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## Screening and Assessment of Perinatal Depression

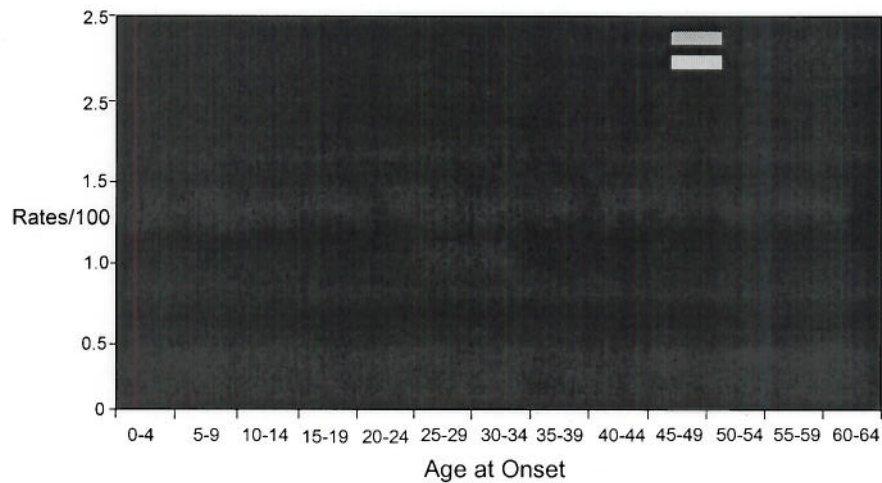
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### Symptoms of Major Depression

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- **S**leep disturbance
- **A**nhedonia/**A**gitation or psychomotor retardation
- **D**epressed mood most of the day
- **F**atigue or loss of energy
- **A**ppetite disturbances
- **C**oncentration difficulties
- **E**steem diminished or guilt
- **S**uicidal or recurrent thoughts of death

## Age-Specific Rates of MDD in the USA

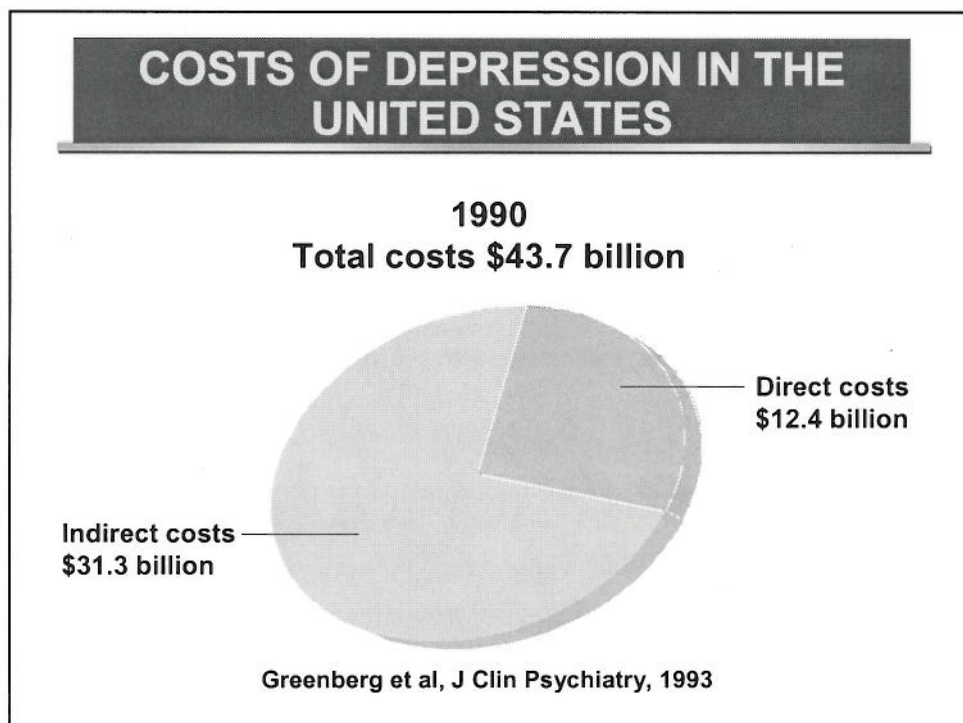
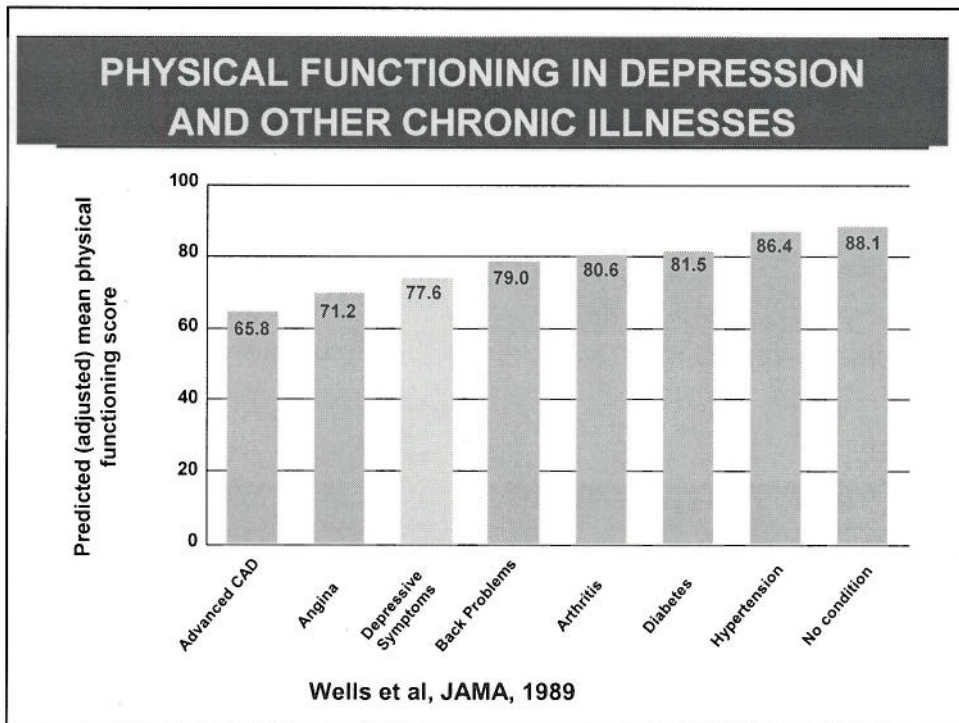


Weissman MM. Presented at the APA; 1997; San Diego, CA.

## Leading Disability Causes Worldwide, 1990

- Unipolar major depression • 10.7%
- Iron-deficiency anemia • 4.7%
- Falls • 4.6%
- Alcohol use • 3.3%
- Chronic obstructive pulmonary disease • 3.1%

*Global Burden of Disease, Lopez et al 1996*



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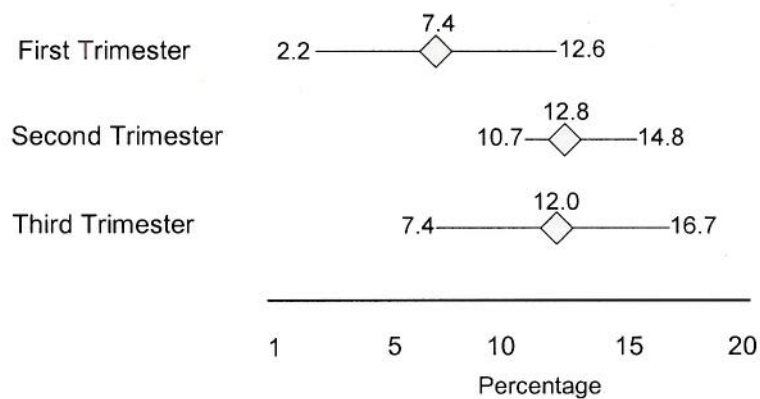
## Are Women Protected Against Depression During Pregnancy?

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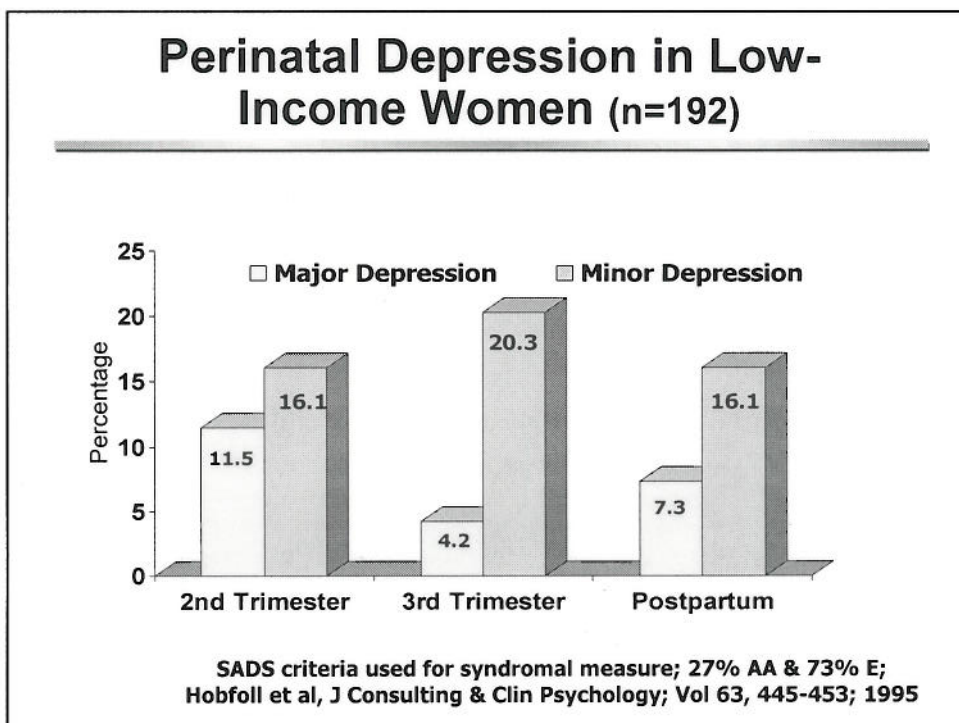
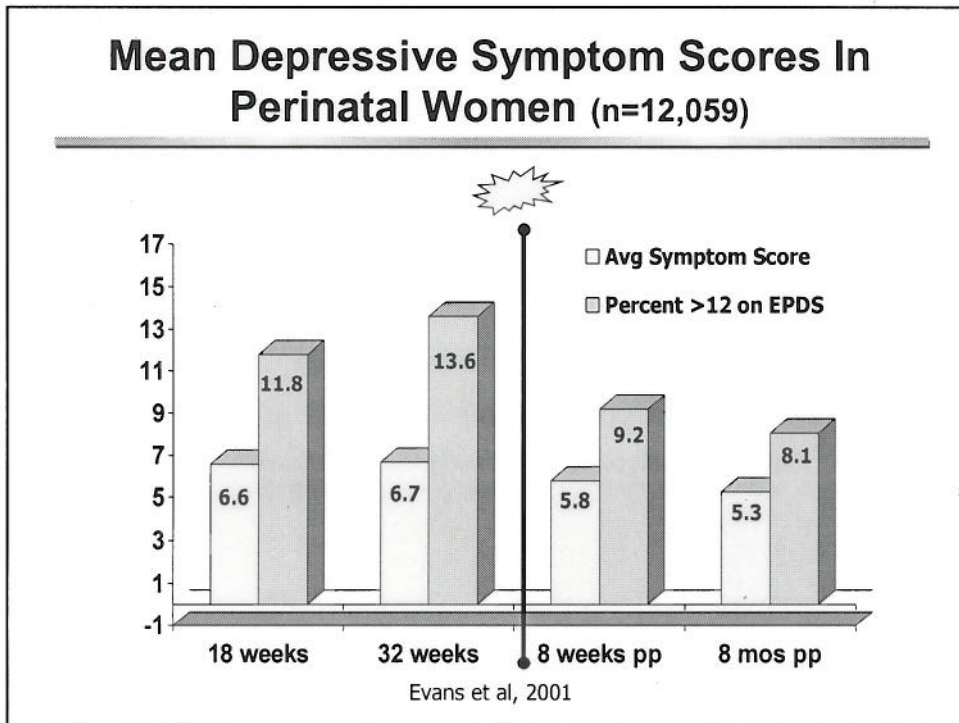
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### Prevalence Estimates of Depression By Trimester

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Bennet et al, Obstet & Gyn, 2004



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## **Risk Factors for Depression During Pregnancy**

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## **Risk Factors for Perinatal Depression**

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- Depression history
- Diminished partner support
- Unemployment
- Poor social adjustment
- Adverse life events
- Unplanned pregnancy
- Adolescence

*O'Hara et al, 1996, Int. J. Psychiatry, 8:37-54*

## **Why Should We Worry About Perinatal Depression?**

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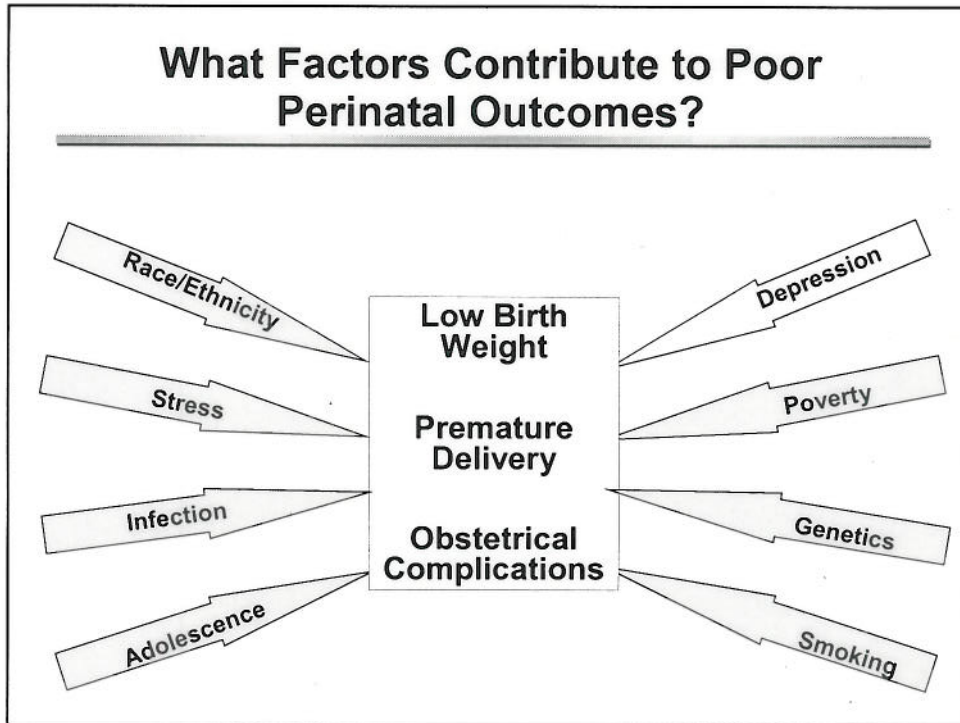
- Depression adversely affects mother's functional status and quality of life
- Depression may worsen perinatal outcomes
- Depression has a potentially deleterious effect on child development

## **Frequency of Select Poor Perinatal Outcomes in the US**

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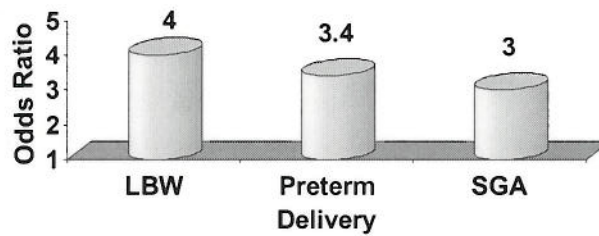
<b>Very Preterm Births (&lt;32 Weeks)</b>	<b>1.5 %</b>
<b>Preterm Births (&lt;37 Weeks)</b>	<b>12 %</b>
<b>Low Birthweight (&lt;2500 gms)</b>	<b>8 %</b>
<b>Very Low Birthweight (&lt;1500 gms)</b>	<b>1.5 %</b>

## What Factors Contribute to Poor Perinatal Outcomes?



## Depression and Perinatal Outcomes

Odds Ratio for Poor Perinatal Outcomes



LBW= low birth weight <2500g; SGA= small for gestational age;  
*Steer et al, J Clinical Epidemiology, 1992*



## **Maternal Depressive Symptoms and Preterm Birth (n=1399)**

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<b>Variable</b>	<b>Adjusted OR*</b>	<b>95% C.I.</b>
<b>Upper 10% Score on CES-D</b>	<b>1.96</b>	<b>1.04, 3.72</b>
<b>Previous poor birth outcome</b>	<b>1.59</b>	<b>1.01, 2.52</b>
<b>Alcohol consumption</b>	<b>0.63</b>	<b>0.24, 1.69</b>
<b>Smoking</b>	<b>1.35</b>	<b>0.80, 2.27</b>

CES-D=Center for Epidemiological Studies Depression Scale

\*Estimated by conditional logistic regression, Orr et al, *Am J Epidemiology*, 2002

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## **Possible Reasons Why Depression May Increase Poor Perinatal Outcomes**

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## **Association of Depression and Pregnancy-Related Health Behaviors**

- **Depression is associated with cigarette smoking, drug abuse, and concurrent medication use**
- **Depressive symptoms may lead to poor weight gain, late or delayed prenatal care, and self-neglect**

Kitamura et al, 1996, Zuckerman et al, 1989, Walker et al, 1999, Pritchard et al, 1994, Horrigan et al, 2000

## **The Biology of Depression May Influence Duration of Gestation**

- **Both depression and preterm delivery are associated with elevations in CRH and cortisol: depression may advance the placental clock**
- **Immune factors such as IL-6, IL-1 are elevated in depression and preterm delivery**

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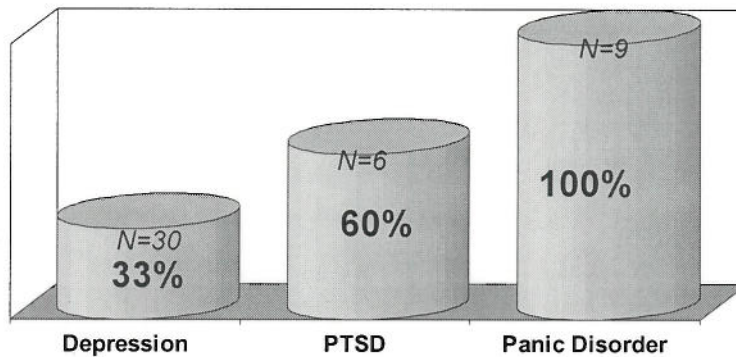
## Perinatal Mood and Anxiety Disorders are Under-recognized & Under-treated

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### Psychiatric Illness Recognition Among Pregnant Women (n=401)

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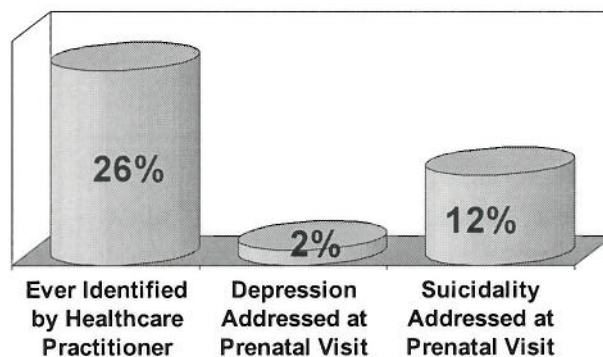
\*This includes any mention in the medical chart of symptoms prior to or during pregnancy or report by patient that a clinician addressed depression at a perinatal visit.  
Smith, Cavaleri, Howell, Poschman, Rosenheck & Yonkers, Psychiatric Services, 2004

### Factors Enhancing Identification of Mood or Anxiety Disorder In Pregnant Women (n=99)

<i>Characteristic</i>	<i>OR</i>	<i>95% CI</i>
Race	1.94	0.36, 10.28
Co-morbidity	1.74	0.08, 36.57
PTSD or Panic	2.75	0.21, 36.1
Prior Outcome*	1.79	0.62, 5.22
Substance Abuse	1.15	0.39, 3.36
Domestic Violence	5.75	1.71, 19.28

\*Prior Outcome= prior poor perinatal outcome;  
 Smith, Cavaleri, Howell, Poschman, Rosenheck & Yonkers, Psych Services, 2004

### Depression Treatment Rates Among Pregnant Women with MDD or Min D (n=99)



\*This includes any mention in the medical chart of symptoms prior to or during pregnancy or report by patient that a clinician addressed depression at a perinatal visit.  
 Smith, Cavaleri, Howell, Poschman, Rosenheck & Yonkers, Psychiatric Services, 2004

## **NEW HAVEN HEALTHY START**

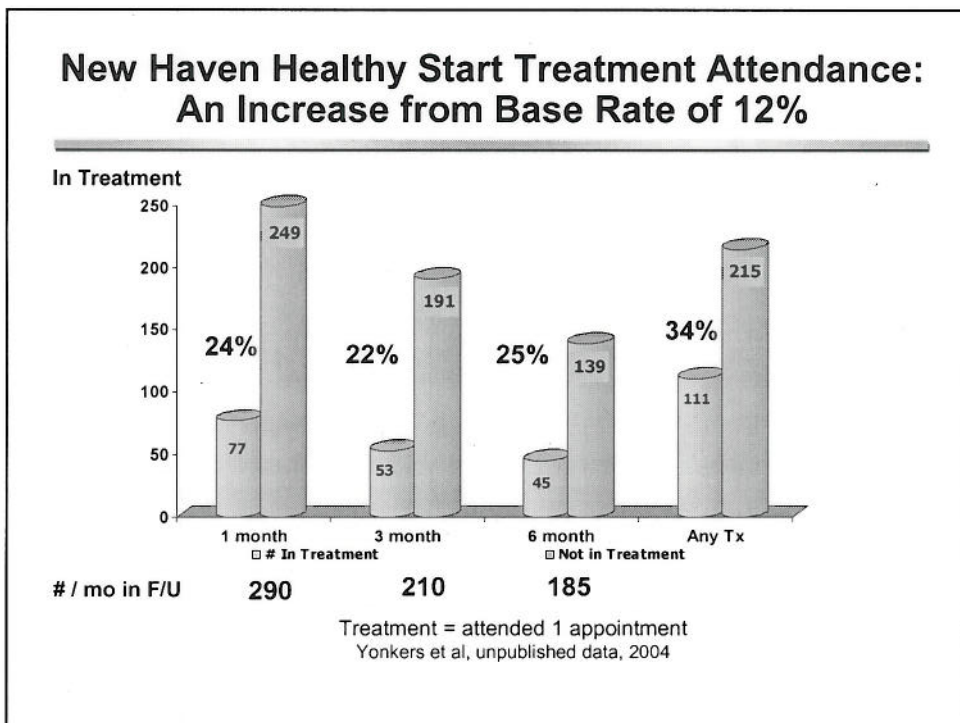
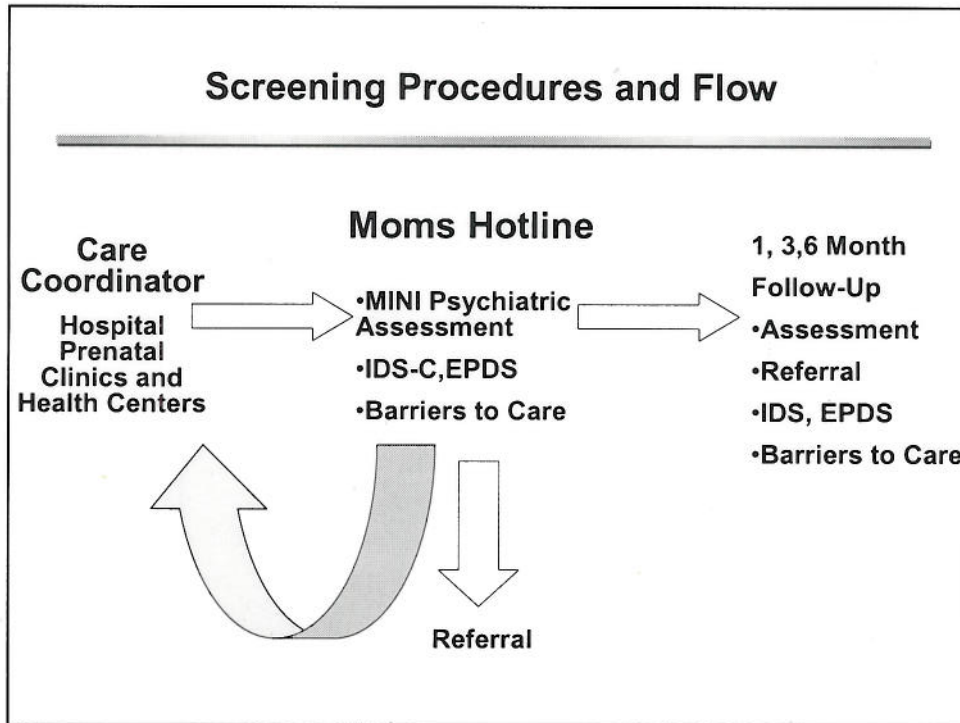
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- **Program Goal: Improve Birth Outcomes For “At-Risk” Families**
- **Care Coordination among health centers, outreach workers, schools, university and health department**
- **Universal Risk Assessment**

## **Mental health Outreach to MotherS: MOMS Hotline** Yale University Department of Psychiatry, & New Haven Healthy Start

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- **Psychiatric evaluations & treatment for Healthy Start pregnant women in New Haven in need of depression treatment**
- **Local mental health resource provider directory can be downloaded from our website, [www.researchforher.com](http://www.researchforher.com)**
- **Information about New Haven Healthy Start [www.nhhealthystart.org](http://www.nhhealthystart.org)**



## Barriers to Care at 1-Month Follow-up

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### *Provider Barriers*

- **12% Cost (n = 20)**
- **11% Distance (n = 18)**
- **9% Waiting list (n = 15)**
- **1% Language (n = 1)**

Yonkers et al unpublished data from NHHS.

\*Percentages exclude missing values

## Barriers to Care at 1-Month Follow-up

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### *Structural Barriers*

- **23% Transportation (n = 40)**
- **8% Childcare (n = 22)**
- **5% Unstable housing (n = 14)**
- **5% Financial problems (n = 15)**
- **5% Unemployment (n = 14)**

Yonkers et al unpublished data from NHHS

\*Percentages exclude missing values

## Barriers to Care at 1-Month Follow-up

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### *Personal Barriers*

- 31% “I feel better” (n = 53)
- 30% “Too busy” (n = 55)
- 17% “I don’t feel well enough” (n = 28)

Yonkers et al unpublished data from NHHS.

\*Percentages exclude missing values

## Treatment at 1-month follow-up point: Multivariate Associations

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- Pregnant: OR = 0.08, 95% CI = 0.02-0.3
- Hx of mental health Rx: OR = 4.5, 95% CI = 1.3-15.7

Yonkers et al unpublished data from NHHS.

\*Percentages exclude missing values



## Summary

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- **Mood disorders peak during a woman's reproductive years**
- **There are a number of medical myths regarding women and mood disorders**
  - **Women are not protected from an episode of depression during pregnancy**
  - **Depression during pregnancy may have a deleterious impact on birth outcomes**
  - **Screening and treatment referral may improve outcomes for mothers and babies**

## Unanswered Questions

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- **How can we increase treatment utilization?**
  - **Can we improve access to treatment?**
- **What are optimal systems for identification?**
  - **Does detection improve treatment?**
- **What are the consequences to offspring?**
  - **Preterm delivery, low birth weight, cognitive and emotional effects on children**

## **Clinical Needs**

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- **It is likely that mental health services need to be offered at primary care facilities**
- **Optimize detection, referral, and treatment during pregnancy**
- **Extend and educate the pool of providers that can offer culturally sensitive care for pregnant & postpartum women with depression**

## **Address the Attitudes of Clinicians, Patients & the Public**

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- **Decrease the stigma of illness: educate clinicians & patients about signs, symptoms, impact of illness**
- **Address the assumption that because someone has difficult life circumstances that they should be depressed**
- **Discuss possibility of pregnancy with all women who have pre-existing mental disorder**