24 (1.04, 1.47)*</td>
<td>1.12 (0.94, 1.34)</td>
</tr>
<tr>
<td>25-29 yrs.</td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>30-34 yrs.</td>
<td>0.74 (0.63, 0.87)***</td>
<td>0.80 (0.67, 0.94)**</td>
</tr>
<tr>
<td>35-39 yrs.</td>
<td>0.87 (0.71, 1.08)</td>
<td>0.96 (0.77, 1.19)</td>
</tr>
<tr>
<td>40+</td>
<td>0.66 (0.45, 0.97)*</td>
<td>0.70 (0.47, 1.05)</td>
</tr>
<tr>
<td>Maternal Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than HS</td>
<td></td>
<td>1.11 (0.89, 1.38)</td>
</tr>
<tr>
<td>High School</td>
<td></td>
<td></td>
</tr>
<tr>
<td>More than High School</td>
<td></td>
<td>1.08 (0.92, 1.28)</td>
</tr>
<tr>
<td>Maternal Insurance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Public or Government Insurance</td>
<td>1.41 (1.19, 1.66)***</td>
<td></td>
</tr>
<tr>
<td>Private Insurance</td>
<td></td>
<td>1.00</td>
</tr>
<tr>
<td>Other Insurance</td>
<td></td>
<td>1.12 (0.78, 1.60)</td>
</tr>
<tr>
<td>WIC Assistance</td>
<td></td>
<td>1.36 (1.16, 1.60)***</td>
</tr>
<tr>
<td>No</td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>
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- RACE
- PLACE
- AGE
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- MORTALITY

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FUNDDED PROJECTS:

Perinatal Depression Database Registry in a Public Health Clinic to examine Racial Differences in Perinatal Depression funded by the Campus Research Board
CHECK ONE OR MORE:

- Black
- White
- Asian
- Native American
- Other

WHAT IS YOUR RACE?
Who are multiracial Americans?

• Multiple ways to think about multiracial classification
  – Ancestry
    • Grandparents or parents race
  – Enumeration/Assignment
  – Self-categorization

• 2000 Census allowed selection of two or more categories

• 2010 Census estimates, 8,953,620 or 2.9% of population
  – select two or more races on the Census
  – 32% rate of increase since the 2000 Census
MULTIRACIAL PERINATAL HEALTH

• Highest Fertility Rates
• A multiracial group
• Specific multiracial categories
  — Heterogeneity
MULTIRACIAL PERINATAL HEALTH DISPARITIES

• BREASTFEEDING INITIATION

• DEPRESSION

• PRETERM BIRTH
BREASTFEEDING INITIATION

• Methods
  – Public Health Clinics
  – Depression registry
  – 1,010 perinatal women
  – Breastfeeding Initiation (ever)
• N=1010 Low-Income Women in a Public Health Clinic Sample
## Logistic Regression Analysis
Predicting Breastfeeding Initiation

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>CI</td>
<td>OR</td>
</tr>
<tr>
<td>Race</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Black</td>
<td>0.38***</td>
<td>0.28 – 0.52</td>
<td>0.46***</td>
</tr>
<tr>
<td>White (reference)</td>
<td>1</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Asian</td>
<td>4.14**</td>
<td>1.46 – 11.76</td>
<td>0.76</td>
</tr>
<tr>
<td>Latina</td>
<td>0.96</td>
<td>0.61 – 1.52</td>
<td>0.49*</td>
</tr>
<tr>
<td>Multiracial</td>
<td>0.19**</td>
<td>0.07 – 0.54</td>
<td>0.23**</td>
</tr>
<tr>
<td>Other</td>
<td>0.85</td>
<td>0.22 – 3.27</td>
<td>0.62</td>
</tr>
</tbody>
</table>
DEPRESSION DURING PREGNANCY

• Methods
  – Electronic Medical Records LINKED
  – Delivery hospitals in Northern California Depression diagnosis
  – 1,358,750 perinatal women
  – 23,320 (1.72%) diagnosis of depression
• 1,358,750 pregnant women from delivery hospitals in Northern California (2007-2012)
DEPRESSION DURING PREGNANCY

% Depression by Specific Multiracial Categories

- WHITE/BLACK: 3.04
- WHITE/AIAN: 3.71
- WHITE/ASIAN: 2.17
- WHITE/HAWPI: 1.32
- BLACK/AIAN: 3.30
- BLACK/ASIAN: 2.19

- 1,358,750 pregnant women from delivery hospitals in Northern California (2007-2012)
## DEPRESSION DURING PREGNANCY

<table>
<thead>
<tr>
<th>Variable</th>
<th>Unadjusted</th>
<th></th>
<th>Adjusted</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>OR</td>
<td>CI</td>
<td>OR</td>
<td>CI</td>
</tr>
<tr>
<td>White (reference)</td>
<td>1.0</td>
<td>-</td>
<td>1.0</td>
<td>-</td>
</tr>
<tr>
<td>Black</td>
<td>1.49</td>
<td>1.43-1.54</td>
<td>0.87</td>
<td>0.83 - 0.90</td>
</tr>
<tr>
<td>Asian</td>
<td>0.37</td>
<td>0.36-0.39</td>
<td>0.39</td>
<td>0.37-0.41</td>
</tr>
<tr>
<td>AI/AN</td>
<td>1.69</td>
<td>1.51-1.88</td>
<td>1.02</td>
<td>0.91-1.15</td>
</tr>
<tr>
<td>Hawaiian/PI</td>
<td>0.74</td>
<td>0.63-0.88</td>
<td>0.58</td>
<td>0.49-0.70</td>
</tr>
<tr>
<td>White/Black</td>
<td>2.12</td>
<td>1.95-2.31</td>
<td>1.39</td>
<td>1.28 - 1.52</td>
</tr>
<tr>
<td>White/Asian</td>
<td>1.62</td>
<td>1.45-1.82</td>
<td>1.19</td>
<td>1.06-1.33</td>
</tr>
<tr>
<td>White/AIAN</td>
<td>2.53</td>
<td>2.32-2.76</td>
<td>1.62</td>
<td>1.48-1.77</td>
</tr>
<tr>
<td>Black/AIAN</td>
<td>2.51</td>
<td>2.02-3.11</td>
<td>1.40</td>
<td>1.12-1.75</td>
</tr>
<tr>
<td>Black/Asian</td>
<td>1.59</td>
<td>1.17-2.15</td>
<td>0.99</td>
<td>0.72-1.35</td>
</tr>
<tr>
<td>White/HAWPI</td>
<td>1.16</td>
<td>0.91-1.47</td>
<td>0.78</td>
<td>0.61-1.00</td>
</tr>
</tbody>
</table>
DEPRESSION SCREENING

- Public health approach
- State mandates to screen for depression
- Perinatal Mental Health Disorders Prevention and Treatment Act of 2008
- Hotline for assistance

Perinatal depression affects as many as one in seven women.

ACOG recommends all pregnant women be screened at least once during the perinatal period.
Perinatal depression screening in a Women, Infants, and Children (WIC) program: perception of feasibility and acceptability among a multidisciplinary staff

Karen M. Tabb, Ph.D. a,*, Shinwoo Choi, M.S.S.W. a, Maria Pineros-Leano, M.S.W. a, Brandon Meline, M.S., R.D. b, Hellen G. McDonald, M.S.W. a, Rachel Kester, D.O. c, Hsiang Huang, M.D., M.P.H. c

a School of Social Work, University of Illinois at Urbana-Champaign, Urbana, IL 61801, USA
b Champaign-Urbana Public Health District, Champaign, IL 61820, USA
c Department of Psychiatry, Cambridge Health Alliance, Harvard Medical School, Cambridge, MA 02138, USA
## RESULTS Themes

<table>
<thead>
<tr>
<th>Themes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Training needs</td>
</tr>
<tr>
<td>Literacy barriers</td>
</tr>
<tr>
<td>Stigma</td>
</tr>
<tr>
<td>Location of screening</td>
</tr>
<tr>
<td>Referrals/follow-up related to resources</td>
</tr>
</tbody>
</table>
BARRIERS TO SCREENING
UNIVERSITY-COMMUNITY PARTNERSHIP

- Community Engagement and Research Involvement
- Improving Clinical Practice
- Broadening the Horizon of Public Health Districts
INDENTIFYING DEPRESSION THROUGH EARLY AWARENESS (IDEA) WOMEN’S HEALTH COALITION est. 2017

• Who are we?
  – PATIENTS, researchers, clinicians, and administrators.

• Collaborators come from:
  – Patients
  – Local non-for-profits
  – Treatment providers
  – University of Illinois-Urbana Champaign (including students)
  – Champaign-Urbana Public Health District
  – Promise Francis Nelson (FQHC)
PATIENT CENTERED OUTCOMES RESEARCH INSTITUTE (PCORI)

– Authorized by Congress in 2010 as part of the Patient Protection and Affordable Care Act (PPACA)

– PCORI supports “research that addresses the questions and concerns most relevant to patients, and we involve patients, caregivers, clinicians, and other healthcare stakeholders, along with researchers, throughout the process”.
PCORI Pipeline to Proposal (P2P) Award

**PIPELINE (TIER A)**

**SCIENTIFIC PROPOSAL**

2017 → 2023
Comparing two or more options?

Studying the risks and benefits (outcomes) of the options?

Comparing options proven to be effective?

Assessing which options are better for your population?
PATIENT-ENGAGED RESEARCH CER

• Community Engagement
  – Pregnancy Expo
  – Town Hall
  – Coffee Hours
  – Happy Hour

• Patients as Partners
  – Design
  – Dissemination
  – Capacity Building

• Comparative Effectiveness Research
  – Shared research questions
PATIENT-ENGAGED RESEARCH CER

• Community Engagement
  – Pregnancy Expo
  – **Town Hall**
    – Coffee Hours
    – Happy Hour
• Patients as Partners
  – Design
  – Dissemination
  – Capacity Building
• Comparative Effectiveness Research
  – Shared research questions
PATIENT-ENGAGED RESEARCH CER

• Community Engagement
  – Pregnancy Expo
  – Town Hall
  – **Coffee Hours**
  – Happy Hour
• Patients as Partners
  – Design
  – Dissemination
  – Capacity Building
• Comparative Effectiveness Research
  – Shared research questions
PATIENT-ENGAGED RESEARCH CER

• Community Engagement
  – Pregnancy Expo
  – Town Hall
  – Coffee Hours
  – Happy Hour

• Patients as Partners
  – ADVISORY BOARD
  – Design
  – Dissemination
  – Capacity Building

• Comparative Effectiveness Research
  – Shared research questions
## CER Question:
Write your question here.

<table>
<thead>
<tr>
<th>Population</th>
<th>Describe the population here.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intervention</td>
<td>Describe the intervention here.</td>
</tr>
<tr>
<td>Comparator</td>
<td>Describe the comparators here.</td>
</tr>
<tr>
<td>Outcomes</td>
<td>Describe the outcomes here.</td>
</tr>
<tr>
<td>Timing</td>
<td>Describe the timing here.</td>
</tr>
<tr>
<td>Setting</td>
<td>Describe the setting here.</td>
</tr>
<tr>
<td>PCORI Priority Area</td>
<td></td>
</tr>
</tbody>
</table>
The proposed comparative effectiveness study will address the following questions (RQ-4, HT-1):

Research Question 1 - Does any screening for depression during pregnancy reduce rates of postpartum depression?

– We hypothesize that women who have completed any depression screening (a documented interaction with the provider regarding the depression screening noted in the electronic medical record [EMR] during pregnancy will have less postpartum depression (symptoms or diagnosis) than women who have not been screened.

Research Question 2 - How does screening inform patients’ experiences and their decision-making related to treatment?

– In this explanatory aim, we will use quantitative findings to refine an interview guide for qualitative in-depth interviews led by trained patient-researchers to learn how patients use the perinatal depression screening to make decisions about their treatments.
I.D.E.A. WOMEN'S HEALTH COALITION
IDENTIFYING DEPRESSION THROUGH EARLY AWARENESS

IDEA-WomensCoalition
@IDEA_Research  Follows you
Identifying Depression through Early Awareness (IDEA) Women's Health Coalition seeks to bridge patients, providers, and researchers together to find solutions!

ilinois, USA
socialwork.illinois.edu/idea
Joined December 2014

Tweets 56  Following 318  Followers 63  Likes 85

Who to follow
- Refresh  View all
- DuckDuckGo @duckduckgo
- Follow
- Promoted

1. Followed by Univ. of Illinois and others
2. Illinois Engineering @Eng... Follow

Learn more about our 50 new research capacity-building projects funded through our Pipeline to Proposal program here:

PCORI awards nearly $2.4 million for research capacity-building projects
The Patient-Centered Outcomes Research Institute (PCORI) has awarded nearly $2.4 million for 50 new projects through its Pipeline to Proposal Awards program.

Trends for you
- #WorldKindnessDay
- #UNICEF is Tweeting about this
- #HandsOfMyDC
- #FridayFeeling

Cook County
1,411 Tweets

#IDEA-WomensCoalition Retweeted

pcori.org

pcori.org
National Perinatal Depression Research Engagement Symposium

• Friday MAY 3, 2019 and Saturday MAY 4, 2019
  – Leading Researchers Perinatal Mental Health Disparities
  – Patient-Researchers
    • Champaign, Illinois
    • Iowa City, Iowa
  – Posters Sessions
  – Networking with patients/women/families
  – Registration open until April 8, 2019
Acknowledgements

• IDEA Women’s Coalition Advisory Board
• The I.D.E.A. Research Team
• My Mentors
• My Family

• Our Sponsors
  – National Institute of Minority Health Disparities
  – Patient Centered Outcomes Research Institute
  – University of Illinois Campus Research Board
  – National Association of Perinatal Social Workers
  – Christopher Family Foundation
  – Lemann Foundation
THANK YOU

KAREN TABB DINA,
ASSOCIATE PROFESSOR,
UNIVERSITY OF ILLINOIS SCHOOL OF SOCIAL WORK
CONTACT: KTABB@ILLINOIS.EDU

ACKNOWLEDGEMENTS:
PATIENT CENTERED OUTCOMES RESEARCH INSTITUTE
NATIONAL INSTITUTE FOR MINORITY HEALTH DISPARITIES