

# UIC Perinatal Mental Health Project

Women's Mental Health Program  
University of Illinois at Chicago

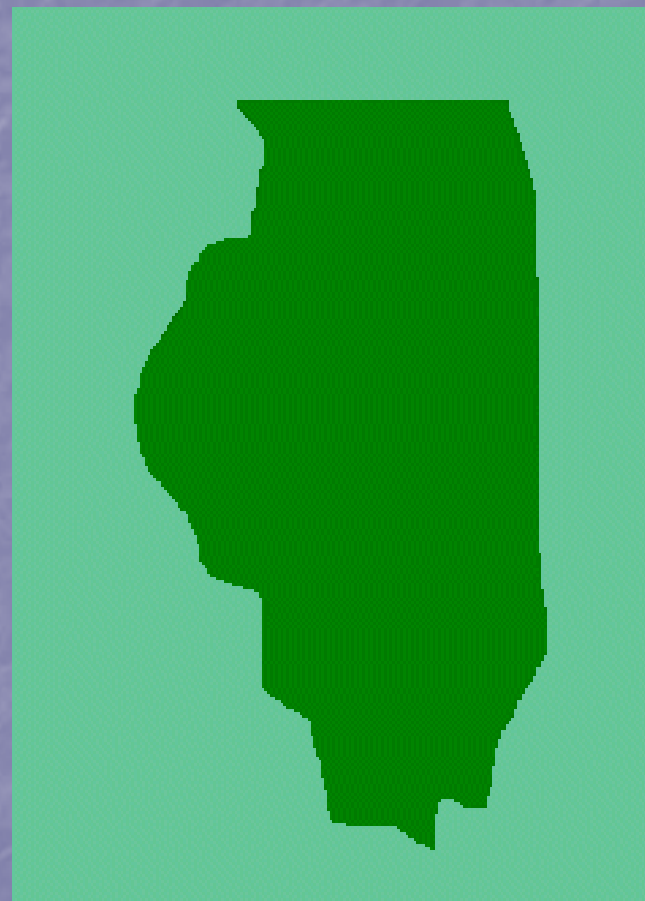
"I started to experience a sick sensation in my stomach; it was as if a vise were tightening around my chest. Instead of the nervous anxiety that often accompanies panic, a feeling of devastation overcame me. I hardly moved. Sitting on my bed, I let out a deep, slow, guttural wail. I wasn't simply emotional or weepy, like I had been told I might be. This was something quite different. This was sadness of a shockingly different magnitude. It felt as if it would never go away."

-from "Down Came the Rain: My Journey Through Postpartum Depression" (Brooke Shields, 2005)

# Peripartum Depression in Illinois

- 9.4 – 12.7% of women giving birth in U.S. develop MDD (Gaynes et al. 2005)
- Only 607 of the 81,000 women with HFS-funded deliveries in 2001 were diagnosed with MDD
- Only 6 - 8% of women with peripartum MDD were diagnosed

(IDPA, 2004)



# Etiology & Symptom Presentation

- Postpartum “Blues”
- Postpartum Depression
- Postpartum Psychoses

# Postpartum “Blues”

- Features: tearfulness, lability, reactivity
- Predominant mood: happiness
- Peaks 3-5 days after delivery
- Present in 50-80% of women
- Present in all cultures studied
- Unrelated to environmental stressors
- Unrelated to psychiatric history

(Miller & Rukstalis, 1999)

# Postpartum “Blues”: Hormone Withdrawal Hypotheses

- Estrogen
  - Receptors concentrated in the limbic system
  - “Blues” correlate with magnitude of drop
- Progesterone metabolite (allopregnanolone)
  - GABA agonists; CNS GABA levels & sensitivity may decrease during pregnancy as an adaptation
  - The reduced brain GABA may recover more slowly in women with “blues”

(Altemus, et al., 2004)

# Oxytocin (OT): Peripheral Effects

- Uterine contraction
- Milk ejection

# OT as a Neuropeptide Neurotransmitter

- Receptors concentrated in limbic system
- New receptors are induced by estrogen during pregnancy
- OT induces intense maternal behavior
- OT antagonists block initiation of maternal behavior



# Posited Relationships Between the “Blues” and Postpartum Depression

- A subset of women may be vulnerable to mood disorders at times of hormonal flux (premenstrual, postpartum, perimenopausal) regardless of environmental stress
- The normal heightened emotional responsiveness caused by OT may predispose to depression in the context of high stress and low social support

# Major Depression: Key Symptoms

- At least one of the following (by self-report or others' observations) for 2 weeks
  - Depressed mood most of the day, nearly every day
  - Markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day
  - Adolescents are more likely to be irritable

(DSM-IV-TR, 2000)

# Major Depression: Associated Symptoms

- Four or more of the following:
  - Changes in weight and appetite
  - Insomnia or hypersomnia
  - Psychomotor agitation or retardation
  - Fatigue or loss of energy
  - Feeling worthless or guilty
  - Impaired concentration, indecisiveness
  - Thoughts of death

(DSM-IV-TR, 2000)

# Clinical Features of Postpartum Depression

- Depressed, despondent and/or emotionally numb
- Sleep disturbance, fatigue, irritability
- Loss of appetite
- Poor concentration
- Feelings of inadequacy
- Ego-dystonic thoughts of harming the baby

(Miller, 2002)

# Characteristics of Postpartum Depression

- Begins within 4 weeks of birth (by DSM-IV definition), but clinical presentation peaks 3-6 months after delivery
- Related to psychiatric history (about 25% of women with history of MDD) (Steiner & Tam, 1999)
- Related to environmental stressors (Bernazzani, et al., 2004)
- Much less prevalent in some cultures (Wile & Arechiga, 1999)

# Confounds in Diagnosing Depression During Pregnancy

- Overlapping symptoms
  - Sleep disturbance
  - Increased appetite
  - Decreased energy
  - Changes in concentration
- Illnesses with similar symptoms
  - Anemia
  - Thyroid dysfunction
  - Gestational diabetes mellitus

# Postpartum Psychoses

- Heterogeneous group of disorders
  - Bipolar disorder
  - Major depression with psychotic features
  - Schizophrenia spectrum disorders
  - Medical conditions (e.g., thyroid disease, low B<sub>12</sub>)
  - Drugs (e.g., amphetamines, hallucinogens, bromocriptine)
- Prevalence
  - 1-2 per 1,000 women giving birth (Attia, et al., 1999)
  - About 35% of women with bipolar diathesis (Steiner & Tam, 1999)
- Onset usually within 3 weeks postpartum

## Postpartum Psychoses: Symptoms

- Delusions (e.g., baby is possessed by a demon)
- Hallucinations (e.g., seeing someone else's face instead of baby's face)
- Insomnia
- Confusion/disorientation (more than non-postpartum psychoses)
- Rapid mood swings (more than non-postpartum psychoses)
- Waxing and waning (can appear and feel normal for stretches of time in between psychotic symptoms)

(Attia, et al., 1999)



# Effects of Untreated Depression on Obstetric Complications

- Low birth weight (Federenko & Wadhwa 2004)
- Premature birth (Orr et al., 2002)
- Pre-eclampsia (Kurki et al., 2000)

# Factors That May Contribute To Risks Associated With Antenatal Depression

- Indirect effects
  - Reduced prenatal care
  - Less optimal nutrition
  - Socioeconomic deprivation
  - Increased use of cigarettes and alcohol
- Direct effects
  - Changes in cortisol and HPA axis development

# Early Consequences of Untreated Postpartum Depression for Offspring

- Sometimes none
- Disturbed mother-infant relationship
- Cortisol elevation (baby and mother)
- Failure to thrive
- Physical injury/death

# Effects of Antenatal Depression on Offspring - Controlled Studies

- Newborns cry excessively and are more inconsolable (Zuckerman, et al., 1990)
- Babies (up to age 1) have poorer growth and increased risk of infection (Rahman, et al., 2004)
- Children (up to age 5) have more difficult temperaments - more distress, sadness, fear, shyness, frustration (Huot, et al., 2004)

# Later Consequences of Prolonged Maternal Depression for Offspring

- Depression
- Behavioral disturbance, including conduct disorder
- Reduced cognitive abilities
- More school problems (truancy, dropping out)
- Role reversal

(Lundy, et al., 1999; Jacobsen, 1999)

# Effects of Maternal Stress and Anxiety During Pregnancy

- Altered fetal hemodynamics and movement
- Lower gestational age
- Lower infant birth weight
- Lower Apgar scores
- Enduring changes in cortisol measures in offspring - so far observed up to age 10

(Huizink, et al., 2004; Berle, et al., 2005; O'Connor, et al., 2005)

# Potential Effects of Postpartum Depression on Relationships

- Altered roles within the couple
- Altered roles within the extended family
- Establishing alternate caregiver patterns that become difficult to change later
- Impaired communication
- Psychiatric symptoms in the partner

# Possible Manifestations of Depression in Parenting

- Mothers:
  - Fewer overall interactions (disengagement)
  - More matching of negative states than positive
  - Less positive interactions (affective flatness, irritability)
  - Less consistency
  - Decreased mutual cueing
- Infants
  - Fewer positive/ more negative facial expressions
  - Fewer vocalizations
  - More fussy and tense
  - More gaze aversion (over time, infant learns to look away)



# The Importance of Early Relationships

- Brain Development
  - Interplay between genes and experiences
  - Early interactions directly affect how the brain is “wired”
- Attachment
  - Infants of depressed mothers are at high risk for developing an insecure attachment (Teti,2000; Reder & Lucey, 1995)
  - Relational problems between infants and their caregivers are connected to early social, emotional, and behavioral problems for children (Cole, et al., 1995; Sameroff, 2004)
- Transactional model of infant-caregiver relationships (Sameroff, 2004)
  - Both infants and caregivers contribute to the developing relationship based on their own unique characteristics (temperament, neurology, etc.) and the context.

# Risk of Suicide From Untreated Major Depression During Pregnancy

- Overall risk may be lower than in non-pregnant women
- Risk may be increased when:
  - Pregnancy is unwanted, especially when woman wanted an abortion but could not obtain one
  - Partner abandoned woman during pregnancy
  - Woman has had prior pregnancy loss and/or death of children

(Czeizel, et al., 1999; Lester & Beck, 1988; Marzuk, et al., 1997)

# Infanticide Due to Postpartum Depression

- Rare; greater risk with psychotic symptoms
- Rarely has a history of abusing children
- Most often part of a suicide attempt
- No anger toward baby; wish not to abandon baby and/or not to burden others with baby
- Rarely attempt to conceal; often self-report

(D'Orban, 1979; Silverman & Kennedy, 1988; Haapasalo & Petaja, 1999)

"I sat holding my newborn and could not avoid the image of her flying through the air and hitting the wall in front of me. I had no desire to hurt my baby and didn't see myself as the one throwing her, thank God, but the wall morphed into a video game, and in it her little body smacked the surface and slid down onto the floor. I was horrified, and although I knew deep in my soul that I would not harm her, the image all but destroyed me."

-from "Down Came the Rain: My Journey Through Postpartum Depression" (Brooke Shields, 2005)

# Thoughts of Harming Baby:

## Low Risk

- Common in non-psychotic PPD - 41% of depressed mothers *vs.* 7% of controls (Jennings, et al., 1999)
- Mother doesn't want to harm baby
- Thoughts are ego-dystonic (obsessive in nature & odd/frightening to mother)
- Mother has taken steps to protect baby
- Mother has no delusions or hallucinations related to harming baby

# Thoughts of Harming Baby: High Risk

- Mother has delusional beliefs about the baby – e.g., that the baby is a demon
- Thoughts of harming baby are ego-syntonic (mother thinks they are reasonable and/or feels tempted to act on them)
- Mother has a history of violence
- Mother has labile mood and/or impulsive behavior

# Detecting Perinatal Depression: Why Screen?

- High prevalence rate
- Risks of untreated symptoms
- Availability of effective treatments
- Under-detection by routine clinical evaluation
- Availability of validated screening tools

# Detecting Perinatal Depression: Why Clinics Don't Screen

- Lack of training in screening, assessment and treatment for perinatal depression
- Lack of time
- Lack of reimbursement for screening
- Lack of a viable plan and resources for what to do with "positive" screens
- Fear of medicolegal liability if women "screen positive" but are not treated



# Perinatal Mental Health Disorders Prevention and Treatment Act

- The purpose of this act is to increase awareness and to promote early detection and treatment of perinatal depression
- Website for complete details:  
<http://www.hfs.illinois.gov/mch/pa0469.html>

# Perinatal Mental Health Disorders Prevention and Treatment Act

- The Act requires that:
  - Licensed health care professionals providing prenatal care provide education to women, and if possible and with permission, to their families about perinatal mental health disorders
  - All hospitals providing labor and delivery services provide new mothers, prior to discharge following childbirth, and if possible, provide fathers and other family members complete information about perinatal mental health disorders
  - Licensed health care professionals providing prenatal care, postnatal care, and care to the infant invite the women to complete a questionnaire to assess whether they suffer from perinatal mental health disorders

# Screening for Peripartum Depression: Edinburgh Postnatal Depression Scale (EPDS)

- 10 item self-report questionnaire
- Advantages:
  - Easy to score
  - Specifically designed for peripartum use
  - Well validated during pregnancy and postpartum
  - Cross-culturally validated; available in over 20 languages
- Disadvantages:
  - Not linked with DSM-IV diagnostic criteria
  - Can not be used for assessment or treatment tracking
- Best validated screening for peripartum populations

(Cox & Holden, 2003; Watkins, et al., 1987)

# Interpretation of the EPDS

- Validated cut off score of 10-13
- Sensitivity and specificity vary according to the chosen cut-off score
- Validation studies do not provide a definitive answer about optimal cut-off scores, but EPDS studies provide enough information to yield useful guidelines

# Interpretation of the EPDS

- Example: Aiming for a sensitivity of at least 0.8 and a specificity of at least 0.7 in detecting peripartum major depression.
  - Cut-off scores between 10 and 12 have consistently yielded sensitivity and specificity scores in that range
  - Cut-off scores above 12 have not been sensitive enough in some studies

# Interpretation of the EPDS

- Maximum score: 30
- Always look at item 10 [suicidal thoughts]
- Use an assessment tool to further evaluate women with high scores

# Screening for Peripartum Depression: Patient Health Questionnaire (PHQ-9)

- 9-item self-report questionnaire
- Advantages:
  - Easy to score
  - Items & scores linked to DSM-IV depression criteria
  - Can use to assess & track treatment response
  - Can use same tool for non-peripartum patients in clinic
- Disadvantages:
  - Not designed for peripartum use (somatic confounds)
  - Not as well validated peripartum (2 studies)
- Best validated for tracking response to treatment

(Kroenke, 2001)

## PHQ-9: Scoring

- Total score ranges from 0 – 27
- A score of 5 or above out of 27 is considered positive
- Each numeric value is directly linked to the DSM-IV diagnostic criteria for major depression, including severity criteria.



## Tracking Treatment Response with the PHQ-9

- Initial treatment response: drop in score of 5 or more from pre-treatment baseline after 4 weeks of treatment
- Adequate treatment response: 50% decrease in score after 8 weeks of treatment
- Remission: post-treatment score < 5
- If response in primary care setting is inadequate, refer for mental health care

## Beck Depression Inventory II (BDI)

- 21-item self-report designed for use in clinic populations
- Advantages:
  - Linked to DSM-IV
  - Tracks response to treatment
- Disadvantages
  - Few validation data postpartum; none antepartum
  - Potential somatic confounds

(Beck, 1988)

# Postpartum Depression Screening Scale (PDSS)

- 35-item self-report designed for post-partum use
- Advantages:
  - Greater symptom detail
  - Reduces somatic confounds
- Disadvantages:
  - Time-consuming
  - Few validation data postpartum; none antepartum
  - Not linked to DSM-IV

(Beck & Gable, 2000)

# Center for Epidemiologic Studies – Depression Scale (CES-D)

- 20-item self-report designed for community use
- Advantages:
  - Better than EPDS at identifying psychomotor retardation in one study
- Disadvantages
  - Few validation data postpartum; none antepartum
  - Potential somatic confounds

(Radloff, 1977)

# Why Bill for Peripartum Depression Screening?

- Providers/clinics can be reimbursed for screening Medicaid recipients
- Each time a screen is administered it can be reimbursed
- Allows clinic to fund resources needed for a viable screening, assessment and referral program (e.g., case manager and clinician time)
- Allows Healthcare & Family Services (HFS) to track the success of their perinatal depression initiatives

# Medicaid Codes

- If the woman is the patient, bill under her recipient identification number (RIN)
- If her infant is the patient (e.g. well-child visit), bill under the infant's RIN
- For screening during a pregnancy visit use code H1000
- For screening during a postpartum visit (up to one year after delivery) use code 99420 with the HD modifier (pregnant/parenting women's program) and the woman's RIN
- For screening during a well-child visit (up to an infant's first birthday) use 99420 with the HD modifier and the infant's RIN

# HFS Approved Screening Tools

- Edinburgh Postnatal Depression Screen (EPDS)\*
- Beck Depression Inventory (BDI)
- Primary Care Evaluation of Mental Disorders Patient Health Questionnaire (PHQ-9)\*
- Postpartum Depression Screening Scale (PDSS)
- Center for Epidemiologic Studies Depression Scale (CES-D)

\* Providers are taught how to administer and score the EPDS and the PHQ-9 during UIC Perinatal Mental Health Workshops

# Providers and Encounter Reimbursed

- Enrolled physicians and other providers performing primary care services
  - During a prenatal or postpartum visit (up to one year after delivery)
  - During an infant well-child or episodic visit
- Family Case Management (FCM) agencies that are certified local health departments
  - Screening may be completed during a face-to-face case management or WIC encounter



# Providers and Encounter Reimbursed

- *Not reimbursed for depression screening and why:*
  - Encounter Rate Clinics (ERCs), Federally Qualified Health Centers (FQHCs) and Rural Health Clinics (RHCs)
- The above clinics are paid an encounter rate that encompasses all services provided during an encounter
- *However, the appropriate “risk assessment” procedure code should be included on the encounter claim*
- Screening can be performed during medical or a behavioral health encounter

# Requirements

- The administration and interpretation of the risk screening/assessment must meet the definition provided by the American Medical Association's Current Procedural Terminology (AMA CPT)
  - “These codes are used to report services provided to individuals at a separate encounter for the purpose of promoting health and preventing illness or injury.”
- The risk screening/assessment must be provided according to the guidelines provided for the instrument, including use of the instrument form
- Providers must interpret and document the service in the medical record

# Documentation

- If the mother is the patient:
  - Record the date of screen
  - Record the screening tool used by its acronym (e.g., PHQ-9, EPDS, etc.) and score of the screen
  - Record the disposition, if indicated
  - Provide mental health referral information
  - Record anticipatory guidance given and whether a referral was made
  - Provide educational materials on perinatal mental health disorders
  - Screen may be provided to the woman or destroyed

# Documentation

- If the infant is the patient:
  - Record the date of screen
  - Record screen as a “risk assessment” in the infant’s chart; no other comments
- For a positive screen:
  - Refer mother to her primary care provider
  - Provide mental health referral information
  - Provide educational materials on perinatal mental health disorders
  - Communication with the mother’s primary care provider is also recommended, if permitted by the mother
  - Screen should be given to the woman or destroyed; screen *should not* be included in the infant’s chart

# Documentation Suggestions

- Stamp which includes necessary data, but maintains confidentiality

Perinatal Screening & Assessment  
Screening Tool Used:

Score:

DSM-IV code: 311.0 or \_\_\_\_\_

Disposition:

# Documentation: DSM-IV Codes

- Depression NOS - 311.0
- Major Depression
  - Single episode - 296.2
  - Recurrent - 296.3
    - 0= unspecified
    - 1= Mild
    - 2= Moderate
    - 3= Severe without psychotic features
    - 4= Sever with psychotic features
- Adjustment Disorder with depressed mood - 309.0
- Mood Disorder NOS - 296.90

# Documentation

For recordkeeping suggestions specific to providers whose patient is the infant, visit:

<http://www.illinoisaap.org/social-emotional.htm#maternal>

# Documentation

For more information on reimbursement for screening for perinatal depression, please refer to the Illinois Department of Healthcare and Family Services Provider Notice located at

[http://www.hfs.illinois.gov/mch/ppd\\_notice.html](http://www.hfs.illinois.gov/mch/ppd_notice.html)



# Treatment of Perinatal Illness

- Established treatments
  - Antidepressant medication
  - Psychotherapy: interpersonal & cognitive-behavioral
- Emerging/adjunctive treatments
  - Estrogen therapy
  - Bright light therapy
  - Transcranial magnetic stimulation
  - Omega-3 essential fatty acids
  - Family and couples therapy
  - Dyadic therapy/parenting coaching

# Educate About Self-Care

- Social support
- Sleep
- Breaks from baby
- Enjoyable, replenishing activities
- Nutrition (iron, calcium, folate, EFA's)
- Aerobic exercise
- Break isolation
  - Be with friends, partner, and/or other mothers with or without baby
- Take time for yourself (even if only 5 minutes)
- Protect yourself and your energy
  - Turn off phones, limit visitors, eat frozen food, etc.

## Resources

- Support Partners Program

[www.supportpartnersprogram.com](http://www.supportpartnersprogram.com)

- Postpartum couples

[www.postpartumcouples.com](http://www.postpartumcouples.com)

- Postpartum Support International

[www.postpartum.net](http://www.postpartum.net)

# Specialty Services for Perinatal Depression at UIC

- Outpatient
  - UIC Women's Mental Health Program
  - (312) 355-1223; call for an appointment
- Inpatient
  - UIC Women's Inpatient Treatment Service
  - (312) 996-7000; ask for the psychiatrist on call

Evanston Northwestern Hospital (ENH)  
Perinatal Depression Program  
Consumer Crisis Hotline  
1-866-ENH-MOMS (1-866-364-6667)

ENH provides a crisis hotline for:

- Perinatal mothers and their loved ones who seek immediate crisis counseling and triage services for perinatal depression
- Obstetric or pediatric providers who need mental health referrals for their perinatal patients

The hotline is *free, confidential, multi-lingual*, and operates *24/7*.

# PPD Illinois Helpline

## 847-205-4455

- Illinois chapter of Postpartum Support International ([www.postpartum.net](http://www.postpartum.net))
- Website: [www.ppdil.org](http://www.ppdil.org) – advocacy, resources, information
- Helpline volunteers contact callers to provide support, information and resources
- “Warm-line” not Hotline (not available 24/7)
- Free of charge

# Fussy Baby Network

- Program for parents who have concerns about a baby who is fussy, crying excessively, or has sleeping or feeding difficulties
- Program includes:
  - Fussy Baby warmline
  - Home visiting program
  - Fussy Baby clinic (located at University of Chicago)
  - Parent Support Group
- Services offered in English and Spanish
- 888-431-BABY
- [www.fussybabynetwork.org](http://www.fussybabynetwork.org)

# Enhancing Developmentally Oriented Primary Care (EDOPC)



- Collaborative project
  - Advocate Health Care, Healthy Steps for Young Children Program
  - Illinois Chapter, American Academy of Pediatrics (ICAAP)
  - Illinois Academy of Family Physicians (IAFP)
  - The Ounce of Prevention Fund





- Offers office-based trainings to pediatric providers (family physicians and pediatricians) on:
  - Developmental Screening
  - Social/Emotional Screening
  - Perinatal Maternal Depression Screening
  - Domestic Violence: Effects on Children
  - Early Autism Detection and Referral
- On-going technical assistance is available
- For more information, please visit [www.edopc.org](http://www.edopc.org), or contact project staff at [info@edopc.org](mailto:info@edopc.org) or at 888-270-0558

# Illinois Perinatal Mental Health Project: How to Reach Us

- Toll-free Consultation Line for Providers

1-800-573-6121

- Illinois Perinatal Mental Health Project web site:

[www.psych.uic.edu/research/perinatalmentalhealth/](http://www.psych.uic.edu/research/perinatalmentalhealth/)

- Illinois Department of Healthcare and Family

Services web site <http://www.hfs.illinois.gov/mch/>

# UIC Perinatal Mental Health Project

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