

# The Pregnant Adolescent Patient

UNIVERSITY OF ARIZONA

## Case-Based Review of Considerations for Care

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## Meet Kara

Kara is a 15-year-old young woman, who is a sophomore in high school at a local public school.

She has a history of anxiety and depression which started after an episode of peer bullying in middle school. Treated with Prozac 20mg.

She presented for a peds sick visit because of vomiting and was found to be pregnant.

Pediatrician referred Kara for a sooner psychiatry appointment given this new information.

# Why Kara?

- Adolescent birth rates globally have decreased but adolescent pregnancy is still common and associated with significant health, social, and economic challenges

## Higher rates of pregnancy complications

- Poor nutrition
- Anemia
- Premature membrane rupture
- Eclampsia
- Higher mortality rate compared to adult pregnant women

## Higher rates of mental health concerns

- Prenatal and Postpartum depression
- Substance use
- Stigma
- Abuse and violence

## Higher rates of complications for baby

- Premature delivery
- Nutritional problems
- Asphyxia
- Low birth weight
- Stillbirth

## Higher rates of educational and economic challenges

- School drop-out
- Lower education and vocational achievement
- Living in Poverty

# Why Kara?

PARENTING

ADOLESCENCE



# What are your goals in this appointment?



# Goals for pediatric and perinatal mental health care: initial appointment

- Psychiatric assessment including current state, history, screening
- Risk assessment – general, adolescent, perinatal
- AACAP assessment recommendations
- Communicate options
- Identify support needs
- Treatment plan



# Adolescent Assessment



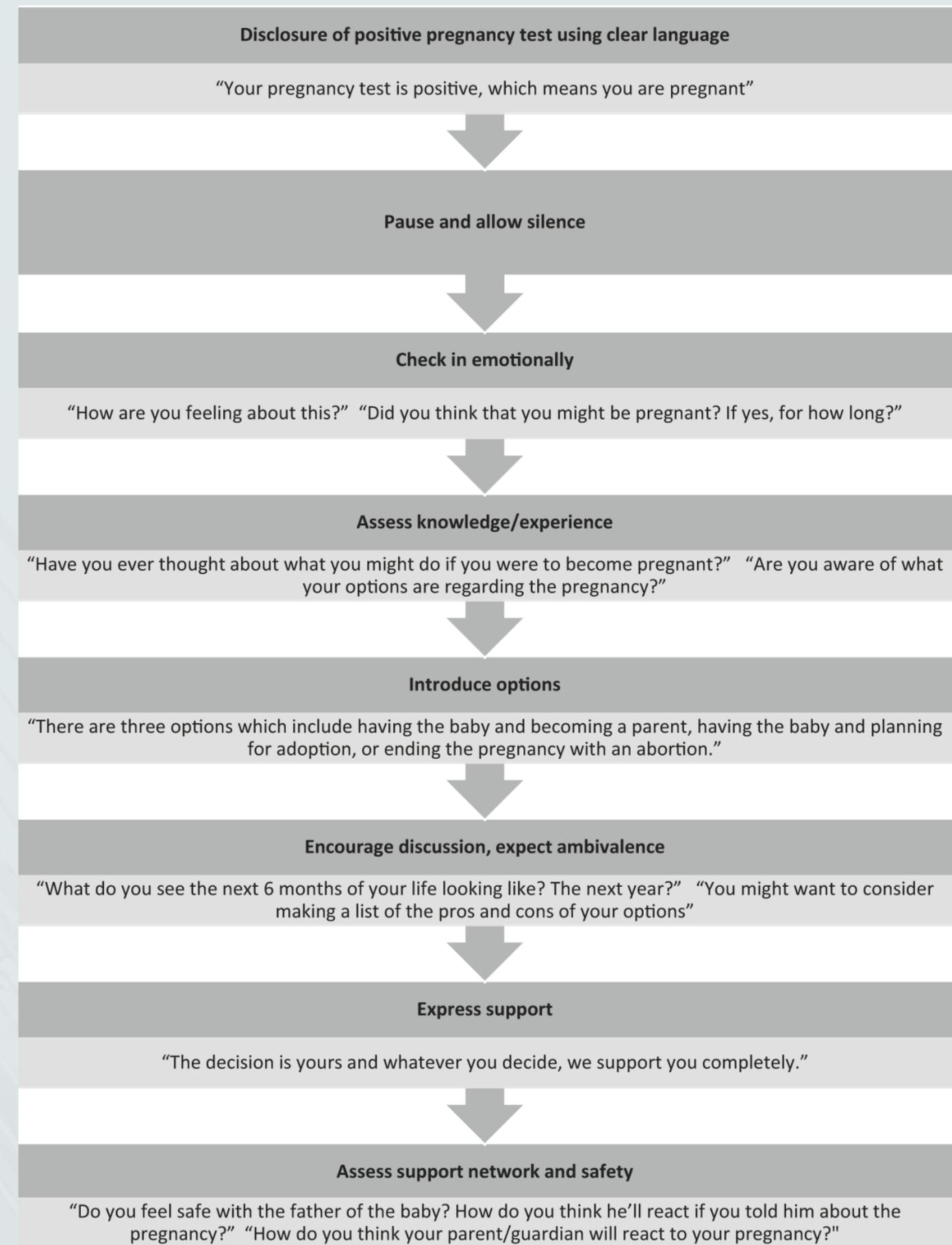
## STRENGTH based focus

- AACAP recommends assessment of pregnant adolescent includes:
  - Screening for physical/sexual/emotional abuse/domestic violence
  - Assessment for mental health disorders including depression, anxiety, trauma, and substance use
  - Availability of family/other social supports
  - Access to physical and mental health care

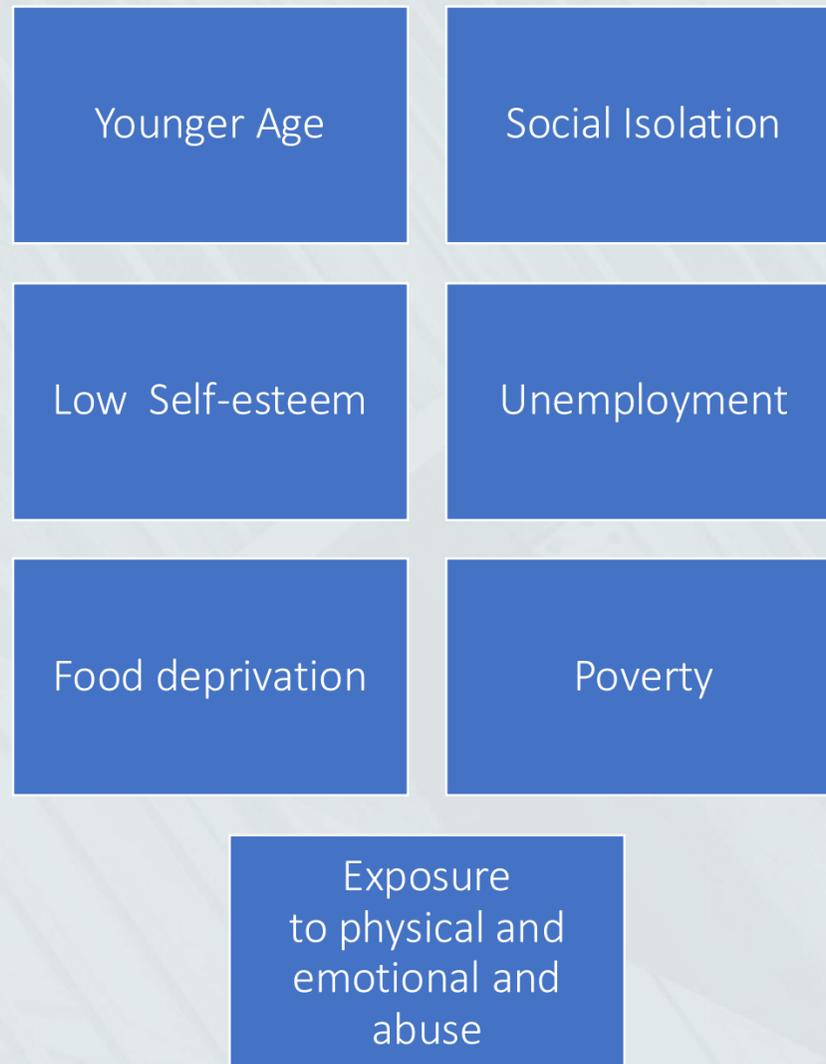
# Initial Conversations

- AAP Policy Statement on Options Counseling for Pregnant Adolescents

Communication with an adolescent about a positive pregnancy test result. (Adapted from Kirkpatrick L, Goldman P, Bell LA, et al. Structured engagement of community partners to revise a pregnancy options counseling curriculum for pediatric residents. *J Med Educ Curric Dev.* 2023;10: 23821205231190476.)



# Risk and Protective Factors for Pediatric Perinatal Patients



## Individual

- Cognitive Ability
- Optimism
- Self-efficacy
- Academic skills
- Relational Skills
- Problem Solving Skills
- Involvement in positive activities

## Relationship

- Parenting competencies
- Positive peers
- Caring adult(s)
- Supportive Partner
- Living with family members

## Community

- Positive school environment
- Positive community environment
- Economic opportunities

# Legal considerations

- AZ state law requires parental/guardian consent for mental health treatment in minors
- While no AZ statutes specifically covers minor's consent for prenatal/pregnancy care, in AZ, minors generally can consent for treatment related to pregnancy care
- AZ state law requires those under 18 to have written parental consent for an abortion or permission from a superior court judge



# Perinatal Assessment

- PMADs Screeners – EPDS can be used in pregnancy
- Universal screening for SUD followed by SBIRT
- Perinatal Risk Assessment:
  - History and current symptoms of psychiatric illness, including trauma, SI, self-harm
  - Future orientation
  - Access to lethal means
  - Sleep**
  - Family history of PMADs and bipolar disorder**
  - Protective factors, including social support



# SBIRT

- **Screening:** quickly assess use and severity of alcohol, illicit drugs and RX drug use  
T-ACE/TWEAK/AUDIT-C, 4 P's, Substance Use Risk Profile – Pregnancy
- **Brief Intervention:** 3-5 minute motivational and awareness raising intervention
- **Referral To Treatment:** referral for specialty care for patients with Substance Use Disorder

## THE 4 P'S

4 P's for Substance Abuse:

1. Have you ever used drugs or alcohol during **Pregnancy**?
2. Have you had a problem with drugs or alcohol in the **Past**?
3. Does your **Partner** have a problem with drugs or alcohol?
4. Do you consider one of your **Parents** to be an addict or alcoholic?

**Scoring:** Any "yes" should be used to trigger further discussion about drug or alcohol use. Any woman who answers "yes" to two or more questions should be referred for further assessment.

*Source: Adapted from Ewing H Medical Director, Born Free Project, Contra Costa County, 111 Allen Street, Martinez, CA. Phone: 510-646-1165.*



# EPDS vs PHQ9

## PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9)

Over the **last 2 weeks**, how often have you been bothered by any of the following problems?  
 (Use "✓" to indicate your answer)

	Not at all	Several days	More than half the days	Nearly every day
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed, or hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself — or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people could have noticed? Or the opposite — being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead or of hurting yourself in some way	0	1	2	3

FOR OFFICE CODING 0 + \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_  
 =Total Score: \_\_\_\_\_



# EPDS

<p>1. I have been able to laugh and see the funny side of things</p> <ul style="list-style-type: none"><li><input type="checkbox"/> As much as I always could</li><li><input type="checkbox"/> Not quite so much now</li><li><input type="checkbox"/> Definitely not so much now</li><li><input type="checkbox"/> Not at all</li></ul>	<p>6. * Things have been getting on top of me</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Yes, most of the time I haven't been able to cope at all</li><li><input type="checkbox"/> Yes, sometimes I haven't been coping as well as usual</li><li><input type="checkbox"/> No, most of the time I have coped quite well</li><li><input type="checkbox"/> No, I have been coping as well as ever</li></ul>
<p>2. I have looked forward with enjoyment to things</p> <ul style="list-style-type: none"><li><input type="checkbox"/> As much as I ever did</li><li><input type="checkbox"/> Rather less than I used to</li><li><input type="checkbox"/> Definitely less than I used to</li><li><input type="checkbox"/> Hardly at all</li></ul>	<p>7. * I have been so unhappy that I have had difficulty sleeping</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Yes, most of the time</li><li><input type="checkbox"/> Yes, sometimes</li><li><input type="checkbox"/> Not very often</li><li><input type="checkbox"/> No, not at all</li></ul>
<p>3. * I have blamed myself unnecessarily when things went wrong</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Yes, most of the time</li><li><input type="checkbox"/> Yes, some of the time</li><li><input type="checkbox"/> Not very often</li><li><input type="checkbox"/> No, never</li></ul>	<p>8. * I have felt sad or miserable</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Yes, most of the time</li><li><input type="checkbox"/> Yes, quite often</li><li><input type="checkbox"/> Not very often</li><li><input type="checkbox"/> No, not at all</li></ul>
<p>4. I have been anxious or worried for no good reason</p> <ul style="list-style-type: none"><li><input type="checkbox"/> No, not at all</li><li><input type="checkbox"/> Hardly ever</li><li><input type="checkbox"/> Yes, sometimes</li><li><input type="checkbox"/> Yes, very often</li></ul>	<p>9. * I have been so unhappy that I have been crying</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Yes, most of the time</li><li><input type="checkbox"/> Yes, quite often</li><li><input type="checkbox"/> Only occasionally</li><li><input type="checkbox"/> No, never</li></ul>
<p>5. I have felt scared or panicky for no very good reason</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Yes, quite a lot</li><li><input type="checkbox"/> Yes, sometimes</li><li><input type="checkbox"/> No, not much</li><li><input type="checkbox"/> No, not at all</li></ul>	<p>10. * The thought of harming myself has occurred to me</p> <ul style="list-style-type: none"><li><input type="checkbox"/> Yes, quite often</li><li><input type="checkbox"/> Sometimes</li><li><input type="checkbox"/> Hardly ever</li><li><input type="checkbox"/> Never</li></ul>

# EPDS Scoring

EPDS Score	Interpretation	Action
Less than 8	Depression not likely	Continue support
9–11	Depression possible	Support, re-screen in 2–4 weeks. Consider referral to primary care provider (PCP).
12–13	Fairly high possibility of depression	Monitor, support and offer education. Refer to PCP.
14 and higher (positive screen)	Probable depression	Diagnostic assessment and treatment by PCP and/or specialist.
Positive score (1, 2 or 3) on question 10 (suicidality risk)		Immediate discussion required. Refer to PCP ± mental health specialist or emergency resource for further assessment and intervention as appropriate. Urgency of referral will depend on several factors including: whether the suicidal ideation is accompanied by a plan, whether there has been a history of suicide attempts, whether symptoms of a psychotic disorder are present and/or there is concern about harm to the baby.

References:

# Screening tools for pregnant adolescents

## EPDS

- EPDS scales accurate for screening for post-partum depression in adolescent mothers
- Small studies have used EPDS in pregnant adolescent mothers, found lower optimal cut-off point (8/9)

## PREP

- Parenting Responsibility and Emotional Preparedness (PREP) Screening Tool

## Trauma

- Child and Adolescent Trauma Screen (CATS)

# What questions do you have for Kara?



# Questions for Kara

- How does she feel about the pregnancy?
- Was pregnancy planned/intended/traumatic?
- Related to IPV, abuse etc?
- Plans for the pregnancy?
- How much support does she have at home?
- What are her educational goals?
- Has she confirmed the pregnancy? Does she have access to OBGYN care? Does she know how far along she is?
- Is she still taking medications? Is nausea/vomiting getting in the way of medications?
- How does she imagine parenthood/parenting (if desired)
- Sense of self
- Current mood
- History of psychiatric illness in self and family
- How is sleep going? How is her energy level?
- How is school going? Is school staff supportive?
- Partner involvement in pregnancy and parenting?

# Key findings at initial appt

- Kara is experiencing symptoms consistent with generalized anxiety disorder and major depressive disorder
- She is planning to keep the pregnancy and parent the baby but still discussing all options with her support system
- Kara has already been seeing an individual therapist since middle school and would like to continue working with her
- She is interested in continuing her medication to help with current symptoms of depression and anxiety and her family is supportive of this
- Negative SUD screening, EPDS 2



# Treatment Planning



# Treatment Planning

- Informed consent for medication
  - Risks of untreated anxiety/depression in pregnancy vs. known possible risks of medication.
- Starting planning for post-pregnancy if decision made to continue pregnancy
- Involvement of supports
- Multi-disciplinary team: establish communication with OBGYN, pediatrician

# General principles: Medications

- Minimize the number of adverse exposures:
  - Multiple medications
  - Relapse
  - Partial treatment
- Don't expose to both illness and medication – treat to remission
- Use medications with data when possible
  - Know that data does not make it the best medication for the patient in front of you



# Risk of medication discontinuation

- Significantly higher relapse rates when medication treatment discontinued before/during pregnancy in women who were euthymic at baseline
- Depression Relapse Rate: 68% (discontinued ADM) vs 26% (continued ADM) (Cohen et al., 2006)
- Bipolar disorder Relapse Rate: 85% (discontinued mood stabilizer) vs 37% (continued mood stabilizer) (Viguera et al., 2007)
- Women with a history of peripartum psychosis have a 50-80% chance of subsequent episodes (Tinkelman, 2017)

# Perspective on Risk

- Present data accurately *and* recognize that words matter-
  - “200% increase in risk” may be accurate, but an increased risk from 1.15:100 to 2.4:100 or a almost *98% chance of no effect* may be more clear
  - \* Odds or relative ratio vs absolute risk increase

All pregnancies carry baseline risk:

Rate of major malformations: 3-4%

Rate of premature delivery: 11-12%

Rate of gestational diabetes: 2-7%



# Risks of Untreated Depression and Anxiety in Pregnancy



## To mom

Increased risk of miscarriage, hemorrhage, gestational hypertension, **suicide**, preeclampsia, poor attachment, placental abnormalities, poor maternal nutrition, breastfeeding difficulties.

## To Baby

Increased risk of preterm birth, NICU admission, low birth weight, neonatal hypoglycemia, microcephaly, increased risk of psychiatric illness in childhood and adolescence, poor attachment, cognitive and motor delays.

## To Community

- Average cost per affected mother–child dyad is \$31, 800
- Loss of economic productivity, cost of pre-term birth, cost of other maternal health expenditures.
- AZ: \$399 million/year

# Risks of untreated depression and anxiety in pregnancy

Outcome	Societal costs
<b>Total societal costs</b>	
<b>Pregnancy outcomes: Compared with birthing parents without PMADs, those with PMADs</b>	
Cesarean delivery	Are <b>1.2 times</b> more likely to deliver via cesarean delivery
Health expenditures (non-obstetric)	Have an increased health expenditure of <b>\$1,795</b> for insurers and <b>\$354</b> in individual out-of-pocket costs
Peripartum stay	Have peripartum stays that are <b>3 days</b> longer on average
Preeclampsia	Are <b>1.9 times</b> more likely to develop preeclampsia
Productivity losses	Are <b>30%</b> more likely to be unemployed, and have increased absenteeism and presenteeism
Social service use	Are <b>0.25%</b> more likely to be enrolled in Medicaid, <b>0.23%</b> more likely to be enrolled in SNAP, <b>0.20%</b> more likely to be enrolled in TANF, and <b>0.175%</b> more likely to be enrolled in WIC
<b>Total costs for cohort of birthing parents</b>	
<b>Child outcomes: Compared with the children of birthing parents without PMADs, children of those w</b>	
Asthma	Are <b>1.9 times</b> more likely to develop asthma
Behavioral or developmental disorders	Are <b>1.5 times</b> more likely to develop a behavioral or developmental disorder
Childhood obesity	Are <b>1.4 times</b> more likely to have obesity
Emergency department visits	Are <b>1.6 times</b> more likely to have an emergency department visit
Hospitalizations for injury	Are <b>1.9 times</b> more likely to have an injury resulting in a hospitalization
Neonatal death	Are <b>3.1 times</b> more likely to die during the neonatal period
Preterm birth	Are <b>2.4 times</b> more likely to have preterm birth
SIDS	Are <b>4.1 times</b> more likely to have SIDS
Stillbirth	Are <b>2 times</b> more likely to be stillborn
Suboptimal breastfeeding	Are <b>10%</b> less likely to be exclusively breastfed at 3 months

# Start planning for postpartum

**YOUR**  
*Postpartum Plan*



**PSI**

*You are not alone.  
Help is available.*

# Plan:

- Continue on Prozac 20mg
- Collaborate with care team- OBGYN, pediatrician, school, family, therapist
- Provide PSI Postpartum Plan Template

## Kara at 20w

Decides to keep the pregnancy and parent the baby after birth. She continues on Prozac 20mg.

She continues in school.

She reports initial improvement in symptoms for several weeks with more recent worsening anxiety.



# What might be going on?



# Possible contributors:

- Managing multiple roles- daughter, student, mother
- Increased stressors
- Worsening depression, anxiety
- Bullying
- Difficulty identifying with peers
- Physiologic and physical changes of pregnancy
- Sleep changes



# Physiological changes in normal pregnancies

**Weight gain**

**Sleep**

Endocrine system

Cardiovascular system

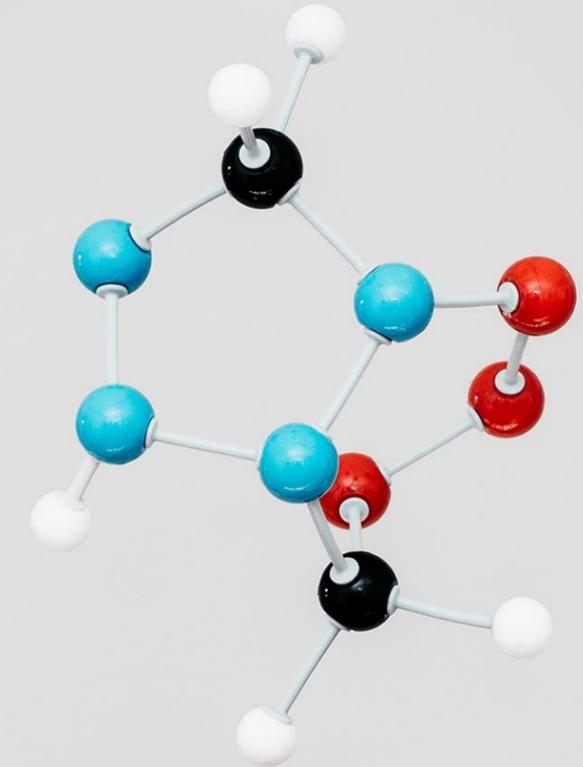
**Hematologic system**

Respiratory system

Urinary system

Gastrointestinal system

Central nervous system



# Medication Metabolism Changes:

- Ratio of lean muscle to adipose tissue decrease- Most psychotropic drugs have a lipophilic profile and show a greater volume of distribution during pregnancy, which may lead to lower peak plasma concentrations.
- Renal blood flow and glomerular filtration rate (GFR) increase- lead to a likely lower peak plasma concentration of medication, despite the possibility of an increased free fraction of drugs due to lower albumin levels.
- Hepatic metabolism (CYP enzymes 3A4, 2A6, 2D6, UGT1A4 and possibly UGT2B7) increase- responsible for the metabolism of a majority of psychiatric medications including SSRIs, SNRIs, benzodiazepines, first- and second-generation antipsychotics and certain TCAs.



# New Stressor: Weight Gain

Too much or too little is associated with preterm birth

Can have profound psychological impacts- especially for those with an eating disorder

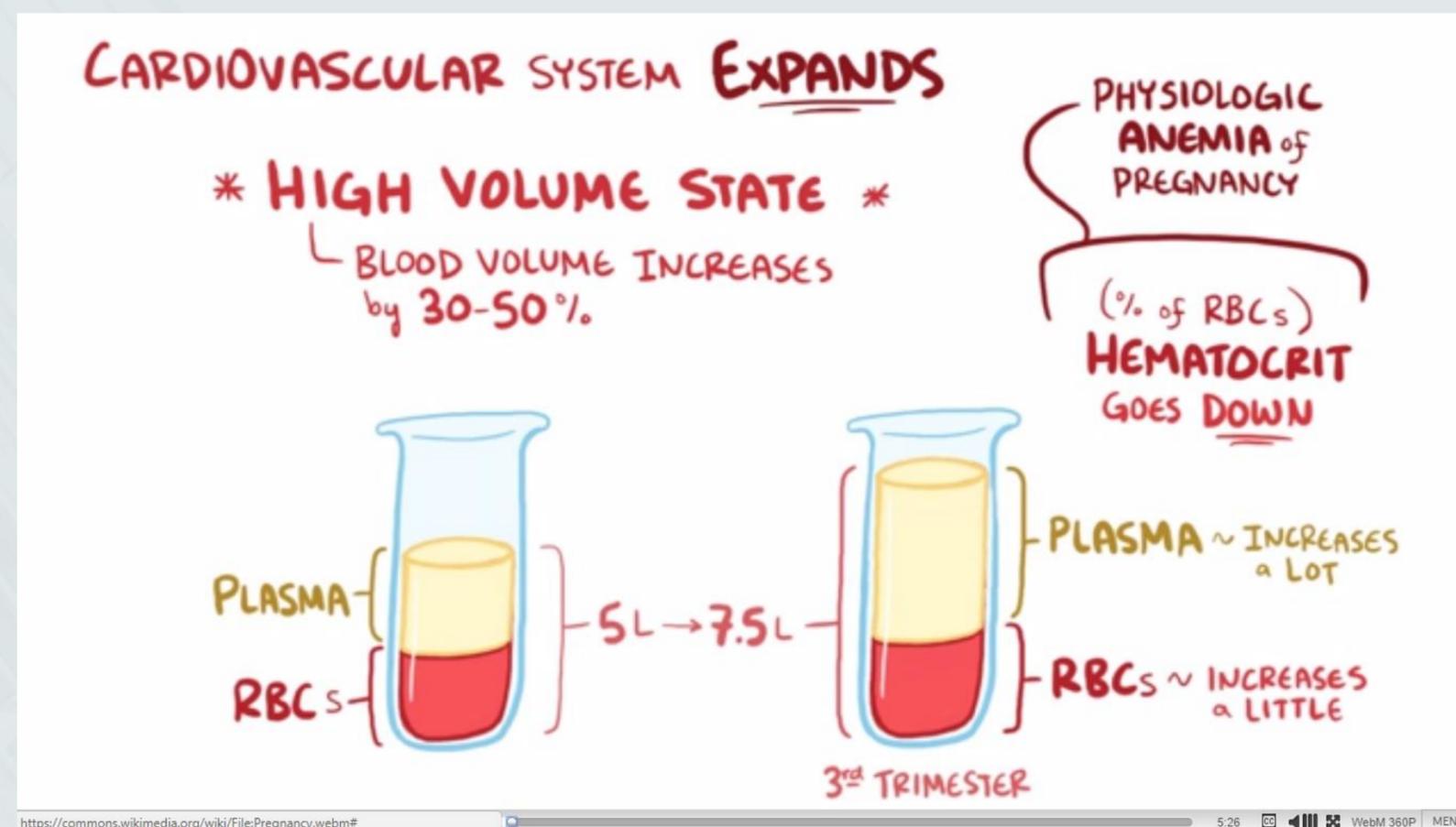
- Retriggering habits (eg: vomiting, restriction)
- Body image concerns
- Loss of control of body

Prevalence rate of eating disorders during pregnancy is 7.5%



# Physiologic Anemia of Pregnancy

- Anemia may mimic anxiety or depression
- Overall lower peak plasma concentration of medications



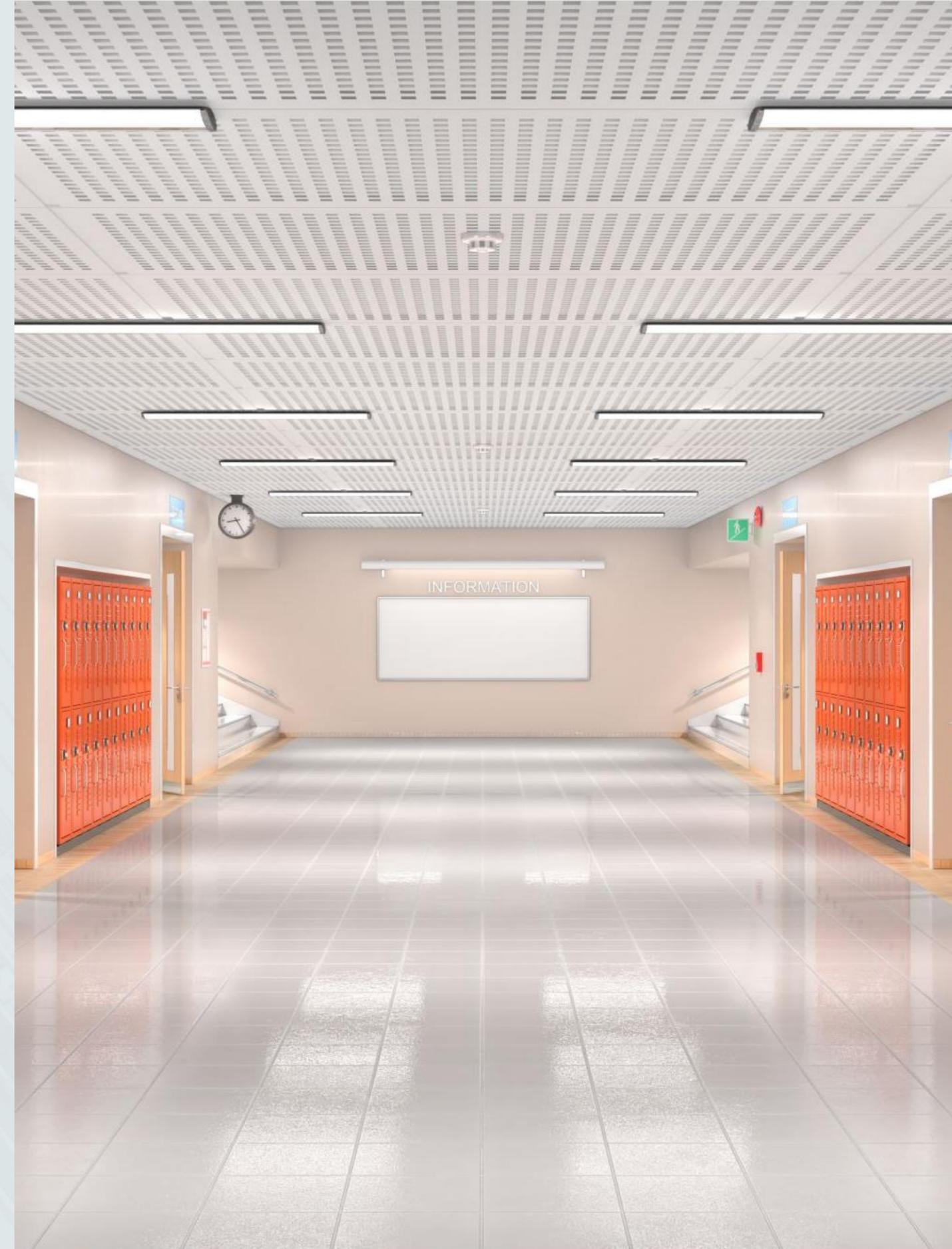
## School Challenges

- Only 51% of teenage mothers graduate high school by age 22 compared with 84% of non-parenting women
- Less than 2% of teenage mothers graduate college by age 30
- Parenting can also be a strong motivator for education
- Supportive policies can help ensure better outcomes



# Title IX protections for pregnant and parenting students

- School must allow:
  - Continued participation classes and extracurricular activities
  - Reasonable accommodations like elevator access/larger desk/frequent restroom trips
- School must excuse pregnancy related absences and allow make up work
- School must protect students from harassment based on sex, including harassment because of pregnancy
- 2024 update and current law
- Best practices:
  - Inform students about title IX coordinator and options
  - Do not keep list of students who are pregnant



# Treatment Planning Considerations



# Considerations when meeting with Kara

- Check on medication compliance
- Any physical issues with medications (eg: still nauseous?)
- Check on any other physical symptoms – constipation, racing heart, lightheaded etc
- Body image, reaction to weight gain/body changes
- Explore additional stressors (peers, school, conflict with family)
- Lab work – keeping in mind trimester specific values
- How is sleep?



# Findings

- CBC normal, ferritin > 60
- No concerns about weight gain or physical changes.
- Good group of friends but they often don't understand her worries about the future.
- Worrying about grades due to missed classes for prenatal appointments.
- Feeling more irritable by the end of the day which leads to more arguments with parents.



# Plan

- Increase her Prozac to 40mg to address worsening anxiety.
- Inform care team (OB/Pediatrician/therapist) of medication change.
- Help Kara make a plan for pursuing more school support.  
Provide information on Title IX accommodations.
- Coordinate with therapist to encourage a family session.



## Kara at 34w

Trying to decide if she should have a baby shower – mom really wants to have one, Kara is reluctant.

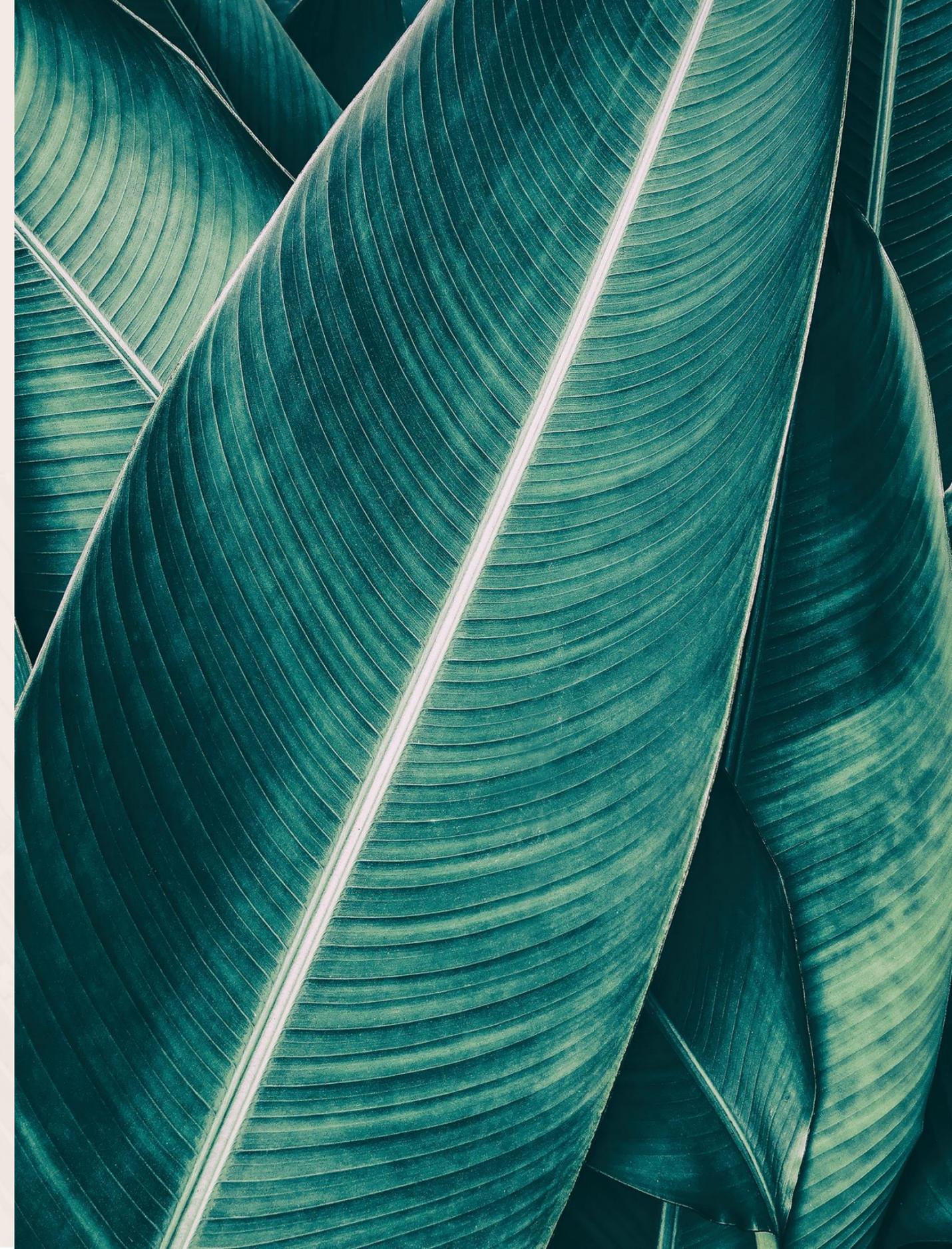
Continues on Prozac 40mg, improvement in school anxiety and relationship with parents.

Looking forward to delivery, but finding decisions about birth overwhelming.

Difficulty with sleep maintenance recently.

# What do you want to check on?

- Relationship with parents
- Medication compliance
- Avoidance- anxiety, PTSD?
- Sleep patterns and strategies – what is getting in the way?  
What is working? Phone use before bed?
- Check on postpartum care plans
- Advanced guidance regarding breastfeeding and postpartum period.



# Treatment Planning Considerations



# Sleep

- First trimester
  - Increased total sleep time: increase in naps
  - Increased daytime sleepiness
  - Increased nocturnal insomnia
  - 13% report sleep disturbance
- Second trimester
  - Normalization of total sleep time
  - Increased awakenings
  - 19% report sleep disturbance
- Third trimester
  - Decreased total sleep time
  - Increased insomnia
  - Increased nocturnal awakenings
  - Increased daytime sleepiness
  - 66% report sleep disturbance**



# New Stressor: Poor Sleep

- Most pregnant women (66% to 94%) report alterations in sleep that lead to the subjective perception of poor sleep quality.
- Up to 73.5% of women report insomnia: mild 50.5%, moderate 15.7%, and severe 3.8%
- Pregnancy causes such significant changes that the American Academy of Sleep Medicine has described a specific pregnancy-associated sleep disorder characterized by insomnia and/or daytime fatigue.
- Abnormal sleep patterns in pregnancy may contribute to certain complications, such as hypertensive disorders and fetal growth restriction.



# What causes insomnia during pregnancy?

- Pregnancy-associated symptoms: urinary frequency, heartburn, fetal movements
- Sleep apnea (up to 26% in 3rd trimester)
- Restless leg syndrome
- Anxiety
- Depression

# Risks conferred by perinatal insomnia

**Increasing rates of gestational diabetes** (Facco et al. 2017)

**Higher rates of prolonged labor and delivery** (Lee and Gay 2004)

**Preterm Birth** (Felder et al. 2017; Okun et al. 2011)

**Near miss MVA for new parents** (Malish et al. 2016)

**Also associated with perinatal depression and anxiety, mood changes immediately after birth, and postpartum psychosis**

# Sleep disturbance in pregnancy and suicide

- Arditi-Arbel and colleagues (Jan 2023) reviewed published research studies, including data on sleep disturbance and suicidal thoughts and behaviors.
- They identified a total of 51 studies with a total of 45,942 participants exploring risk factors for perinatal suicidal thoughts and behaviors
- In a 2017 systematic review by Littlewood et al, they noted lack of belongingness or social isolation may explain the relationship between sleep disturbance and suicidal ideation
- Sleep disturbance is an important, and potentially preventable, risk factor for suicidal thoughts and behaviors in pregnant and postpartum women
- Bi-directional complex relationship

# Planning ahead

- Review postpartum plan including:
  - Sleep plan
  - Coping skills
  - Recognizing personal warning signs
  - Identify support people
  - Plans for eating- cooking, frozen meals, snacks on hand
  - Planning for physical recovery
  - Maintaining social connection



## Sleep & Rest

How many hours of sleep do you need each night to function and feel good?

Where will baby sleep?

How can you use daytime hours or someone else's help to get some extra rest?

What can you prepare ahead of time for overnight needs (feeding and diapers, etc)? If you are able to take "shifts" with someone, where will you both sleep and how will shifts work?

# Plan

- Encouraging planning ahead – connecting with resources
  - Labor and delivery prep
  - Feeding baby prep
- EPDS prior to delivery to assess for prenatal depression, anxiety
- Addressing sleep:
  - Sleep hygiene
  - Caffeine intake
  - Reducing anxiety
  - Magnesium



# Kara 4 weeks after delivery

- Reports that she delivered via C-Section after stalled labor
- Breastfeeding
- Living with parents



# What do you want to check in on?



- Perception of delivery
- Breastfeeding success and desires
- Sleep
- Mood, anxiety
- Medications
- Health of baby
- Bonding
- Fears
- Support system



# Next steps

- Evaluate for PMADs via interview and EPDS
- Connect with support groups (lactation groups, emotional support groups)
- Check in on postpartum plan- how has it been working? Do we need to tweak anything?
- See how baby is doing with breastfeeding on Prozac
- Continue to explore educational goals



# Take home points

Adolescent pregnant patients are a vulnerable population with unique risks

Specialized approach that combines principals of adolescent and perinatal mental health care

Emphasis on strengths and building protective factors

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