

# PREGNANCY AND BEHAVIORAL HEALTH ISSUES

12<sup>th</sup> Annual Zarrow Mental Health Symposium  
September 28, 2006

# PREGNANCY AND BEHAVIORAL HEALTH ISSUES

- APRIL 9, 2007

# Tulsa Healthy Start Partners

- Tulsa Health Department: *Grantee*
  - Community Service Council, Family Health Coalition & Babyline Program
  - Oklahoma State University Obstetrics Clinic
  - Oklahoma University Women’s Clinic and School of Nursing
  - Urban League of Tulsa
  - Indian Health Care Resource Center
  - Morton Health Clinic
  - Planned Parenthood of Arkansas and Eastern Oklahoma
  - Parent Child Center
  - Margaret Hudson Program

# Behavioral Health Focus

- Mental Health: Primarily Depression
- Substance Abuse: Including tobacco use
- Domestic Violence

# Babyline Program

- Telephone service, scheduling first prenatal appointments with local safety net providers.
- Tulsa County Resident Births in 2004: 9,175
- Babyline Prenatal Appointments Scheduled in 2004: 4,659

# Free Pregnancy Testing Program

- All Planned Parenthood Clinics
- Free Pregnancy Tests in 2005: 6,614
- 3,216 tests or 48% positive

# Behavioral Health Questions

## Mental Health

- Have you had a psychiatric diagnosis other than depression?
- **Have you ever had problems with or been treated for depression?**
- **Do you feel sad or depressed lately?**
- Do you feel overwhelmed lately?

# Behavioral Health Questions

## Substance Abuse

- Have you ever drank alcohol?
- **In the month before you knew you were pregnant, how many drinks did you have per week?**
- **In the month before you knew you were pregnant, how many cigarettes did you smoke per day?**
- *Free Pregnancy Testing Program asks about the past month alcohol and cigarette use.*

# Behavioral Health Questions

## Violence

- **Have you been hit, kicked, punched or physically hurt by someone in the past 12 months?**
- Do you feel unsafe in your current relationship?
- At this time, do you feel unsafe from a previous partner?

# Behavioral Health Data 2005

Question	Free Pregnancy Testing: (Raw Number)	Babyline: (Raw Number)
Psychiatric Diagnosis other than Depression		5.4% (236)
Ever Had problems with or been treated for depression	* 30% (2,005)	20.6% (895)
Feel sad or depressed lately	*	17.6% (767)
Feel overwhelmed lately		20.9% (911)

# Behavioral Health Data 2005

Question	Free Pregnancy Testing: (Raw Number)	Babyline: (Raw Number)
Hit, kicked, punched or hurt in the past 12 months?	8% (524)	4.9% (214)
Feel unsafe in current relationship		.7% (29)
Feel unsafe now from a previous partner?		2.3% (101)

# Behavioral Health Data 2005

Question	Free Pregnancy Testing: (Raw Number)	Babyline: (Raw Number)
Ever drank alcohol		49.7% (2,165)
Month before knew pregnant: drinks/week	*21% (1,386) Any use	1-3: 21% (912) 4-7: 2% (86) 8+: .8% (35)
Month before knew pregnant: cigarettes/day	*40% (2,663) Any use	< 5: 9.7% (421) 5-14: 20.7% (896) 15+: 8.1% (353)

# Prenatal Depression

- Depression during pregnancy may be as common as during the postpartum. One study found that depression was higher at the 32<sup>nd</sup> week of pregnancy (13.5%) than at 8 weeks postpartum (10%)
- 14 to 25% of pregnant women have symptoms which meet the criteria for a clinical diagnosis of depression
- 50% of women who experience depression during pregnancy will also develop postpartum depression.
- Medical complications of depression during pregnancy include; preeclampsia, reduced blood flow to the uterus, low birth weight and premature birth

# Postpartum Baby Blues

- Transient state, generally resolves by the 10<sup>th</sup> day postpartum without treatment.
- Experienced by 50 to 80% of all mothers.
- Symptoms peak in the 4<sup>th</sup> or 5<sup>th</sup> day and include; unexplained tearfulness, fatigue, insomnia, anxiety, feelings of loss and/or being overwhelmed.
- An increased risk of postpartum major depression.

# Postpartum Depression

- **Postpartum Major Depression:** Symptoms are the same as DSM-IV criteria for Major Depression but a postpartum specifier is included if onset is within 4 weeks of delivery
- 8 – 15% experience depression during the first year after childbirth, women in poverty may have rates as high as 48%
- Untreated, PMD can linger several months or even into the 2<sup>nd</sup> year postpartum

# Postpartum Depression

- **Postpartum Major Depression:** may emphasize different characteristics of depression:
  - High level of anxiety
  - Obsessive compulsive symptoms
  - Effort to appear less affected than they are
  - Guilt and agitation appear more frequently
  - Suicide tends to be less common

# Postpartum Psychosis

- Affects 1 – 3 per 1,000 women during the first year following childbirth.
- Women with a family or personal history of bipolar or schizophrenic disorders may be at greater risk to develop
- Onset is usually within the first month and manic in nature.

# Postpartum Psychosis

- Early warning signs may include; inability to sleep for several nights, agitation, expansive or irritable mood, avoidance of the infant
- Diagnostic criteria require 2 of the following; Delusions, Hallucinations, Disorganized Speech, Disorganized and usually agitated or catatonic behavior and Withdrawal
- Should be considered a medical emergency and should not be confused with PMD

# Impact

- On the Mother:
  - Feelings of shame
  - Fear of being judged
  - Fear of having the baby taken away
  - Difficulty in partner relationship
  - 40% who have a first episode of PMD will have depressive episodes unrelated to childbearing
  - There is a 7 fold increase in the risk of psychiatric hospitalization for women following childbirth.
  - Risk of recurrence with a subsequent pregnancy is 20%

# Impact

- On the infant:
  - Difficulties in emotional regulation
  - Less optimal interactions
  - Insecure attachment
  - Problem behaviors
  - Delays in the acquisition of competencies.
  - Children of depressed mothers see primary care physicians more often & have higher rates of prescription medications & hospitalizations than children of non-depressed mothers.

# Studies

- 6 month infants whose mothers had a history of depression had higher levels of cortisol
- Infants of chronically depressed mothers (before and after pregnancy) had the same brain wave abnormalities that mimic an adult with depression and were more likely to be irritable and sleep erratically.

# Screening

- A standardized measure or list of questions should be used to screen every woman at onset of prenatal care, every trimester and at postpartum.
- Screening Questions
  - Have you ever had problems with or been treated for depression?
  - Do you feel sad or depressed lately?
  - Do you feel overwhelmed or anxious lately?
- Standardized Tools
  - Postpartum Depression Screening Scale
  - Edinburgh Postnatal Depression Scale

# Screening

- Study of 1,053 pregnant women using a self-report measure – 25% scored positive, a diagnosable mood disorder was found in 93% of those with positive screen
- Study of 186 women receiving prenatal care found that 38% screened positive for a psychiatric disorder and/or substance abuse.
  - 43% had symptoms reported in medical chart
  - 35% had been evaluated
  - 18% received treatment
  - Over one-half met criteria for a depressive disorder

# Treatment

- Couples Counseling
  - Partner conflict is a common issue before and after delivery
  - Couples counseling with a focus on role transitions for each partner.
- Educational Interventions
  - “Survival Skills for New Moms (Zlotnick et al.) four 60 minute group sessions beginning between 20 and 32 weeks gestation.
  - Within 3 months after giving birth, 33% of control group had developed PMD compared to none of the education group.

# Treatment

- Psychotherapy: Study by Cooper & Murray  
3 study and a control group of 40 women  
at 6 weeks postpartum.
    - Group 1: Nondirective counseling
    - Group 2: Cognitive-behavioral therapy with  
mother-infant focus
    - Group 3: Brief dynamic counseling with  
mother-infant focus
- Followed at 9 & 18 months postpartum

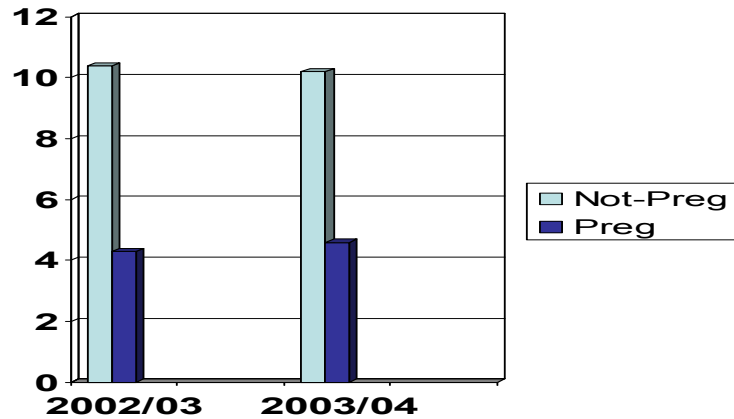
# Treatment

- Psychotherapy:
  - Cognitive-behavioral therapy showed better short & long term effects in women with no prior history of depression
  - Dynamic counseling produced better results for women with a history of depression.
  - Women in each of the intervention groups reported satisfaction with the approach
  - Treatment was shown to significantly advance remission.

# Treatment

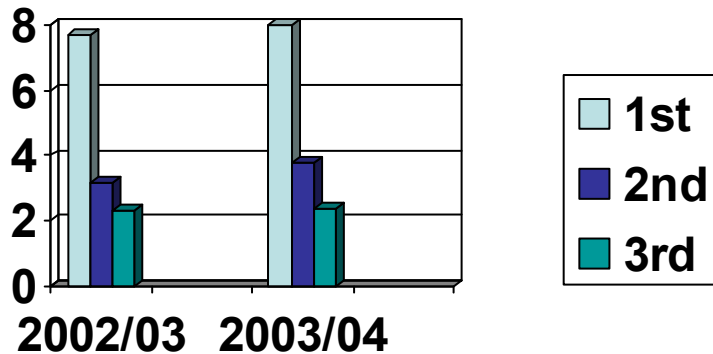
- Pharmacotherapy:
  - The American Academy of Pediatrics (AAP) states “Drug treatment is indicated if psychotherapy is inadequate or inappropriate for the patient’s severity of illness.”
  - AAP: dosing requirements of tricyclic antidepressants must be based on the trimester of exposure. The final dose achieved during pregnancy may be up to 1.6 times the dose required when the patient is not pregnant.
  - Wisner et al. studies of tricyclic and SSRIs do not show an increase for intrauterine death or major birth defects. Development of children did not differ from controls. Some direct drug effects and withdrawal were seen in infants whose mothers were treated near delivery.

# Substance Abuse



- Chart 1:

- Illicit Drug use in the past month by women 15-44 years of age. Compares percentage of Not-Pregnant (2004: 10.2%) and Pregnant (2004: 4.6%) women

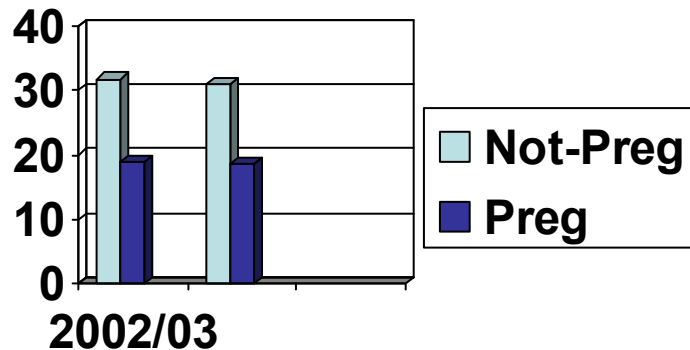
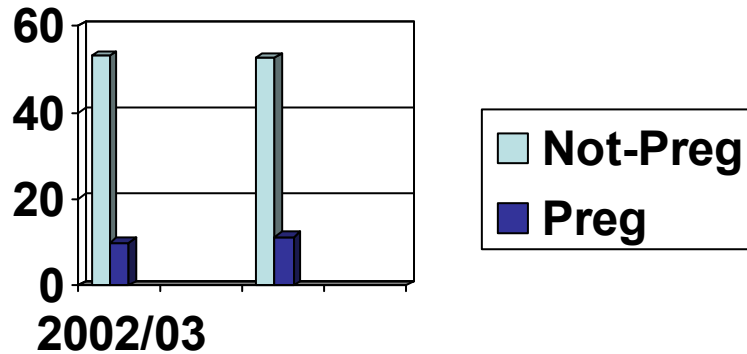


- Chart 2:

- Illicit Drug use by trimester of pregnancy (2004: 8/ 3.8/ 2.4%)

SAMHSA

# Substance Abuse



- Chart 1

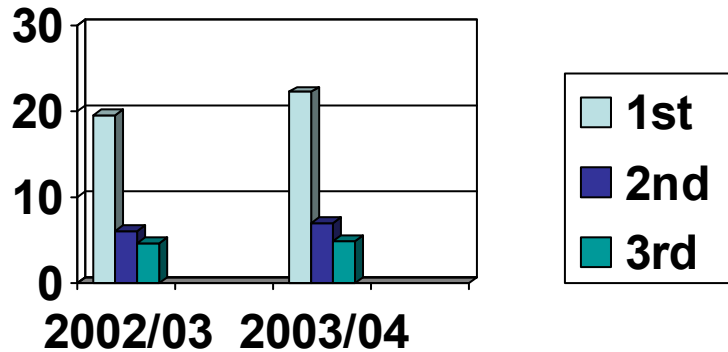
- Alcohol Use in the past month among women 15 to 44 years. Compares percentage of not-pregnant (2004: 52.8%) and pregnant (2004: 11.2%)

- Chart 2

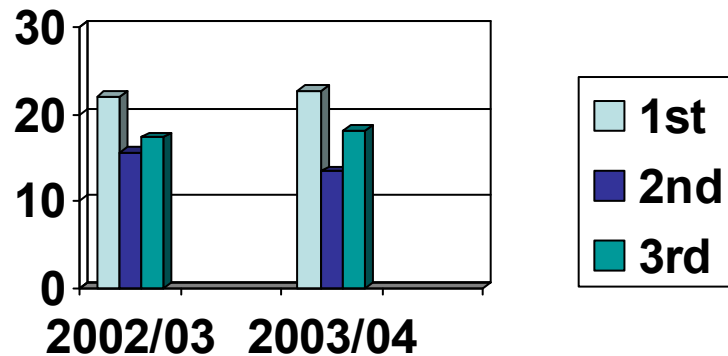
- Tobacco Use in the past month among women 15 to 44 years. Percentage of not-pregnant (2004: 31%) and pregnant (2004: 18.7%)

SAMHSA

# Substance Abuse



- Chart 1
  - Alcohol use by trimester of pregnancy. (2004: 22.2/ 7/ 4.9%)



- Chart 2
  - Tobacco use by trimester of pregnancy. (2004: 22.7/ 13.4/ 18%)

SAMHSA

# Chasnoff Study

- Public clinics:16.3% Private offices:13.1%
- White women:15.4% Black women:14.1%
- Black women were reported 10 times the rate for white women and poor women were more likely to be reported.
- Public Clinics Black women 44% yet 67% of reported patients were black.
- Private offices Black women less than 10% but 55% of those reported.

# Impact

- Tobacco
  - Nicotine is found in fetal serum and amniotic fluid at 15% higher concentrations than in maternal blood and lasts for 15 to 20 hours (much longer than cocaine)
  - If all pregnant women in the U.S. stopped smoking, there would be a 10% reduction in infant deaths.
  - Environmental tobacco smoke almost doubles the risk of SIDS.
  - Infants of mothers who smoke during or after pregnancy are 38% more likely to be hospitalized for pneumonia during their first year, and several studies have documented higher rates of asthma.
  - Nicotine causes vasoconstriction and increased heart rate in both the mother and fetus, which reduces blood flow. Nicotine also interacts with various neurotransmitter receptors in the fetal brain, which affects nervous system transmission and reduces brain cell division.

# Impact

- Alcohol:
  - FAS is the most common nonhereditary cause of mental retardation. Prevalence estimates range from .5 to 3 per 1,000 live births.
  - Drinking more than 3 drinks per week caused a 2 to 3 times increase risk of spontaneous abortion in the first trimester.
  - Autopsies of the brains of children with FAS show widespread and severe damage, including malformation of the brain tissue, failure of certain regions to develop, failure of certain cells to migrate to appropriate locations during embryonic brain development and a tendency of the tissue to die in some regions.
  - Stud of alcohol exposed children into adolescence. Social drinkers, heavy drinkers and abstainers compared, most did not meet the criteria for FAS. Long term effects included lower IQ, poorer academic achievement and classroom behavior, antisocial behavior and self-perceived learning difficulties, especially among first trimester binge drinkers.
  - Study of 3 day old infants, examined the intensity, threshold and pitch of crying with and without prenatal alcohol exposure. Significant differences found between 2 groups in all 3 characteristics and varied by the amount of alcohol used.

# Impact

- Illicit Drugs
- Marijuana: Studies of 12, 18, 24 & 36 month infants found no effect on mental and motor development. At 48 months, a number of cognitive variables are observed including, short-term memory, verbal & abstract/visual reasoning seem to be effected.
- Cocaine: increases rate of preterm delivery, low birth weight, abruptio placentae and small head circumference.
- Heroin: CNS irritability, gastrointestinal upset, yawning, sneezing, frantic sucking yet poor feeding, high pitched cry and increased or decreased muscle tone. Symptoms can last 3 to 5 days while infant goes through withdrawal.

# Impact

- Financial:
  - 1993 data, health care costs in US from smoking during pregnancy estimated at \$135 to \$167 million
  - Total lifetime cost of caring for a typical child with FAS: \$1.4 million
  - 1996 data:
    - First year costs for child of
      - Normal birth weight: \$9,330
      - Low birth weight: \$23,206
      - Very low birth weight \$64,027

# Screening

- Chasnoff's 4P+
  - Did either of your parents have any problems with drugs or alcohol?
  - Does your partner have any problems with drugs or alcohol?
  - Is your partner's temper ever a problem for you?
  - Have you ever drunk beer/wine/liquor
  - In the month before you knew you were pregnant, how many cigarettes did you smoke?
  - In the month before you knew you were pregnant, how much wine/beer/liquor did you drink?

# Screening

- Chasnoff model:
  - If all pregnant women are screened, approximately 1/3 will screen positive.
  - Those with a positive screen are asked several follow-up questions to which another 1/3 will answer positively. Those need assessment by a substance abuse professional and possible treatment.
  - Chasnoff model suggests that approximately 1,000 pregnant women in the Tulsa area need professional assessment and possible treatment per year.

# Treatment

- Need for further research regarding gender specific treatment as well as treatment for pregnant women.
- Treatment can be challenging due to the woman's fears that her baby will be taken from her.

# Domestic Violence

Maternal Demographic PRAMS	Physically hurt by partner 12 months prior to delivery.
Age:	
<20 years	10.9%
20-29	6.6%
30+	1.7%
Race:	
White	4.2%
African American	15.4%
American Indian	7.3%
Other	0
FPL	
< 100%	9.4%
100-184%	7.4%
185+%	1.3%

# Domestic Violence

- For many women, abuse may begin or escalate during pregnancy. Most studies report between 4 – 8% of women abused during pregnancy. Estimates of abuse during pregnancy have been as high as 16% and when just looking at adolescents as high as 29%.
- 324,000 pregnant women battered/year. More than have gestational diabetes or preeclampsia.
- Abuse during pregnancy is a significant risk factor in intimate partner homicide.
- Experts predict that abuse to women could be reduced by as much as 75% if identification and intervention were offered in primary care settings.

# Impact

- During Pregnancy:
  - Low weight gain
  - Anemia
  - Infections
  - 1<sup>st</sup> and 2<sup>nd</sup> trimester bleeding
  - Increased fetal distress
  - Lower infant birth weight

# Intervention

- Study of 3 public health clinics serving 12,000 pregnant women. Two clinics added questions regarding abuse to their forms, one did not. Review of medical records showed that at clinics using the form, abuse assessment increased from 0 to 88% and detection increased from .8 to 7%. There was no change at the comparison clinic.

# Effectiveness of Police Intervention

- Study of 90 women who contacted police. Regardless of any other intervention (arrest etc.)

	Before Police	After Police
Choke	60%	3%
Hit	46%	0%
Weapon Force	24%	2%
Sex	52%	6%

# Safety Plan

- An escape plan for she and her children
  - Identify emergency phone numbers
  - Hide money, extra set of car keys, house key
  - Place important papers together and easy to obtain
  - Arrange a code so children or friends know you need them to call the police
  - Ask neighbors to call the police if they hear a disturbance
  - Place a few clothes with a trusted person in case they have to leave the home for a time

# Conclusions

- For approximately 1 year, a pregnant woman has a medical care visit every month (at a minimum). This may be the most effective period in which to identify women who need behavioral health services.
- Pregnancy may be the point at which a woman is most motivated to make behavioral changes to improve the life of her unborn child.
- If such interventions do not occur the added stress of motherhood will likely increase the severity of the problems
- If the woman continues to experience these problems the life of her child will also be significantly affected.
- Behavioral health professionals should identify opportunities to work more closely with medical providers, helping them learn to effectively screen and have treatment services available to those who need them.

# Thank you!

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