Brief Overview Perinatal Mental Health

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Postpartum Support International

What are PSI and PSI-CA?

Postpartum Support International (PSI) was founded in 1987. Its purpose is to increase awareness among public and professional communities about the emotional changes that birthing people experience during pregnancy and postpartum. PSI provides direct peer support to families, trains professionals, and serves as a bridge between the two.

The California Chapter of PSI was founded in 2020, and our mission is to promote equity and inclusion in awareness, prevention, and treatment of mental health issues related to pregnancy, childbearing and parenting in California.

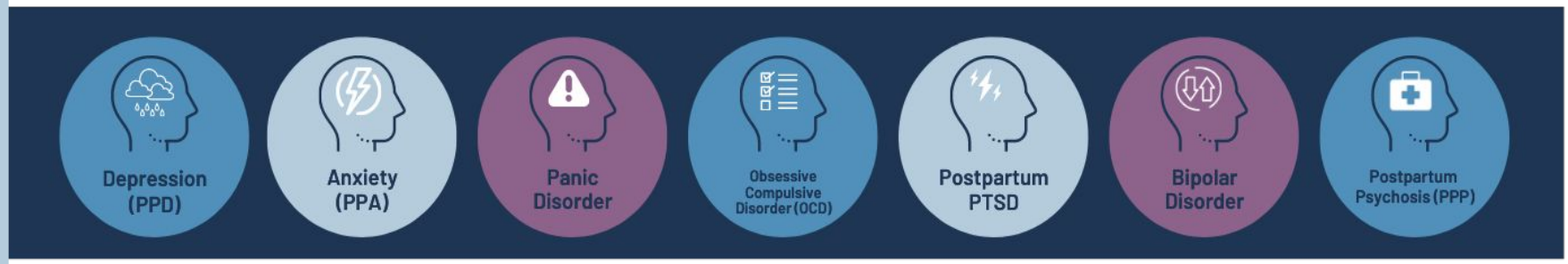
Perinatal Mental Health Disorders (PMHDs)

- **"Postpartum" (12 months after birth) means:**
  - Popularized as 'postpartum depression,' but runs full MH gamut
  - Formerly Perinatal Mood and Anxiety Disorders (PMADs), now Perinatal Mental Health Disorders (PMHD), includes psychosis
  - DSM V politics (qualifiers for first six weeks only)
- **Lack of education:**
  - **Currently no therapist board mandates training in PMH** -> mandate HIV/AIDS, sexuality, aging/long term care, child development, domestic violence

Perinatal Mental Health Disorders

- **1 in 5 nationally for birthing parents, more likely 1 in 3 in California**
  - Data misses miscarriages and abortions, adoption and partners
  - Parental self-report is fraught due to stigma attached to mental health/mood disorders and fear of CFS involvement
- **Different from the 'Baby Blues' (more on this later)**
  - Baby blues only lasts until **2 weeks postpartum**
- **Impact:**
  - Untreated PMHDs cost healthcare system costs $31,800 per mother*
  - Impact on attachment between parent/child, parents' relationship, long-term consequences to children and families
  - 2025 DHCS Birthing Care Pathways, 75% of women DO NOT receive treatment in California

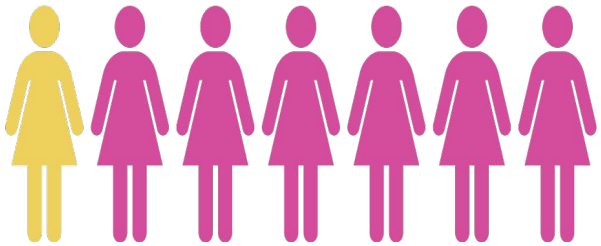
PMHDs – Perinatal Mental Health Disorders



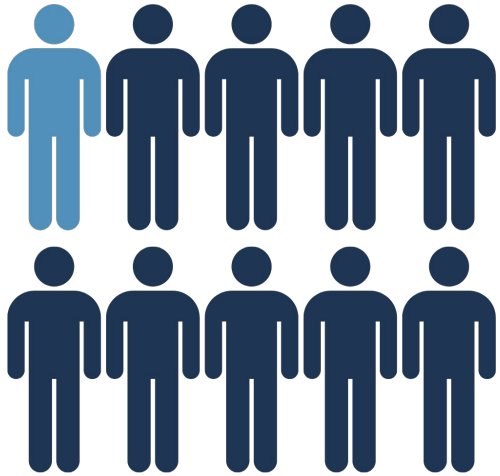
- Postpartum Depression (**PPD**)
- Postpartum Anxiety (**PPA**) & Panic Disorder
- Obsessive-Compulsive Disorder (**OCD**)
- Bipolar Disorder
- Postpartum Post-Traumatic Stress Disorder (**PTSD**)
- Postpartum Psychosis (**PPP**)

STATISTICS

- **1 in 7** mothers experience serious depression (**PPD**) or anxiety (**PPA**) during pregnancy or postpartum.



- **1 in 10** fathers experience depression before or after the birth of their child.



- **1-2** mothers out of **1,000** might have a serious condition called postpartum psychosis (**PPP**).

Three U's of Dad's and Postnatal Paternal PMH

- **Under-screened**
  - Onset often around 3-6 months postpartum, also OCD, anxiety, etc.
- **Under-diagnosed (1 in 10)**
  - 10.4 – 14% in United States
  - Pre/postnatal care geared towards Mother/Child dyad
  - Low self-report due to stigma attached to mental health/mood disorders
- **Untreated**
  - Lack of education and focus on research surrounding PMH symptomatology in men (i.e. often referred to as 'paternal depression')

When Parents Need Help

Screening For Perinatal Mental Health

- **What does your clinic use?**
- **Most common - Edinburgh Perinatal Distress Scale (EPDS/Edinburgh/EPDS-US)**
  - new version vs. old - pregnant vs journey
  - validated for screening, but languaging difficult for loss parents and non-birthing parents
- **PHQ-9, GAD-7**
  - Very common in FQHC clinics, diagnostic vs. screening tool
- **Perinatal Anxiety Screening Scale (PASS)** located at https://mihp.utah.gov/wp-content/uploads/Perinatal-Anxiety-Screening-Scale.pdf

When and Where to Screen

- PMHDs can occur any time during pregnancy or up to a full year after birth
- After the first three months, most common time is after return to work or after abrupt weaning
- Without treatment, symptoms can continue long after the first postpartum year
- Suggested screening guidelines:
  - Regularly during pregnancy and at delivery
  - At six-week postpartum visit, and
  - After first six weeks, at each pediatric visit during the first year

Myths of Parenthood

- **Good parent vs. Bad parent, i.e. WHAT NOT TO SAY**
  - Good parents don't get depressed! (or anxious, or traumatized, etc.)
  - You're having/had a baby, you can't be depressed!
  - But the baby is healthy, focus on that!
    - Birthing parent as a "candy wrapper" rather than a human being
  - Provider bias towards cis-gender, heterosexual, partnered moms and babies
    - "Is Dad babysitting today?"
    - "Where's Dad today?"
    - "Where's Mom today?"
    - "Are you Mom or are you Dad?"

Consequences of Myths of Parenthood

- **Stigma -"good parents don't get depressed/anxious"**
- **Shame - "must be my fault"**
- **Lack of outreach for help**
  - Lying on screening tools
  - Think this is just how new parenthood really is
  - Common experience is "I'm a terrible parent" rather than "I'm depressed/anxious"
  - Mistrust of healthcare providers (especially among marginalized communities)
  - Fear of Child Protective Services

Risk Factor: Unrealistic Expectations of Parenthood

- **Unrealistic expectations related to shared caretaking**
  - Equal caretaking for baby/household (overnight, after work)?
- **Unrealistic expectations related to loving child**
  - Assumption of immediately falling in love with child/role
- **Financial Responsibility**
  - Increased pressure for promotion, raise
  - Impact of family leave - does partner take theirs?
- **Lack of self-care ("I should be able to do it all, without help!")**
- **Balancing sleep deprivation (risk factor) and work**

Contributors to PMHDs

- **Hormones (changes affect all birthing and caregiving parents)**
  - Estrogen - large increase during pregnancy, rapid decrease in estrogen and progesterone after birth/while breastfeeding
  - Testosterone decrease in cohabitating fathers in 3rd trimester
  - Increased oxytocin/prolactin/cortisol in all new parents when caregiving
- **Brain changes associated with caregiving may contribute**
  - Significant brain changes in birthing people help with attunement
  - Brain changes also in partners who spend time caregiving
  - Greater brain changes positively associated with postpartum depression in fathers
- **History of mood or anxiety disorder**
- **Postpartum psychosis** link to Bipolar Disorder or first manic episode

Contributors to PMHDs (Cont'd)

Psychosocial factors

- Work or financial stress
- Relationship dissatisfaction/lack of empathy by partner
- Planned pregnancy vs. unplanned
- Prior pregnancy/infant loss, infertility journey, pregnancy or birth complications
- Colicky or sick baby (NICU), temperament mismatch
- Lack of social/family support
- Feeding complications or abrupt cessation of breastfeeding
- Personality issues (perfectionism, people-pleasing, Type A)
- Recent life stressors (move, loss of loved one, etc.)

Contributors to PMHDs (Cont'd)

Adverse Childhood Experiences **(ACEs) -** Understanding the impact of childhood trauma

A checklist of common childhood traumas that are positively associated with health and mental health challenges, such as:

- childhood emotional neglect or severe poverty
- loss of a parent
- parent with mental health or substance abuse challenges
- physical, psychological or sexual abuse

A high ACE score is positively correlated with perinatal mental health and substance use

Biologic Risk Factors For Women

- **Family/Personal History Mental Health Concerns**
- **Family/Personal History of Thyroid Illnesses**: Postpartum thyroiditis and anxiety similarities in sx
- **Inflammation and Metabolites**
  - Cedars Sinai studies 2021/2022: inflammation correlates, marker in plasma
  - Japanese study plasma metabolic disturbance 2023
- **Premenstrual Syndrome (PMS) and Premenstrual Dysphoric Disorder (PMDD)**: Correlation between history of pain/mood issues and PMHDs
- **Shorter or longer break between children**
  - WHO recommends 18-24 months minimum, Mayo recommends not more than five years
- **Other Biological Factors**
  - Onset of PMHDs often occur after cessation of breastfeeding
  - low Vitamin D, iron, circadian rhythm, sleep dysfunction/sleep issues

Additional Biologic Factors For Men

- **Cohabitating with gestating partner**
  - Men generally experience a drop in testosterone a month before birth, increase in estrogen
  - Lower testosterone creates higher empathy in fathers
- **Pre/Post Birth**
  - Higher testosterone/lower cortisol in fathers correlates to poor paternal parenting and vice versa
  - Oxytocin correlated to stimulatory play – 30 sample study showed nasal oxytocin just prior to labor increased paternal motivation.

Additional Biologic Factors for Trans-men/Gender Non-Conforming

- **Additional likelihood of prior mood and anxiety disorders in this demographic**
- **Impact of Testosterone**
  - Cessation of testosterone and rebound to estrogen
  - Minimal research on fertility time period of moving into gestating parent.
- **Pre/Post Birth**
  - Unknown impact on biochemical mood of moving out of gestating parent to restarting testosterone
  - If chest-feeding, then risk for PMH onset at cessation

Prevalence of PMHDs in the LGBTQ+ Community

- **Increased Risk Among LGBTQ+ Women:** Research indicates that they are 50% more likely to experience stress and depression during pregnancy
- **Higher Rates of Postpartum Depression:** LBGTQ+ women are more likely to screen positive for postpartum depression
- **Elevated Mental Health Challenges:** LGBTQ+ women in the U.S. face disproportionately high rates of trauma and mental health issues, yet they are less likely to seek medical care.

Barriers to Accessing PMH Treatment for LGBTQ+

- **Discrimination and Stigma:** LGBTQ+ often encounter discrimination in healthcare settings, leading to mistrust and avoidance of care
- **Lack of Provider Competence:** Many healthcare providers lack training in LGBTQ+ health issues, resulting in inadequate or insensitive care
- **Systemic Heteronormativity:** Medical forms and practice assumptions alienate LGBTQ+ patients
- **Fear of Legal and Social Repercussions:** Concerns about PMH diagnoses leading to child removal or employment discrimination deter LGBTQ+ from seeking help
- **Geographical and Financial Barriers:** Access to LGBTQ+ - competent care is limited geographically and financially

Cultural Considerations

- **Underdiagnosis and Misdiagnosis**: Clinicians unfamiliar with culturally specific expressions of distress (e.g., somatic complaints rather than emotional language) may miss postpartum depression or anxiety.
- **Bias in Health Systems**: Racial and ethnic minorities, especially Black and Indigenous women in the U.S., face higher rates of miscommunication, dismissal of symptoms, and poorer maternal outcomes due to systemic bias.
- **Language Barriers**: Limited English proficiency can hinder screening, psychoeducation, and treatment engagement.

Cultural Considerations (cont'd)

- **The Perinatal Health Alliance for People of Color (PMHA or Alliance)** was founded in February 2017.
- The **Alliance** is bridging the gap in perinatal mental health support services for birthing persons, providers, and communities of color.
- Within PSI, the **Alliance** is continuing to bridge the gap in PMH support services by expanding its reach to the **LatinX and Spanish-speaking community** with our Alliance Spanish & Cultural Program.

But That's Just New Parenthood

For all parents, PMH concerns can masquerade as

- Response to hormonal shifts
- Concern about physical changes/birth recovery
- Somatic complaints
- Normal sleeplessness/exhaustion

Providers often dismiss the mood and anxiety symptomatology

- Irritation and low mood/flat affect can look like tiredness
- Anxiety can look like normal new parent worry

Mental Health History Risk Factors in PMH

- **Previous episode of depression or anxiety disorder**
- **Anxiety about the pregnancy and birth experience**
  - Fear from prior experience, fear of watching partner suffer, fear of loss of sexuality and intimacy
- **History of trauma** – High ACE Score
- **Family of origin/Ghosts in the nursery**
  - **Overprotective family of origin** increases the risk paternal perinatal depression (Matthey S. et al, 2000)
  - Childhood neglect (even without specific trauma) contributes to anxiety & depression

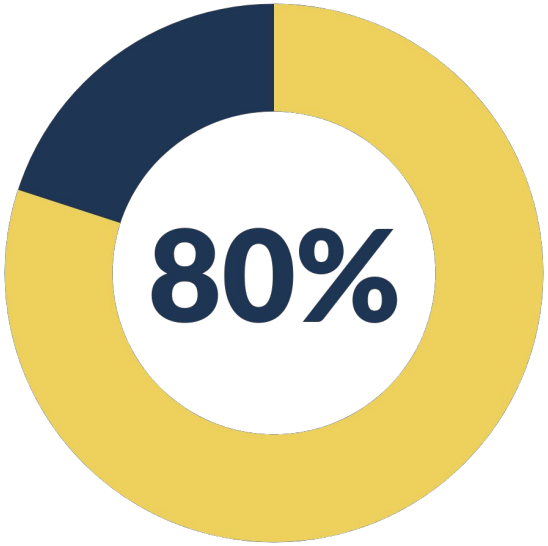
Intersectional Risk Factors in PMH

- **What is intersectionality**
  - crossroads of race/ethnicity/immigration status, gender, sexual identity, disability/neurodivergence
- **How does intersectionality create a risk factor in CA**
  - implicit bias and systemic racism
  - causes chronic stress in marginalized groups
  - BIPOC birthing people higher rates of PMH
    - Up to 44% in Black women, 40% in Latina women

The Specifics: Recognizing Baby Blues

Baby Blues

- Thought to be response to hormonal shifts
- About 80% of birthing women
- More linked to hypomania than depression
- Lasts only about two weeks after birth



Symptomatology

- Anxious/Overwhelmed
- Sad/Mood swings/Loss of appetite
- Tearful/Crying spells
- Difficulty sleeping
- Waxes and wane/not clinically severe
- Resolves on its own

Language of Perinatal Mental Health Disorders

- No one has ever felt as bad as I do *helplessness*
- I have made a terrible mistake *anxiety*
- I am all alone and no one understands *isolation and withdrawal*
- I am a failure as a parent/partner *guilt, poor self-esteem*
- I will never be myself again *hopelessness*
- I'm losing it *despair*
- I am on an emotional roller coaster *mood changes*
- I want to cry all the time *tearfulness*
- Everything feels like a huge effort *no energy*
- I feel like I'm in a fog *disorientation, confusion*
- Sometimes I think everyone would be better off without me *suicidal thinking*

Adapted from MMHN, 2018

Most important take-home message about PMHDs

Intrusive thoughts are pervasive in new parents (almost universal)

- Can be thoughts or images
- Can be extremely graphic and disturbing in nature
- Can be near-constant in severe anxiety or OCD
- Parents often keep thoughts to themselves due to fear and stigma
- Parents without psychosis are upset by these thoughts

NORMALIZE INTRUSIVE THOUGHTS, EVEN DISTURBING ONES

- Postpartum psychosis is not just intrusive thoughts
- Those with intrusive thoughts need understanding and empathy, not a big reaction, a report to CFS or a 5150

Perinatal Depression Symptomatology

- Difficulty sleeping
- Trouble coping/overwhelm
- Loss of appetite (more common) or overeating
- Sadness/tearfulness
- Feeling numb (just going through the motions)
- Poor concentration
- Fear of being left alone or social isolation
- Commonly comorbid with anxiety
- Difficulty connecting to baby/feeling like the baby is theirs
- Forgetfulness
- Feelings of failure

In fathers, more often includes hyperfocus on work, irritability, agitation, increase in risky behavior/substance use

Perinatal Anxiety/Panic Disorder Symptomatology

- Excessive worry/preoccupation with safety and baby's well-being (calling/seeing pediatrician frequently)
- Sleep issues (sometimes complete inability to sleep)
- Feelings of guilt and shame
- Panic attacks can progress to panic disorder, challenges leaving the house or caring for the baby
- Inability to relax, restlessness
- Overly concerned what others think
- Overwhelm
- Somatic complaints (back pain, dizziness, nausea, headaches)
- Fatigue

In fathers, more likely to include irritability and increased frustration

What is Perinatal OCD?

What are Postpartum and Perinatal OCD (pOCD)?

- OCD that occurs after childbirth is called postpartum OCD
- OCD that occurs during pregnancy is called perinatal OCD

People who are pregnant, or who have recently given birth, are at an increased risk of developing OCD symptoms. Those who have OCD often experience worsening of symptoms.

How is pOCD different from OCD that occurs at other times?

- In pOCD, the obsessions and compulsions usually focus on the infant. There may be obsessions about the baby getting hurt, contaminated, or lost; and compulsive rituals involving checking, mental rituals, and seeking-reassurance.
- There may also be unwanted sexual obsessions. The person may also use excessive avoidance, such as avoiding bathing or holding the baby.
- While OCD typically begins gradually, pOCD tends to begin somewhat rapidly, coinciding with feelings of being responsible for the newborn.

Perinatal OCD Symptomatology

- Obsessive worry (obsessions)
- Repetitive/compulsive/reassurance-seeking behavior (compulsions)
- Can include obsessions & compulsions or obsessions only (Pure O)
- Intrusive thoughts of harming baby (including sexual thoughts, common in history of sexual victimization & Pure O)
- Intrusive thoughts of harm coming to baby
- Counting/tracking (feeds, diapers, naps)
- Hand washing/excessive grooming
- RECOGNIZE INTRUSIVE THOUGHTS AS DISTRESSING

In fathers, more commonly includes excessive work and/or budgeting

Perinatal OCD Symptomatology (cont'd)

Who struggles with Perinatal OCD (pOCD)?

- pOCD affects about 8% of pregnant and 17% of postpartum women
- Some new fathers develop pOCD symptoms to the extent they bear caregiving responsibilities
- People with OCD who become pregnant often experience worsening symptoms during pregnancy or postpartum

Is pOCD related to depression?

- Depressed people tend to have more negative thoughts, which can develop into obsessions
- Alternatively, obsessions and compulsions can lead to depression due to the distress they cause and shame about having negative thoughts during this time

Perinatal Bipolar Disorder Symptomatology

- Depressive or elevated mood (euphoric and/or irritable)
- Decreased need for sleep
- Rapid/pressured speech
- Impulsivity
- Easily distracted
- Overconfidence
- Increase in risky and/or goal-directed behavior (spending, cleaning, etc.)
- Rapid cycling common
- Anxiety more often co-morbid
- High percentage of unmedicated bipolar birthing people will have postpartum manic episode (66%)

Fathers more likely to have comorbid substance use and greater irritability/anger

Postpartum Psychosis Symptomatology

POSTPARTUM PSYCHOSIS IS RARE BUT IT IS A MEDICAL EMERGENCY REQUIRING HOSPITALIZATION DUE TO RISK OF SUICIDE/INFANTICIDE

- A person with history of Bipolar Disorder, or a previous psychotic episode is at risk
- Prolonged lack of sleep (going days without any sleep) is a risk and a warning sign
- Waxing/waning
- Auditory/visual hallucinations
- Paranoia and/or delusions (not connected to reality)
- Disorganization/confusion/agitation
- Depersonalization/derealization
- Abnormal mood/bizarre behavior
- Abnormal thought content/beliefs
- LACK OF AWARENESS OF ABNORMAL THOUGHT CONTENT/BELIEFS

Assumed to be first episode of Bipolar I Disorder if DSM criteria met, otherwise, severe depression with psychotic features or sleep deprivation psychosis

Only vague theories regarding postpartum psychosis in fathers

Differential Diagnosis of OCD vs. Postpartum Psychosis

Is perinatal OCD related to postpartum psychosis?

- Both can involve thoughts of harming the baby
- Cases of postpartum psychosis have received media attention, leading people to worry that OCD will lead to psychosis
- Postpartum psychosis is rare, affecting 1-2 in a thousand births. pOCD is common, about 8% in pregnancy and 18% in postpartum
- Persons with postpartum psychosis have harmed their infant, acting on their hallucination or delusion, while pOCD is harmless
- People with postpartum psychosis lack insight and believe in their hallucinations/delusions, while OCD sufferers have insight and recognize thoughts as upsetting and inconsistent with their wishes

There is no evidence that pOCD symptoms can change into postpartum psychosis

PTSD and Birth Trauma

Birth Trauma

- Obstetric violence
- Birth provider failure to include patient in decision-making/informed consent - perceived loss of control by patient
- Insensitivity of birth provider language
- Postpartum provider callousness in discussing birth experience
- Triggers - hx. of physical victimization
- Triggers - hx. of sexual victimization

NICU Trauma

- Fear of newborn death
- Witness to other NICU babies suffering
- Survivor's guilt

For partners, concern for partner, helplessness, trigger of own history, and lack of provider attention/acknowledgement

PTSD and Perinatal Loss

Birth/Infant Loss

- Grief
- Isolation – loss of community (*providers often ignore partners*)

Trauma

- Unexpected/late term loss or stillbirth
- Loss of control/what-ifs
- Financial stresses

Infertility/Genetic Disorders

- Repetitive cycle, loss after loss
- Stigma

Perinatal PTSD Symptomatology

- Re-experiencing trauma/nightmares
- Negative thoughts/distress
- Detachment, difficulty with bonding
- Numbness, avoidance of peers, providers
- Hypervigilance
- Sleep issues
- Triggers can include
  - Medical setting (avoidance)
  - Insensitive comments
    - Comparisons to typical birth experiences
    - "At least you and the baby are healthy"
    - Platitudes, minimization

Case Study

A patient at your clinic complains of anxiety since the birth of their child, four months ago. Their anxiety got significantly worse upon returning to work at three months.

When asked if they have any upsetting thoughts, they state with obvious discomfort that they have thoughts of dropping their baby when carrying the baby upstairs. When cooking, they often imagine a very graphic image of stabbing the baby and when they say this, they begin to cry.

1. You ask how they're sleeping, and they say they're sleeping five to six hours a night because of night feedings, but they're able to fall back to sleep right after feeding.
2. They score 18 on the EPDS, with high scores on the anxiety questions and no suicidality.
3. When asked if they have any desire to hurt the baby, They say "No, I've been avoiding situations where I might hurt her because I'm scared about the thoughts I'm having."

WHAT ELSE WOULD YOU WANT TO ASK IN ORDER TO RULE OUT DANGER TO HER OR THE BABY, AND WHAT DO YOU THINK THE LIKELY DIAGNOSIS IS?

Clinical Treatment Options

ALWAYS have patient cleared medically to ensure symptoms not due to or exacerbated by medical condition (thyroid, anemia or vitamin D deficiency)

- Individual psychotherapy (nurture the nurturer):
  - Recommend therapists trained in PMH
    - Interpersonal Psychotherapy (IPT) - validated
    - Cognitive Behavioral Therapy (CBT) - validated
    - Dialectical Behavior Therapy (DBT) - helps with dysregulation
    - Harm Reduction/Motivational Interviewing (for SUD)
    - Eye Movement Desensitization & Reprocessing (EMDR) for trauma
    - Parent/child dyadic therapy, to improve disrupted bonding
- Psychopharmacology if moderate/severe (reproductive psychiatrist)

Other Treatment Options

- Psychoeducation about PMH (and lifestyle factors that contribute to symptoms)
- Peer support (individual or group)
- Lifestyle case management
  - Troubleshooting sleep challenges
  - Getting additional family or doula support/sharing caregiving responsibilities
  - Food/nutrition/sunlight
  - Exercise/getting moving
  - Socializing/pleasurable activities
- Bright light therapy for depression (warning: can induce mania in those predisposed to bipolar disorder)

PMHDs and Substance Use

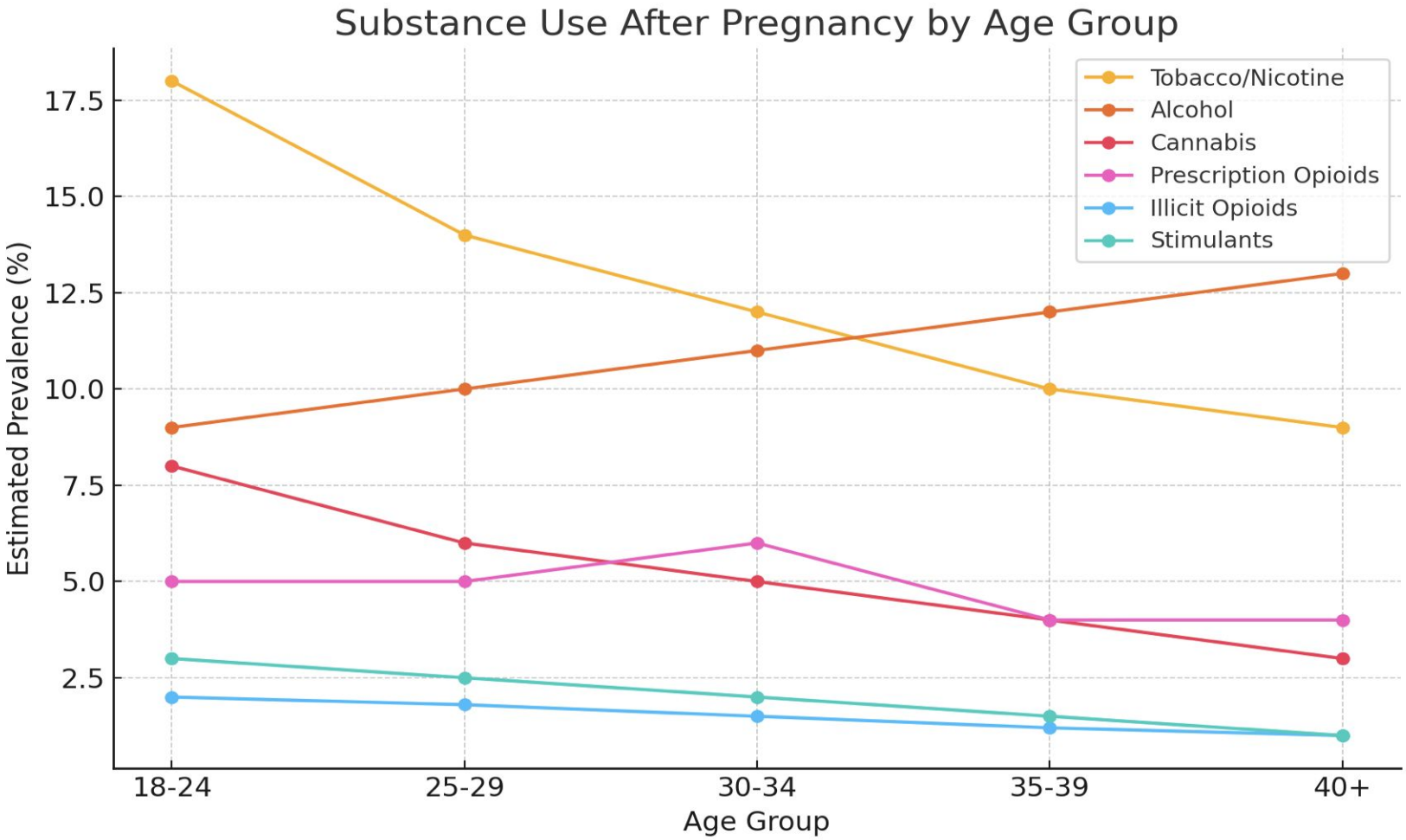
- Significant co-occurrence of mental health disorders and SUDs
- Pregnant women with poor mental health more likely to drink
- Over 30% of pregnant women in rehab screen positive for depression, over 40% experience postpartum depression
- Pregnant women with substance use disorders often have depression, anxiety and PTSD and use as self-medication
- Suicide and overdose are leading cause of death in the first year postpartum

All parents with PMHDs should be screened for SUD and vice versa!

Most Common Substances Used Postpartum

SUBSTANCE	PREVALENCE	RISKS
Tobacco	~10–15%	SIDS & Respiratory issues
Alcohol	~8–10%	Impaired Bonding
Cannabis	~5–7%	Neurodevelopmental effects
Prescription Opiods	~4–6%	NAS, dependency
Illicit Opioids	~1–2%	Overdose, Impaired Caregiving
Stimulants	~1–3%	Preterm birth, placental abruption

Substance Use After Pregnancy by Age Group



Strategies for Improvement

- **Provider Education:** Implementing training programs to ensure PMH competency of all perinatal providers and to enhance cultural competence among healthcare providers.
- **Inclusive Practices:** Adopting gender-neutral language and acknowledging diverse family structures in medical documentation.
- **Policy Reforms:** Advocating for universal PMH training for licensed medical and mental health professionals, as well as policies that protect LGBTQ+ individuals from discrimination in healthcare settings.
- **Community Support:** Establishing support networks and resources tailored to the unique needs of LGBTQ+ parents.

PSI Resources for Parents

- **PSI Helpline: 1-800-944-4773 (4PPD) and National MMH Hotline**:The Hotline is available to text or call 24/7. 1-833-TLC-MAMA
- **PSI Support Groups on Smart Patients Forum**: For those affected by PMHDs to connect with peers in a safe, supportive environment. Over 50 groups for different demographics and circumstances, including pregnancy, postpartum, adoption, partners, birth trauma and loss. Includes a group for parents struggling with substance use/misuse.
- **Chat with an Expert: Connect with other parents and talk with a** PSI mental health expert about resources, symptoms, and treatment options.
  - *first **Mondays** for Dads,*
  - *every **Wednesday** for Moms*

PSI Resources for Parents (cont'd)

- **PSI Peer Mentor Program**: This program pairs individuals in need of support with a trained volunteer who has also experienced and fully recovered from a Perinatal Mood Disorder (PMD)
- **Provider Directory**: Online directory of trained perinatal providers.
- **Perinatal Mental Health Discussion Tool**: For parents to identify PMHD symptoms to discuss with their provider.
- **Social Media**: Facebook page and private group, Instagram and X, and our new app, Connect by PSI.

PSI Resources for Providers

- Perinatal Mental Health Certification (PMH-C): Creates a structure for professional education and evaluation and a standardization of training and experience.
- Perinatal Prescriber Consultation Line: For medical professionals who are prescribers and have questions about mental health care related to perinatal patients.
- Membership: PSI members (clinicians, physicians, survivors and advocates) around the world receive benefits including:
  - Discounts on training and the annual Conference
  - Online **Peer Consultation Groups** for psychotherapists (including one in Spanish and one for providers of color), prescribers and doulas
  - Email listservs for providers and prescribers (International and within California)

PSI Resources for Providers (cont'd)

- Perinatal Mental Health Alliance for People of Color (**PMHA-POC**):
  A program within PSI, created to fill a gap in support services for professionals and communities of color.
- **PSI California Chapter (PSI-CA):**
  Furthers the mission of PSI on a statewide level.
  - Bimonthly newsletter
  - Short PMH trainings
  - State-level legislative advocacy
  - Scholarships for PSI training

  Check our website for more information and to connect with your state chapter for collaboration, education, support, and advocacy.

Summary and Takeaways

- PMHDs are extremely common, especially among underserved populations, but also very put-together parents
- Parents often underreport symptoms or avoid help - stigma and lack of recognition that they have a PMHD
- Intrusive thoughts are normal but extremely upsetting in anxiety and OCD, and should be treated as routine
- Postpartum psychosis is a rare **psychiatric emergency** and requires immediate action to avoid tragic consequences. Hospitalization and medication is needed
- PSI can help with support for parents and by providing culturally competent training for providers.
- With knowledgeable and compassionate treatment, most parents with PMHDs will recover quickly and completely.

Emergency Resources

Maternal Mental Health Hotline
- 800.852.6262 (24/7 call/text – HRSA)

National Suicide Prevention Lifeline
- Dial 988
- suicidepreventionlifeline.org

Crisis Text Hotline (24/7)
- Text HOME to 741741

Domestic Violence Hotline
- Call 800.799.7233
- Text START to 88788

SAMHSA
https://www.samhsa.gov/
https://findtreatment.gov/
Nationa Helpline 1-800-662-HELP (4357)

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DadCare™

Wholistic Management of Pregnancy

The Provider Guide and Workbook for Bringing Fathers into Pregnancy

By Edward M. Stephens, MD
Foreword by Jane I. Honikman, MS

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DadCare

WHOLISTIC MANAGEMENT OF PREGNANCY

The Provider Guide and Workbook for Bringing Fathers into Pregnancy

By Edward M. Stephens, MD
Foreword by Jane I. Honikman, MS

Printed in the United States of America.

CONTENTS

FOREWORD

Significant progress has been made since my generation introduced the concept of childbirth education and welcoming fathers-to-be into the realm of pregnancy. It started in the 1960s and we promoted the radical shift from excluding men after conception to inclusion. For the first time they were welcomed into a previously strictly female domain to witness the birth of their baby.

Prior to marriage in the 1960s, my husband and I had an unplanned pregnancy, and we placed our first born for adoption. We kept this traumatic and stigmatizing experience a secret.

When we were "ready" for parenthood we celebrated the opportunity to "do it right" and embraced the new norm that included prenatal education and co-parenting. However, we were not prepared for the postpartum experience. There was a missing link between fantasy and reality.

Upon reflection, fifty plus years later, I can identify how our secrecy and trauma impacted the arrival of our planned baby and our marriage. No one asked us pertinent questions that could have helped us. There was no discussion whatsoever about mental health, job insecurity, and lack of family support.

This personal journey led me to start a local nonprofit called Postpartum Education for Parents in 1977. The emphasis was the inclusion of social support for both parents to ease the adjustment of the developing family. Ten years later, I founded Postpartum Support International. The focus was on parental mental health, training professionals, developing networks and resources.

Factoring in fathers' emotional wellbeing has been added to the conversation and curriculum related to childbearing, however, there has not been an intake questionnaire designed specifically for the pregnant father, until now.

DadCare provides the solution. The father-to-be is as important as the mother-to-be. He also must be asked about his personal and family health history. This action is the missing link.

Jane I. Honikman, M.S.

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ABOUT THIS GUIDE

Preface

The purpose of this Guide is to introduce DadCare, a management of pregnancy using the Father's Before and After Birth Questionnaire. This medical/psychological record is an intake document for the father that becomes part of the official record during pregnancy.

Currently, pregnancy is exclusively for mothers. Prenatal visits start with and focus on the health of the mother even though the biologic and psychological facts of pregnancy render this approach myopic.

The father, the male partner, shares a 50/50 investment in the pregnancy both through the genes he shares in the fetus and in the epigenetic background he brings to the nascent family.

The mother and father are really a mother-father-fetus amalgam. They are not just 'joined at the hip' but are an organic whole and need to be seen and managed as such.

Bringing the Father into Pregnancy changes the management of pregnancy from a literal minded focus on the medical event of pregnancy, to this larger understanding, a wholistic vision of the intertwined biology and psychology of the expecting parents.

Background

There has been a long road leading up to this vision of interconnection between biology and psychology.

For the purposes of this paradigm shift, and this questionnaire, the route is best traced through our emerging understanding of Postpartum Depression (PPD). At least, at a minimum, 10% of fathers experience the symptoms of this disorder during pregnancy, after the birth or characteristically for men, months later. Fathers do have postpartum depression.

Research has revealed that if either partner has PPD there is a 50% chance that the other would experience their own PPD. Every single stressor on the mother has a counterpart in the father so that their fates are inextricably linked, as is the outcome of the pregnancy and the wellbeing of the child. PPD fathers and mothers have more complications in pregnancy, higher rates of premature delivery and significant findings of depression in the infants or later in childhood.

Given these emerging new understandings of the mother and the father it is imperative to change the existing care model to one of inclusiveness recognizing the father's total interconnectedness and central role in the wellbeing of the pregnancy itself as well as the health of the infant.

Fathers are instantly transformed from visitors to participants in the threshold human event of pregnancy.

Father's Before and After Birth Questionnaire

The questions in this document have been taken from a consensus report by clinicians with actual experience in recognizing and treating PPD. They represent a distillation of concerns during pregnancy to those which are felt by the clinicians to be the most likely and most impactful factors in the wholistic wellcare management of pregnancy.

Each question is a potential 'red flag' for the wellcare provider (WCP). On the antepartum questions, when symptom positivity is registered to single items, it is a deeper concern when multiple symptom-positive answers are noted. With each symptom-positive answer in the antepartum section, the likelihood of the emergence of PPD during the peripartum period increases. The scale of concern for the postpartum questions is quite different. Any symptom-positive answer to the after-birth questions is an almost certain indicator of the presence of PPD.

The WCP should also be aware that the symptoms are almost invariably interconnected. As an example, "Do you feel you have job security", may be a key to arguing over finances.

Another example might be, "Is this a planned pregnancy" leading the WCP to the sense that is reflected in the question, "Do you feel you have intimacy with your partner". Lack of planning together may well point to intimacy and communication problems.

The questions are a guide for the WCP to focus attention on seeing pregnancy in the larger context of the life of the couple as opposed to the medicalized, myopic mother/fetus only approach. Myopic, shortsightedness is an apt description of the shortcomings of the current omission of the father.

While 'father' is meant literally, the intent of the questionnaire is to cast a wide net that encompasses, absent fathers, significant others and same sex partners. It is envisioned that the questionnaire be given to mothers to take home to the absent father, or to be filled out by the mother to describe the father who doesn't want to be involved. In short, the intent of the questionnaire is to highlight the emotional and participatory status of any person intimately connected with the mother and this pregnancy.

Preventive medicine is "the ounce of prevention which saves a pound of cure". Early detection of stressors allows the WCP to intervene before the emergence of PPD. In fact, counseling directed during the pregnancy has a high likelihood of preventing the development of PPD or ameliorating its intensity.

Not every WCP is expected to have the time or the psycho-therapeutic skills to intervene. In the normal course of pregnancy management, Social Service interventions may be part of the care. The inventory of stressors facilitates referral as well as giving a blueprint for the therapeutic interventions.

Absent professional social service support, the WCP can still encourage positive interventions by engaging the pregnant couple in a dialog about their own resources. "Do you have anyone you can talk to?" "Is family involved?"

Pregnancy is an event that touches the larger community of family and friends. Family and friends are "stakeholders". They often both want to be involved and can be a major source of support in every pregnancy. The important point to note is that the WCP, with the help of the questionnaire, can develop insight into not only the father but also the mother, as well as gathering the information needed to bring help from multiple sources to the expecting couple.

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QUESTIONNAIRE

Father's Pregnancy Engagement

The benefits of a questionnaire for fathers as an essential component of the routine antenatal evaluations are immediate and enduring. Paternal health issues affecting the mother and child will be addressed immediately. Forward-thinking care will plan for the immediate postpartum stage. Inclusion of the father in pregnancy sets the stage for paternal inclusion in pediatric wellcare.

Every pregnancy undergoes routine medical management which involves prenatal care. This care has been, and continues to be, centered on the mother. The foundational component of this care is contained in the ACOG written evaluation completed at the initial antenatal visit. It is comprised of a health and mental health history followed by a physical examination and supporting laboratory testing, which creates a baseline for understanding the mother's wellness and potential for complications, both physical and mental.

Routine prenatal care requires equivalent attention to the health, mental health, genetic, and epigenetic history of the father. A standard of care that settles for less does not reflect a holistic understanding of the interconnectedness of the father, mother and child. It cannot do justice to the health needs of the mother, the father, or the child.

The creation and standardization of an intake questionnaire for fathers establishes an additional foundational record. The questions mirror those on the maternal questionnaire with crucial modifications that will improve care for the mother and child. The health and mental health history of the father are as central and relevant to understanding and managing pregnancy as is that of the mother. A growing body of studies in obstetrics, pediatric, and phychiatric journals have reached this conclusion, especially as it influences the child and mental health. A unique set of questions is required to detect paternal depression mental health and epigenetic factors that might affect the health of the mother.

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Patient Information/Label

FATHER'S BEFORE AND AFTER BIRTH RECORD

DATE _____ **NAME** _____

DATE OF BIRTH _____ **AGE** _____ **LANGUAGE** _____

RACE _____ **ETHNICITY** _____ **EDUCATION** _____
(Last completed grade)

MARITAL STATUS: Single Married Separated Divorced **OCCUPATION** _____

Total Number of previous pregnancies in which you have participated: _____ **EXPECTED DATE OF DELIVERY** _____

MOTHER'S NAME _____ **ID#** _____ **HOSPITAL OF DELIVERY** _____

FOR FATHERS BEFORE BIRTH					
	O Neg. + Pos.	DETAILED POSITIVE REMARKS INCLUDE DATE & TREATMENT			O Neg. + Pos.
1. DIABETES			13. HISTORY OF STD		
2. HYPERTENSION			14. PULMONARY (TB, ASTHMA)		
3. HEART DISEASE			15. SEASONAL ALLERGIES		
4. AUTOIMMUNE DISORDER			16. DRUG/LATEX ALLERGIES REACTIONS		
5. KIDNEY/URINARY DISEASE			17. HERPES		
6. NEUROLOGICAL/EPILEPSY			18. HEPATITIS B, C		
7. PSYCHIATRIC			19. OPERATIONS/HOSPITALIZATIONS (YEAR & REASON)		
8. DEPRESSION/POSTPARTUM DEPRESSION			20. RELEVANT FAMILY HISTORY		
9. HEPATITIS/LIVER DISEASE				AMT/DAY PREPREG	# YEARS USED
10. VARICOSITIES/PHLEBITIS			21. TOBACCO		
11. THYROID DYSFUNCTION			22. ALCOHOL		
12. TRAUMA/VIOLENCE			23. ILLICIT/RECREATIONAL DRUGS		

CHECK THOSE THAT APPLY	YES	NO
Is this a planned pregnancy?		
Is this a wanted pregnancy?		
Do you feel you are ready for this pregnancy?		
Are you under the age of 25?		
Do you feel involved with this pregnancy?		
Are You and your wife or partner in agreement on this pregnancy?		
Do you feel you have a sense of intimacy with your partner?		
Do you feel you have the support of the extended family?		
Have you had a history of mood or anxiety disorder?		
Do you feel you have job security?		
Are you concerned about performance or failure at work?		
Have you had mood or anxiety experiences in previous pregnancies?		
Do you have current anxiety or mental illness?		
Do you have a recent or past history of losses or grief?		
Do you have a history of adverse childhood experiences? (Domestic violence, physical or sexual abuse, divorce, substance use, etc.)		
Have you experienced an increase in stress?		
Have you experienced any of the following: Low mood, negative thoughts, loss of appetite, weight loss, sleep issues, irritability, suicidal or homicidal thoughts, a desire to withdraw and isolate, an increase in substance use, increased gambling or cheating on your partner?		
Do you feel your partner is anxious or stressed?		

FATHER'S BEFORE AND AFTER BIRTH RECORD

FOR FATHERS AFTER BIRTH		
QUESTIONS FOR FATHERS ON FOLLOW UP VISITS AFTER THE DELIVERY OR WITH THE PEDIATRICIAN.		
CHECK THOSE THAT APPLY	**YES**	**NO**
Have you experienced any of the following: Low mood, negative thoughts, loss of appetite, weight loss, sleep issues, irritability, suicidal or homicidal thoughts, a desire to withdraw and isolate, an increase in substance use, increased gambling or cheating on your partner?		
Do you feel connected to the baby?		
Do you have a special needs child?		
Do you feel inadequate to the new family situation?		
Do you feel sleep deprived?		
Do you feel confused in the fathering role?		
Do you feel concerned about your ability to father?		
Do you feel trapped?		
Do you feel grief at the loss of the old life and relationship with partner?		
Do you feel your partner is anxious or stressed?		
Is there anyone you can turn to for help?		

COMMENTS

Note to clinicians:

Most of the questions represent a consensus evaluation by professionals working in the field of risk factors in the peri-partum period. A few questions regarding employment were derived from the meta-analysis of the literature.

In the ante-natal questions, a symptom-positive answer to any one of the questions raises concern. Symptom-positivity in two questions is an indicator of further concern. Symptom-positive responses to three or more questions gives a reasonable sense of current PPD or an elevated risk of PPD developing.

In the post-natal evaluation, all 'Yes' answers indicate symptom-positivity sufficient to warrant clinical intervention.

NB: The post-natal questions can be repeated at all after-birth visits and continued into pediatric management.

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WORKBOOK

Questions Before Birth

1. Is this a planned pregnancy?

This is a loaded question. Even 'planned' pregnancies have all the elements of life altering surprise.

The question points to where the individual is in the planning process, including whether to have a child. When the pregnancy comes before the couple is ready, fiscally and emotionally, career-wise or a dozen other considerations, there are real obstacles and real opportunities. As we all know, "Life is what happens on the way to where we thought we were going".

Where the couple is in their planning process is an open invitation for the WCP, for even a 'planned' pregnancy is worth discussing. Most of the time, we plan as we go, bringing resources to bear as we move further into the endeavor. Pregnancy is no different with the exception that for each of us it was an experience of which we had no experience. The question invites both the couple and the social services support to make the plan to fit the occasion.

Whether the pregnancy is 'planned' or 'unplanned', there is an opportunity for the WCP to look at the larger picture and support the emergence of a plan.

Notes

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Notes (continued)

2. Is this a wanted pregnancy?

This question is a key to many locks. To have a child involves commitment and resolve, determination and fortitude. "Wanting" the pregnancy, with or without ambivalence, is probably the single most important factor in working through the duress of pregnancy, to arrive at the total life adjustment that a child brings with the need for 24/7 parenting.

When ambivalence, hesitation or even an outright, "do not want" are detected, a world of possible interventions opens. Termination of pregnancy may even be an important decision in an unwanted pregnancy.

Ambivalence and hesitancy can be explored as they are usually the derivatives of inexperience rather than underlying uncertainty. Which one of us did not think twice about marriage, change of jobs or residence? The WCP, by exploring hesitancy, gains an opportunity to help the parent to 'think through' their new situation. The thinking-through process creates a path forward that defeats hesitancy.

Hesitancy and ambivalence might even be seen as a sign of intelligence. When resolved, a door can be opened to a world of personal fulfillment and engagement with others. "It takes a village to raise a child".

Notes

Notes (continued)

3. Do you feel ready for this pregnancy?

"Ready" is an interesting concept. Some parents have hoped and planned for the pregnancy. Others, depending on age or personal development, readily describe themselves as, "not ready".

As with every other question, the "not ready" answer opens the dialog to the actualities of time, place, resources, relational commitment, etc. "Not ready", opens both to the discussion of what is felt to be missing as well as to planning for the resources to "get ready".

"Not ready', can also mean, "at this time". For some the difficulties of current circumstances can be an actual barrier to a successful pregnancy outcome. The awareness that a pregnancy "at this moment" in the lives of the mother, father or both, does not create a stable basis for moving the pregnancy to a conclusion that will benefit any of the parties and certainly, not the child.

Fears may be allayed by discussion, hidden resources discovered, or termination of pregnancy might be considered or ruled out.

Notes

Notes (continued)

4. Are you under the age of 25?

Age at pregnancy, for both the mother and the father, is a significant factor. Those under 25 years old have a marked increase in the likelihood of developing PPD.

Knowing this vulnerability, the WCP is alerted to this increased risk. In turn, this creates an opportunity to explore the emotional age of the parties. How 'mature' are they? What is their capacity for problem solving? Or, how can young age be seen as an asset with its vigor, vitality and desire to move into adulthood?

Most of all, what may be lacking in personal resources, can possibly be augmented by the community resources of family. Can the family be brought in to support the emerging family? Mothers and fathers of the young couple have a deep vested interest in grandchildren. Aunts, uncles and grandparents can offer support in ways that only emerge as they are discovered, and the family members invited to join the young extension of the family.

The young age of the pregnant couple can be a positive force in creating family bonds by inventing a support system that was not even imagined before the pregnancy.

Notes

Notes (continued)

5. Do you feel involved with the pregnancy?

Since pregnancy is a unique event for each individual, they have never been in this circumstance before, and each person will react differently as they either try to grapple with the magnitude of the happening, or distance themselves from the event.

The question searches out the 'stunned' nature of the father at the news that his life will never be the same again. The question highlights the need to come to grips with the event that, "it will not go away", and "it cannot be denied". There are few, if any, life circumstances that have the same impactful inclusiveness of life-altering possibilities.

The WCP is also afforded the opportunity to use this question as a way of exploring the father's own family experience. The most likely source of the young father's imaginations regarding 'involvement' are to come from his experience of his own family.

Notes

Notes (continued)

6. Are you and your partner in agreement on this pregnancy?

One of the most important factors influencing the emergence of PPD is the nature and quality of the partner relationship. Agreement is the fundamental glue; disagreement is both an obstacle and an opportunity for growth. The WCP is on the threshold of couple communication training.

Whether or not to have the pregnancy at this time depends on a host of circumstances that involve age, career path, finances and personal expectations. Surfacing the specifics of the different perspectives of the partners allows for a process of resolution.

This capacity for resolution of differences is a skill rooted in the ability to listen to what the other is concerned with, letting them know you understand their point of view even if you don't agree with it and expressing one's own view with an eye to gaining that same acknowledgement from the partner.

Next steps involve developing the capacity for alternate thinking, thinking of alternatives; the capacity to be nonjudgemental. All the above offers the opportunity for the couple to grow into the spirit of cooperation that is fundamental to the life task of raising a child.

Notes

Notes (continued)

7. Do you feel you have a sense of intimacy with your partner?

Just raising the topic of intimacy may be a door opener: "What's intimacy?". The question extends the theme of problem solving and cooperation and introduces a new level of 'intimate' partner communication, the sharing and exchange of feelings.

'Intimate' is inner, inner thoughts and feelings that are shared. This involves the development of the capacity to know what one is thinking and feeling, as well as the trust in the other to the degree that one feels safe in expressing those inner thoughts and feelings. In turn, this requires the development of the capacity for acceptance, the ability to listen in a nonjudgemental way.

The WCP can introduce the couple to the world of 'empathic listening', communication skills and ultimately the joy of shared thoughts, feelings and aspirations as they build a life together with the shared acceptance of the pregnancy as its bedrock.

Notes

Notes (continued)

8. Do you feel you have the support of the extended family?

The question of isolation is particularly crucial for the male partner. Men, characteristically, have very few people they share even the most important happenings in their lives. Not having the support of family compounds this difficulty for men. Contacting the mother's family requires a whole new set of skills as they represent a different culture from his family of origin.

At the same time, pregnancy is a wonderful time to open to family. "Dad, what was it like when mom was pregnant with me?" "What kind of feelings did you have when you found out that mom was pregnant?" "Did you feel your family was with you?" "How did they help, or did they help?"

The suggested dialog with Dad offers a window into the young father's heritage of family love. The very suggestion of this dialog opens a potential connection to father-son sharing which may never have happened before.

Notes

Notes (continued)

9. Have you had a history of mood or anxiety disorder?

This very direct question opens a path to understanding the father's response to life situations in a larger sense. Often, fathers will recall periods when they were depressed, discouraged or anxious in varied contexts. One of the primary indicators of potential PPD is a history of mood or anxiety disorder in the past.

The WCP can begin to form a picture of actual mood disorder history or reaction to adverse circumstances on their own. The WCP is able to enquire about how the father managed those periods gaining insight into resourcefulness or retreat.

This is also a good point to see if substances played a part either in bringing on mood alterations or were used to cope with adverse situations and manage mood or anxiety.

The question might lead to the discovery of significant mood or anxiety feelings during this pregnancy leading to a referral to structured support or even psychiatric intervention.

Notes

Notes (continued)

10. Do you have job security?

The centrality of this question to the father's level of tension makes it both remarkable in the asking as well as its previous omission.

When men think of their role in the family, it is invariably to "provide and protect". A man's employment is at the heart of his ability to perform those tasks. Job insecurity takes many forms and has many sources that cannot be remedied by discussion: market vagaries, under-employment, lower educational achievement or under-skilling. At the same time, raising the question exposes both the "elephant in the room" as well as a plan forward with the impetus of the pregnancy as an incentive.

The question offers an entry into the 70% of 'fatherless' families of color where the absence of a life partner is primarily driven by economic factors for male parents of color. The question also offers, through recognition of the place of the father in the wellbeing of the family, a way to defeat the single parent crisis in families of color.

No matter the ethnic or educational strata of the father, addressing the question of job security provides a platform for improving both job security through active counseling, and family security in the process.

Notes

Notes (continued)

11. Are you concerned about performance or failure at work?

Closely aligned with the question of job security from larger forces, this question focuses on the personal responses of the father. Even with full and steady employment, the father may feel insecure by virtue of pressures from work that affect his sense of security.

The question surfaces prime indicators of depression or depressive tendencies in the father's potential for 'fortunetelling bad'. It opens the window to how the father assesses his own place in the work force. The reality is that not all work forces are benign and there is often a complicated atmosphere of competitiveness which can breed insecurity.

Surfacing difficulties in the father's estimation of his own and others' senses of how he is doing gets into the father's estimation process. In turn, this will more than likely give an indication of how he is going to see his own performance in the new family.

How the father sees himself as well as his estimation of how others see him becomes an emotional barometer. It also invites the question of how, through his own agency, he can move his forecasting into the realm of security and success.

Notes

Notes (continued)

12. Have you had mood or anxiety experiences in previous pregnancies?

Not every father will be a first timer. A history of previous depressive, stress or anxiety reactions are predictive of potential current difficulties. This history also alerts the WCP to where the pressure is likely to arise as well as giving a head start on heading off crises.

The question also opens the dialog to remediation. Difficulties realistically anticipated offer opportunities to assess emotional skills as well as to build on strengths. It indicates that additional counseling or psychiatric resources may be needed. Nowhere is the 'ounce of prevention worth a pound of cure' more important than in the early identification of emotional variance.

In this same sequence, the opportunity arises to enquire about the mother's previous responses to pregnancies as well as an assessment of her response to the current pregnancy. Thus, the WCP always has the interplay of the mother's and father's emotional state as a guide to couple support.

Notes

Notes (continued)

13. Do you have current anxiety or mental illness?

Asking this direct question may be difficult for some WCPs. Why invite trouble where none apparently exists? Can't the past simply be the past?

We know that the past is prelude to the future and this question is as important as asking about any underlying disease, i.e. "Do you have a history of heart disease?".

Discovery of a previous history of 'mental illness' opens the door to the 'what' explicitly had been previously diagnosed and treated. Previous depressions, bipolarity, schizophrenia, panic disorder. Each of these disorders has a different treatment and prognosis along with a different rhythm of recurrence. In each case, treatment may be ongoing or have been discontinued inappropriately.

In any case, pregnancy is a potent precipitator of previous known conditions. Calling in resources from previous treatments prevents the 'back to square one' problem.

Notes

Notes (continued)

14. Do you have a recent or past history of losses or grief?

Being specific about loss, current, past or recent past acknowledges our human tendency to get over but not completely get through our losses.

Recent loss of parents, siblings or friends is especially poignant with the impending arrival of the 'new person' of the child. The child may take on added significance as a replacement for the lost significant other.

Losses don't have to be confined to the personal. Business losses, illness, loss of personal dreams… all create an aura around the birth of a child. The pregnancy can represent new possibilities or awaken fears that the child is being born into a dangerous world where loss is the rule rather than the exception.

Notes

Notes (continued)

15. Do you have a history of adverse childhood experiences?

These are commonly referred to as ACEs, a history of domestic violence in the home, physical or sexual abuse, traumatic divorce, and substance use in parents.

How many ACEs do you have in your life? The more ACEs you have, the more likely you are to have a well of anticipatory fears concerning the birth of a child. The child metaphor brings one back to one's own childhood with all its vulnerabilities.

The specifics of ACEs are vast and have a personal application to each expectant parent. They are often expressed by saying, "I never want that to happen in my family".

Or in the case of a new parent having grown up in a family with alcoholism, they may be living out one of the roles in life that are common to adult children of alcoholics (ACOA).

Other substance dependence or abuse may have distorted or destroyed their family experience. Every adverse experience is brought forward in the new parents (epigenetics).

Notes

Notes (continued)

16. Have you experienced an increase in stress?

When questioning men about symptoms, they have to be approached differently. Many of the previous queries involved depression, anxiety and mental illness. For a good many men, even if they had those conditions, they would either not recognize them or, least of all, admit to them.

"Stress', on the other hand, is something they can both identify and admit to without losing face. Every general practitioner knows that most men presenting with 'back pain' are actually depressed. Back pain seems to be an acceptable face to put on emotional malaise that they can't or won't identify.

Likewise, with stress, it can almost be a badge of courage, "Look how seriously I am taking this, I even feel stress".

As with all the questions, the way in is the way out; diving into the causes of stress begins a process of targeting the areas of the pregnancy, relationship, work, or other circumstances that are problematic. Once there are words for an area of tension it can be worked through.

Notes

Notes (continued)

17. Have you experienced any of the following: low mood, negative thoughts, low hunger, weight loss, a desire to withdraw or isolate, an increase in substance use, increased gambling or cheating on your partner?

With this question, an enumeration of common symptoms of depression with specific instance of where men might go for relief, the theme of 'likelihood of PPD is advanced.

Beyond the 'low mood and negative thoughts, there is an enumeration of common 'acting out' behaviors in male emotional disturbance: substances, gambling and cheating are named. This highlights the tendency of men to express their emotions in actions without making the connection to the underlying feelings. Hence, the description, "acting out' referring to the underlying feelings.

Most current WCPs will be female. While this creates a natural sympatico with the mother, it highlights a disadvantage in comprehending the different ways men express their tension. Men don't cry, they more often 'act out'. This question opens the door to exploring how men's distress is expressed in 'doing' as in 'over working'.

Notes

Notes (continued)

18. Do you feel your partner is anxious or stressed?

Men's tendency to deny their own emotional responses to situations may, and often does, put them at a disadvantage in recognizing distress in their female partner. Men, with their mantra of 'sucking it up' and just plowing ahead may find it incomprehensible that their partner is stressed. After all, "pregnancy is a natural process" that is, until it happens to you, which leaves men out of the loop.

It is hard for men to appreciate the unique biology and psychology of female partners. Men are always looking at their female partners from the outside while women are experiencing their lives from the inside. For all their good will, men have never had a menstrual period with all it entails, nor have they ever been pregnant.

This question offers the WCP the opportunity to educate the man to some of the interior experiences of the man's partner. This is a chance for the mostly female cohort to use their natural sympatico with the pregnant mother to create a window into the mother's lived experiences of being pregnant, with all its altering physical and emotional changes.

Notes

Notes (continued)

Questions After Delivery

1. Have you experienced any of the following: low mood, negative thoughts, low hunger, sleep issues, suicidal thoughts, irritability, a desire to withdraw and isolate, an increase in substance use, increased gambling or cheating on your partner?

Among depressed fathers there is a 20% chance of suicide. That fact alone sets the tone for the seriousness of this investigation when it is coupled with the additional fact that 10% of fathers, at least, experience depression after the birth of the child or, unlike the mother, some months later. The stakes are very high.

All the points that were made predelivery are still valid after delivery. It is just that everything has changed from imagination and anticipation to the actualities of being 'three', not two; of being a family instead of a couple, of being a father instead of a man.

Such profound changes may be obscured in the business of the new family situation but nothing is missed in the patent or hidden emotional responses of the father, which may not all be joyous.

Notes

Notes (continued)

2. Do you feel connected to the baby?

A primary sign of PPD in the mother is a feeling of disconnection, possibly even aversion or hostility toward the infant. Asking directly about feelings of 'connectedness' on the part of the father toward the infant have the same implications as the feelings of connection or disconnection on the part of the mother.

However, there are also stark differences. After delivery, the infant is placed on the mother's chest, or she suckles the infant. Clearly, the infant not only came from her but is intimately connected to her by her own biological processes. The father does not have these visceral experiences to deepen the reality of his connection to the infant. He is looking at the baby. He does not have the experience of the baby being part of him. It is hard to experience that 50% of the infant's DNA belongs to him.

The whole experience of birth and delivery, not to mention pregnancy itself, may be too surreal for him to feel connected. The mother knows that she is the mother. The father must grow into the novel experience of being a father and the father-child connection.

This is a chance for the WCP both to explore the father's bewilderment at connection, and support the father's transition to the 'baby's father'. Teaching the father about developmental milestones in the first month and the first year can go a long way to capturing the father, making him proud, involved and connected to both the mother and the child.

Notes

Notes (continued)

3. Do you have a special needs child?

There is nothing in this world that can trigger depression, confusion, loss of dreams like a special needs child. Until delivery there were tensions. After the birth of a special needs child, there are harsh realities with life-altering consequences. We are not prepared for the adversities that befall us. By and large, we imagine that we live in a benign world where nothing bad happens. And then it does. Even emotionally stable people are thrown for a loop.

Any special needs child of any degree of severity is a unique stressor that tears at the father and the mother at the same time. Both are affected, making it harder as there is no shoulder to lean on.

First responses may be numbness and shock, giving way to worry and concern, feelings of helplessness and eventually to a post-traumatic stress disorder (PTSD).

The birth of a special needs child invariably produces PPD. The medical needs of the child will be managed with medical efficiency. The PPD will call on all the supportive and remedial resources available to manage the emotional fallout.

Notes

Notes (continued)

4. Do you feel inadequate to the new family situation?

Having a baby is almost a concept until you bring the child home. The care is 24/7 for the next decade of life. This total commitment for the father comprises care for both the infant and the mother in ways that have never been done before.

The mother may have had basic infant care instruction before leaving the hospital. Was the instruction given to the father? He has to learn as he goes, with and from his partner if he is lucky. He has to get used to even holding the infant, not like a football, and performing basic tasks such as feeding, changing, bathing, soothing; none of which are part of his skill base.

That is only part one, the infant. Part two is the mother and infant; the new family. Part three is the instant assumption of the transition from 'person' to being a father. What in the world is it to be a father? Mothers talk to mothers and other women. Bye and large, fathers talk to no one. Fatherhood must be invented in an almost perfect vacuum.

The WCP has to assess where the father is in the process of assimilating to the new dimensions of family and fatherhood and help the process along.

Notes

Notes (continued)

5. Do you feel sleep deprived?

This simple question has a profound significance. The first symptom of depression is disturbance in the sleep architecture. It takes longer to fall asleep, more than thirty minutes. Then, there is early morning awakening, before one usually wakes up. The quality of sleep changes to a pattern of shallow, light sleep with intermittent awakenings.

The pattern and content of dreams change. The net effect is feeling sleep deprived. In other words, a report of sleep disturbance taps into the biology of depression. Infants characteristically require feeding every three hours for the first weeks. They let you know by crying, summoning either the father or the mother. Either the father or mother getting out of bed to feed the infant disturbs the sleep of the partner.

The WCP, using sleep as a barometer of wellbeing in both the father and the mother, can often detect the presence of difficulties in areas already explored. Sleep disturbance is not to be treated as an isolated event but very often the tell-tale symptom that points to other problem areas.

When all is said and done, the new family and the WCP can breathe a sigh of relief when it is reported that the infant is sleeping through the night. That seems to be a coded message that all is well.

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Notes (continued)

6. Do you feel confused in the fathering role?

It used to be common for girls to play with dolls or to play house. Boys invariably played with trucks or balls. The actualities may have changed to a video format, but the message is the same. The former is a rehearsal for motherhood. The boys' pastimes offer diversions with no relation to the new dimensions of the modern involved father.

Providing and protecting has evolved to a much more hands-on, emotionally involved pattern of family care.

Biology itself plays a role in preparation for mothering simply by the series of biological and hormonal changes that accompany pregnancy. The man has no such clues with the exception, that he is not conscious of, that his testosterone level has fallen slightly making him less aggressive and more open to oxytocin release.

Becoming a father is a steep learning curve from the first stages of pregnancy through infancy, childhood, adolescence and the young adulthood of this new arrival.

Compounding the difficulty may be the 'gate keeper' behaviors of the mother and the other providers working to exclude the father from participation in infant care with its concomitant learning. Fathers may be seen as intruders, incompetent competitors for the attention of the infant. In any event, the WCP has to beware of and guard against 'gatekeeping' by the mother, the system or inadvertently by the WCP themselves.

Assuming that the father is the working parent, the same applies to the working mother, work may be demanding, leaving little time or energy to grow into the harmonious interplay of parent and child.

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Notes (continued)

7. Do you feel concerned about your ability to father?

This question, when answered in a symptom-positive way, speaks both to the father's sense of his ability to grow into a fathering stance and the father's own history of being fathered.

In other words, concerns about the ability to father can come from the psychological makeup of the father or from the epigenetic load of experiences of himself being fathered that he brings to the new family.

Men characteristically are less intuitive about feelings while they are entering a world where feelings speak louder than words. They are entering a world which is dominated by feeling communications.

Developing the ability to father requires the acquisition of a whole new skill set: learning the language of feelings, learning how to listen and putting the urge to 'do something' last on the list of remedial responses. The father has to do this with the child and, paradoxically, with the mother at the same time.

This question allows the WCP to trade on the 'concerns' and steer the father to the host of new father's training programs that are springing up in response to changing times that support father inclusion and the mother's expectation that she will have a partner rather than another child.

Notes

Notes (continued)

8. Do you feel trapped?

When the infant arrives home and the door closes on the new family, in the father/mother/infant unit, fathers often experience being cut off from their previous lives. There are hosts of new demands on time and effort and hosts of new responsibilities that take one away from familiar pastimes and 'lock' one into a new life. Choices are narrowed.

Trapped is not too strong a word. The hedge-fencing of duties and responsibilities in evolving the lives of others is daunting. The play of a couple relationship has turned to work in a way that can easily be experienced as being caught in a trap, aptly called the 'parent trap'.

Pregnancy leads to family and once you are in one you never get out. It is your family to build, support, enjoy or suffer through. No matter what, it is your family, and you are a unit. No matter how loose your connection may become, Family Court will still see you as obligated, no questions asked.

The father must grow or perish. He is caught in a new web of life happenings whether by choice or by accident.

Notes

Notes (continued)

9. Do you feel the loss of the old life relationship with your partner?

Often, this question focuses on the imputed sense of male sexual deprivation. While it is true that sexual accommodations must be made during pregnancy and after birth, sex can become diminutive. The real action is in the shifting of attention and relatedness of the partners.

The father goes from being the sole recipient of the mother's attention to the status of an afterthought. The mother is focused on the child, not her partner.

She wants a helpmate, not a playmate. Loss of undivided attention from a formerly attentive partner can have a deflating effect that triggers previous hurts as the father's epigenetic history of 'falls from the center of attention' comes front and center.

Fathers, unlike mothers, must grow up. Mothers have the same task but with the difference that they are growing into mothering. Fathers, to use an unflattering cliche must 'man up'. They must put the boy inside of them aside. They can no longer just go out with the gang and party. Unless the father can make the transition to family, they may be experiencing the former playmate as their current cellmate.

Notes

Notes (continued)

10. Do you feel your partner is anxious or stressed?

While this is a return to a question from the antepartum state, the circumstances have changed so drastically from before birth to after birth that a whole new set of sensitivities to the partner is needed.

Before birth, tensions and stressors in the partner focused in large part on anticipatory concerns. Now many of the stressors have shifted to the physical labor of caring for the infant. That care may expose her to the same doubts of adequacy that we reviewed in the father. Or, the burden of care may simply feel overwhelming, causing its own type of burnout.

The father also has a vastly shifted set of concerns that may cloud his vision of the mother's difficulties. He must work and come home to work as well. Sensing his partner's difficulties may be obscured by his own burdens.

The father's development in learning the 'language of feelings' is now put to the test in his ability to sense the present and emerging stressors of his partner.

The WCP can be a gentle guide by drawing attention to the new needs of the partner, as well as a source of encouragement to rise to the new challenges.

Notes

Notes (continued)

11. Is there anyone you can turn to for help?

Nowhere is the axiom "a problem shared is a problem halved" more appropriate than in the home setting after delivery. The WCP can review the father's resource base of contacts. Perhaps, the WCP is the person that is turned to for help.

It is important to note that even the phrasing of this question is problematic. It contains a word that men are allergic to, "Help". With this in mind, the WCP can open a path to conversations with the families of origin, friends or new contacts the father may have acquired along the birthing process path. The father may be encouraged to talk to other new fathers or to join a father's group. This may be the moment when the new father, with the excitement of grand parenthood in the air, reaches out to his own father.

Most important, this may be the moment, with the guidance of the WCP, when the father reconnects with his own partner after both have recovered from the event of delivery. None of us were born with 'infused knowledge'. We must learn every step of the way, and the new role of father is no exception.

Supporting the new father with resources, and being a resource, may bring as much joy to the WCP as it brings benefit to the father along his learning path.

Notes

Notes (continued)

A CASCADE OF BENEFITS

- Father shifts from being a visitor to becoming a participant.
- The acknowledgement of the father strengthens fatherhood.
- Pregnancy wellcare transforms to a wholistic management of the mother/child/father.
- The genetic and epigenetic history of the father becomes part of the official medical record in real time.
- The father is screened preemptively for PPD.
- PPD in the father can be discovered, prevented or remediated.
- Mother/child safety is enhanced by preemptive screening of the father.
- Reduction of PPD in the father reduces the risk of PPD occurring in the mother.
- Every screening question for the father has a corresponding value as a screening tool to detect, prevent or remediate PPD in the mother.
- The 20% chance, one in five pregnancies, that PPD will occur is addressed immediately.
- The questionnaire offers multiple points of entry for the father and mother to talk meaningfully to each other.
- The questionnaire, by strengthening the father and opening possibilities for dialog with the mother, strengthens the family relationship.
- The discovery of the presence or potential for PPD lowers the risk of premature delivery.
- Treating or preempting depression in either the father or the mother protects the child from developing depression in childhood or later in life.

- Institutions or practitioners that adopt this model lower significant elements of risk which add both to pregnancy as well as aftercare.

- Institutions and practitioners who adopt this approach can make more efficient and targeted interventions with existing resources.

Bringing the Father into Pregnancy is a win for the father, the mother, the child and the health care provider.

ABOUT THE FOUNDATION FOR MALE STUDIES

Dr. Stephens created the Foundation for Male Studies to foster intellectually rigorous and groundbreaking research on the state of the male around the world.

The intent of the Foundation is to benefit all, male and female, through the scientific and academic study of the male, thereby promoting a larger understanding about our inter-connectedness and inter-dependence. Twenty-five years ago, he created the Foundation for Male Studies to support an apolitical, academic understanding of the male toward the goal of creating policy and practice that was rooted in gender holism.

ABOUT THE AUTHORS

Dr. Edward M. Stephens, MD, participated in specialty training in obstetrics where he observed the prevalence of psychological factors in pregnancy and the importance of early intervention with social services and mental health involvement. His training emphasized father's involvement by the routine inclusion of childbirth education training. He experienced the devastating effects of postpartum depression in his own life when there was no recognition by the professionals that it even existed for fathers. He changed his specialty from obstetrics to psychiatry on the strength of his experience of the benefits of mental health interventions in pregnancy management. He presented a proposal for a meta-analysis for father PPD research at the International Association for Infant Mental Health (WAIMH) in Dublin, Ireland in 2023. The finished document, Bringing the Father into Pregnancy, was presented at the 2024 WAIMH conference in Finland. He is a life member of the American Psychiatric Association, American Medical Association, American Academy of Child and Adolescent Psychiatry and a member of WAIMH.

Jane I. Honikman, MS, co-founded Postpartum Education for Parents (PEP) to ensure support for parents in Santa Barbara because using trained parent volunteers and unintentionally began a career as a parent support advocate and activist. In 1987, she founded Postpartum Support International (PSI), and gives presentations at national and global meetings promoting perinatal mental health and preventing mental illness. After retiring as Executive Director of PSI, she co-founded the Parental Action Institute (PAI) to continue her long-term goal to confront the stigma of mental illness and the mythology surrounding new parenthood. She has authored books, articles, and educational materials on parental mental health. Her most recent publications are *Parental Mental Health: Factoring in Fathers*, and *Postpartum is Forever: Social Support from Conception through Grandparenthood*. Her archives reside at the University of California Santa Barbara, Special Collections Library.

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“I Wanted to Be There as a Father, but I Couldn’t”: A Qualitative Study of Father’ Experiences of Postpartum Depression and Their Help-Seeking Behavior Sarah Christine Pedersen, Helle Terkildsen Maindal, and Knud Ryom

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PLOS ONE

RESEARCH ARTICLE

Pregnancy Risk Assessment Monitoring System for Dads: A piloted randomized trial of public health surveillance of recent fathers' behaviors before and after infant birth

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OPEN ACCESS

Citation: Garfield CF, Simon CD, Stephens F, Castro Román P, Bryan M, Smith RA, et al. (2022) Pregnancy Risk Assessment Monitoring System for Dads: A piloted randomized trial of public health surveillance of recent fathers' behaviors before and after infant birth. PLoS ONE 17(1): e0262366. https://doi.org/10.1371/journal.pone.0262366

Editor: Sze Yan Liu, Montclair State University, UNITED STATES

Received: August 17, 2021

Accepted: December 22, 2021

Published: January 21, 2022

Data Availability Statement: Based on our data use agreement, there is limited access to the data itself. Data can be requested by contacting Northwestern University fsm-research@northwestern.edu for access to the dataset.

Funding: This project was supported by the Centers for Disease Control and Prevention (Cooperative agreement #NU38OT000140-05-01)

Abstract

Background

Becoming a father impacts men's health and wellbeing, while also contributing to the health and wellbeing of mothers and children. There is no large-scale, public health surveillance system aimed at understanding the health and behaviors of men transitioning into fatherhood. The purpose of this study was to describe piloted randomized approaches of a state-based surveillance system examining paternal behaviors before and after their infant's birth to better understand the health needs of men and their families during the transition to parenthood.

Methods

During October 2018–July 2019, 857 fathers in Georgia were sampled 2–6 months after their infant's birth from birth certificates files and surveyed via mail, online or telephone, in English or Spanish, using two randomized approaches: Indirect-to-Dads and Direct-to-Dads. Survey topics included mental and physical health, healthcare, substance use, and contraceptive use.

Findings

Weighted response rates (Indirect-to-Dads, 33%; Direct-to-Dads, 31%) and population demographics did not differ by approach. Respondents completed the survey by mail (58%), online (28%) or telephone (14%). Among 266 fathers completing the survey, 55%

and CDC Innovation Fund, Office of Science/Office of Technology and Innovation.

Competing interests: The authors have declared that no competing interests exist.

had a primary care physician, and 49% attended a healthcare visit for themselves during their infant's mother's pregnancy or since their infant's birth. Most fathers were overweight or had obesity (70%) while fewer reported smoking cigarettes (19%), binge drinking (13%) or depressive symptoms (10%) since their infant's birth.

Conclusions

This study tests a novel approach for obtaining population-based estimates of fathers' perinatal health behaviors, with comparable response rates from two pragmatic approaches. The pilot study results quantify a number of public health needs related to fathers' health and healthcare access.

Introduction

Fathers represent nearly two-thirds of the adult male population in the United States [1] and can play key roles in the health and development of their families [2]. Father involvement has been linked to improved maternal and infant health, including longer breastfeeding duration [3], lower levels of maternal depression [4], earlier prenatal care initiation [5], higher utilization of postnatal care services [6], and improved child developmental, psychological and cognitive outcomes [7, 8]. Beyond influencing the health of their families, fatherhood presents an opportunity for men to improve their own health [9]. Healthy men are more likely to participate in childrearing [10], support mothers in parenting [11], and have healthy children [12].

Specifically including fathers in health studies over the transition to parenthood is an increasingly recognized need [13]; however, no population-based surveillance system in the United States currently collects data from fathers during the perinatal period [14]. While several federally-funded, population-based surveys include men (e.g., National Health Interview Survey [NHIS] [15], Behavioral Risk Factor Surveillance System [BRFSS] [16], National Survey of Family Growth [NSFG] [17], and National Health and Nutrition Examination Survey [NHANES] [18]), they are not specific to fatherhood or men's experiences and behaviors before, during, and after the perinatal period. Further, while there are several father-inclusive population-based studies (e.g., Fragile Families and Child Wellbeing Study [4], Early Childhood Longitudinal Study of Birth [ECLS-B]) [19], they do not specifically focus on the health of fathers during the perinatal period.

Since 1987, the Pregnancy Risk Assessment Monitoring System (PRAMS), a site-specific and population-based surveillance system, has collected data annually on a representative sample of mothers regarding their experiences, attitudes, and behaviors before, during, and shortly after pregnancy from births sampled 2–6 months after delivery, with most respondents answering the survey at 3–4 months postpartum [20]. Building on the PRAMS infrastructure, a parallel population-based survey for fathers during the perinatal period, known as "PRAMS for Dads," was implemented in collaboration with the Georgias Department of Public Health [2]. The purpose of the study was to 1) test two methodological approaches for effectively reaching a representative sample of fathers of recent live-born infants, and 2) describe fathers' behaviors and experiences during the perinatal period, including before and shortly after the birth of their infant.

Materials and methods

We conducted a pilot, randomized controlled trial comparing response rates for two methodological approaches for sampling fathers 2–6 months following the birth of an infant. Eligibility criteria included Georgia residency, in-state birth, and presence of both maternal and paternal identifying information on the birth certificate. Unmarried fathers without a paternity acknowledgement (PA) form (N = 14,887), and fathers with unknown identifying information, including marital status or presence of a PA (N = 65) were excluded from eligibility from the study due to the target population definition. The target population was comprised of fathers in Georgia who were listed directly on the birth certificate through marriage or listed indirectly via a completed PA form [21]. The study protocol, modeled after PRAMS [20], used stratified random sampling to select women with a recent live birth from birth certificate files and was designed to reflect Georgia's birth population. To align with ongoing PRAMS operations in Georgia, we selected all eligible fathers (hereafter "sampled fathers") for whom the infant's mother had been sampled in PRAMS during the period from October 15, 2018–July 3, 2019 (representing infants born during May 28, 2018–May 3, 2019). During the study period Georgia PRAMS sampled 1,074 women with a live birth, eligible fathers could be identified for 857 (79.8%) births and were included in the "PRAMS for Dads" pilot. This study was approved by both the Georgia Department of Public Health Institutional Review Board, which served as the Institutional Review Board of record, and the Northwestern University Institutional Review Board.

Following the PRAMS data collection protocol for mothers [20], sampled fathers were mailed a pre-survey letter describing the study, followed by the first survey packet, a reminder letter, and two additional survey packets. Survey packets included a cover letter, survey instrument, pre-stamped return envelope, flat pen with the PRAMS logo (provided as a gift to encourage response), and a resource list including support services for a variety of needs from child support and career services to fatherhood and parenting (e.g., Department of Human Services—Division of Child Support Services, Georgia Department of Labor Career Centers, Georgia Fatherhood Program). Mail non-respondents were followed up with telephone outreach beginning approximately 45 days after initial contact per PRAMS protocol, continuing with up to 15 call attempts made until the index infant was 9 months old. Fathers who completed the survey received a $20 gift card, the same gift offered to mothers participating in Georgia PRAMS.

To assess the most effective way to reach fathers, we randomized fathers to one of two study arms: 1) "Indirect-to-Dads," wherein fathers were contacted indirectly through the infants' mother, or 2) "Direct-to-Dads," where fathers were contacted directly. The Indirect-to-Dads arm borrows from existing literature referring to mothers as gatekeepers or gateopeners, conveying the idea that mothers can either block or facilitate access to fathers [22, 23]. This indirect method of reaching fathers is a validated approach in other studies surveying fathers in the perinatal period [24]. Participants in the Indirect-to-Dads arm were therefore contacted using the available mailing address for mothers from the birth certificate, and materials for fathers were included in the same mailing packet sent to mothers selected for participation in the Georgia PRAMS survey. All materials were addressed to the sampled PRAMS mother, rather than the father, who was then asked to provide the PRAMS for Dads survey to the infant's father to complete. When fathers did not respond to the mailings, mothers were subsequently contacted via telephone and asked to provide the father's contact information. No further attempts to contact fathers were made when contact information was not provided by the infant's mother. Participants in the Direct-to-Dads arm were contacted using the fathers' physical (residential) address listed on the birth certificate since mailing address was not reported

for the second parent; all mailings were addressed and sent directly to fathers, independent of the mother. Fathers who did not respond to the mailings were directly contacted via telephone numbers first obtained through the following external database sources: LexisNexis, Thomson Reuters CLEAR investigation software, and Georgia Registry of Immunization Transactions & Services, and Newborn Screening databases. If external databases were unable to find a father's phone number, mothers' phone numbers available on the birth certificate were contacted to reach fathers. Mothers were then asked to provide father's contact information, including during her PRAMS phone interview, if she had not yet responded by mail. A third option for survey participation, web-based completion, which is not currently available for regular PRAMS, was made available to all fathers via a personal link included in the preletter and all subsequent mailings, regardless of study arm.

The PRAMS for Dads survey instrument, modeled after the PRAMS questionnaire for mothers (https://www.cdc.gov/prams/questionnaire.htm), was available in Spanish and English, took approximately 30 minutes to complete, and contained 71 questions covering a range of topics including health care access and usage, contraceptive use, health behaviors, infant safe sleep practices, father involvement, and employment. Survey questions were directly taken or adapted from validated surveys [17, 20, 25].

The number of contact attempts and survey completions for participants in both arms was monitored for mail, telephone, and web options by Georgia Department of Public Health (GDPH) study staff using Research Electronic Data Capture (REDCap), a secure web-based data collection and management platform [26]. All mail surveys were double-entered and verified independently by two study staff members.

Survey data were weighted for sampling design, nonresponse, and noncoverage to be representative of fathers to live-born infants who were either married or unmarried, with a completed PA form, in Georgia. The noncoverage weight accounts for fathers from the target population that were excluded from the selection process of the sample because their names were not listed on the birth certificate; the percentage of noncoverage was 1.6%, representing the total number of fathers with missing last name (1,336) divided by the total number of fathers in the target population (85,653). Paternal characteristics and infant birth outcome data, collected from infant birth certificates, included age, education, race/ethnicity, indication of paternity (either married or unmarried with signed PA form), infant gestational age at delivery and infant birthweight. Paternal body mass index (BMI) was computed using self-reported weight and height values survey responses. The two-item patient health questionnaire (PHQ-2) was used to determine frequency of depressed mood after the infant's birth.

We used Chi-squared tests to compare the distribution of select paternal characteristics by study arm among sampled fathers, and used Chi-squared testing, followed by Benjamini and Hochberg [27] adjusted Chi-squared testing for post-hoc analyses involving variables with more than two categories in cases of a significant Chi-squared test, to compare the distribution of study arm, paternal characteristics and infant birth outcomes between respondents and non-respondents. Finally, we calculated weighted prevalence estimates and 95% confidence intervals of select demographic and health-related survey measures among respondent fathers. Data analyses were conducted by two co-authors who were blinded to study arm allocation to prevent detection and interpretation bias; this was achieved by labeling as arm 1 and 2 during the analytic process.

All analyses were conducted in SAS-callable SUDAAN v. 11.0.1 (RTI International, Research Triangle Park, NC, USA) to account for the complex survey design. The statistical significance level was set at p-value <0.05. Power and sample size calculations indicated that a minimum of 388 fathers would need to be sampled for each arm (776 in total) to detect a difference of at least 10% in response rates at 80% power and 5% level of significance (2-sided) [28].

Verbal/oral consent was obtained during phone phase using a consent script prior to completing the survey over the phone. Voluntarily returning the survey via mail, completing the survey electronically, or completing the telephone interview was considered a tacit indication of participant consent. The Centers for Disease Control and Prevention was not directly engaged in the research, and did not interact with study participants or have access to identifiable information pertaining to the fathers.

Results

Study sample

Of 857 fathers comprising the study sample, 429 were randomized to the Indirect-to-Dads arm and 428 to the Direct-to-Dads arm. Compared with all fathers of live-born infants in Georgia during the study period who were either married or unmarried with a PA form (N = 85,653), weighted survey respondents for PRAMS for Dads did not differ significantly on selected paternal characteristics, including age, education, race/Hispanic origin, and indication of paternity (Table 1). Overall, 266 fathers (31.7% weighted response rate) completed the survey; of these, 132 were in the Direct-to-Dads arm and 134 were in the Indirect-to-Dads arm (Table 1). The weighted proportion of respondent fathers who were married was 64.6%, with 55.7% completing at least some college, 37.7% aged 35 or older, and 48.3% of fathers were non-Hispanic white.

Impact of methodology on response

Overall response rates did not differ by study arm (Fig 1: 32.5%, Indirect-to-Dads; 30.9%, Direct-to-Dads), The majority of fathers in both arms responded to the survey by mail (68.2%, Indirect-to-Dads, 50.2%, Direct-to-Dads), followed by online (23.0%, Indirect-to-Dads; 32.4%, Direct-to-Dads) and phone (8.8%, Indirect-to-Dads; 17.3%, Direct-to-Dads). Paternal age, education, race and Hispanic origin, marital status, education, infant gestational age at birth and infant birthweight, as obtained from the birth certificate file, were distributed similarly between the two study arms among sampled fathers (Table 2). When comparing respondents and non-respondents, no significant differences were observed by study arm, paternal age, paternal education, infant gestational age at birth, or infant birthweight (Table 3). Compared with non-respondents, a higher proportion of respondents were Hispanic (10.8% vs 19.5%), and a lower proportion of respondents were non-Hispanic Black (39.7% vs 25.6%) and unmarried with a completed PA form (42.7% vs 26.7%).

Demographic and health characteristics of respondents

Most fathers (92.1%) reported working during their infant's mother's pregnancy (Table 4). Half (50.6%) reported a household income >200% of the federal poverty level, and nearly two-thirds (63.3%) reported having private insurance. Nearly half (48.6%) of respondents had attended any health care visit for themselves during their infant's mother's pregnancy or since their infant was born, while over half (54.8%) reported currently having a primary care physician. Among those attending any health care visit during their infant's mother's pregnancy or since the infant was born, 67.1% sought a regular checkup, 55.9% reported having their teeth cleaned, and 28.2% reported seeking care for an illness or chronic condition. Visits for an injury (8.0%) or family planning/birth control (8.2%) were less common.

With regard to paternal mental and physical health, 10.2% fathers reported depressive symptoms since their infant's birth. Most fathers reported their health status as excellent (25.4%) or very good (38.9%); the remainder reporting good or fair. Over two-thirds of fathers

Table 1. Comparison of selected paternal characteristics of the PRAMS for Dads pilot study target population and weighted survey respondents, October 2018–July 2019, Georgia, USA.

Selected paternal characteristics from the birth certificate	PRAMS for Dads target population [a]		Weighted survey respondents		
	N = 85,653[b]		n = 266[c]		
	N	%[f]	n	%[g]	P-Value[d]
Age, years					
<25	13,520	16	31	12.6	0.4438
25–34	40,841	48.3	129	49.7	
> = 35	30,181	35.7	106	37.7	
Education					
<=High school or GED	40,705	48.6	123	44.3	0.5079
Some college, no degree	13,523	16.1	47	19.3	
College Grad	29,609	35.3	96	36.4	
Race/Hispanic origin					
Non-Hispanic white	37,759	45.4	121	48.3	0.6944
Non-Hispanic black	27,044	32.5	73	30.8	
Hispanic	12,216	14.7	50	12.6	
Non-Hispanic other/Multiple Races[e]	6,241	7.5	19	8.3	
Indication of Paternity					
Married	54,674	63.8	193	64.6	0.8469
Unmarried with PA form	30,979	36.2	73	35.4	

Abbreviations: PA = Paternity Acknowledgement, GED = General Educational Development.

[a] The taret population for the Georgia PRAMS for Dads pilot study is all Georgia residents who are fathers to a live-born infant. Only married fathers or unmarried fathers with completed paternity acknowledgment form were included in the population of interest. Exclusions: Because the definition of the target population, certain fathers were excluded from eligibility in the Georgia PRAMS for Dads survey: Unmarried fathers without paternity acknowledgment forms or unknown marital status. Study period includes infants born between May 28, 2018 to May 3, 2019.

[b] Totals may not add up to the indicated PRAMS for Dads target population size (N = 85,653) due to missing/unknown values.

[c] Totals may not add up to the indicated overall unweighted sample size (n = 266) due to missing/unknown values.

[d] Goodness-of-fit (GOF) p-value. GOF hypothesis: Distributions of the PRAMS for Dads target population and weighted sample of survey respondent percentages are statistically equivalent.

[e] Race categories API (n = 14) and Other/Multiple races (n = 5) were combined because of small sample size.

[f] Weighted percentage.

[g] Father analysis weight is the product of his sampling weight, non-response weight and non-coverage weight.

https://doi.org/10.1371/journal.pone.0262366.t001

were overweight (39.2%) or had obesity (30.6%) based on self-reported weight and height at the time of survey completion. Most fathers reported consuming any alcoholic drink in an average week (84.3%) since their infant's birth, with 13.1% reporting any binge drinking (5 or more drinks on one occasion) in the past 30 days. Overall, 18.5% of fathers reported smoking cigarettes on an average day at the time of survey completion. Since their infant was born, 4.3% reported e-cigarette use and 5.1% reported marijuana use. Most fathers reported they and the infant's mother were currently doing something to prevent pregnancy (78.5%), while 15.6% reported currently being in a sexual relationship with the mother but not doing anything to prevent pregnancy, and 5.9% reported not currently being in a sexual relationship with the infants mother (Table 4).

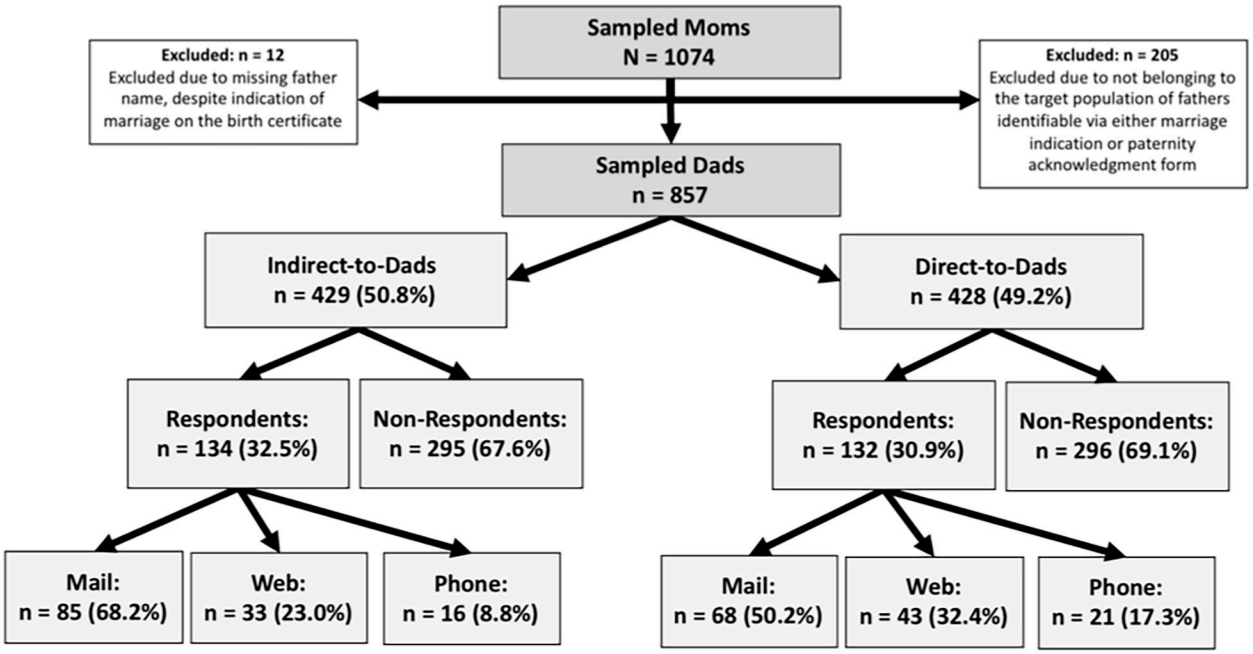

Fig 1. Flow chart of the selection of eligible participants sampled the Pregnancy Risk Assessment Monitoring System for Dads Pilot Study by study arm, survey response, and mode of survey completion. NOTE: All percentages are weighted. Father analysis weight is his sampling weight. Numbers may not sum to 100% due to rounding.

https://doi.org/10.1371/journal.pone.0262366.g001

Discussion

This pilot surveillance effort to adapt PRAMS methodology to include fathers around the time of an infant's birth was successful in testing two different approaches for contacting fathers while also collecting representative data for fathers' perinatal health behaviors. Demographic characteristics and response rates were similar between the two randomized arms. In comparing survey respondents and non-respondents, we found similar sociodemographic characteristics between most subgroups, with the exception of lower response rates among fathers who were non-Hispanic Black or unmarried. By measuring the health behaviors of men during the perinatal period, the pilot PRAMS for Dads study helps bridge a research gap in understanding the health of fathers during this key timepoint in men's lifecourse.

Preferred approaches to reaching fathers

Historically, as prior research has shown, studies of fathers during the perinatal period experience the highest participation rate when interviews are conducted with in-person options, whether in hospital or in the home. For example, the Fragile Families and Child Wellbeing Study interviewed both mothers and fathers, recruiting in the hospital around the time of birth, with both in-person and telephone completion available; 76% of fathers completed interviews when mothers had already completed the interview. Overall response rates for fathers were higher within the hospital (70%) compared with outside the hospital (53%) due to ease of locating fathers during hospital visits [25]. The Pregnancy Risk Assessment Monitoring System-Zika Postpartum Emergency Response (PRAMS-ZPER) study, conducted in Puerto Rico during the 2017 Zika outbreak, also achieved a high response rate for fathers (77%) through the use of self-administered surveys, completed in-person in the birth hospital [9]. The Early Childhood Longitudinal Study–Birth Cohort used interviews and self-administered

Table 2. Distribution of select characteristics from the birth certificate: Comparison between study arms[a]—Total sampled fathers–the Pregnancy Risk Assessment Monitoring System for Dads study, October 2018-July 2019, Georgia, USA.

	Direct-to-Dads	Indirect-to-Dads
	n = 428[b]	n = 429[ab]
Characteristics from the birth certificate	n[b] (%[c])	n[b] (%[c])
Paternal Demographic Characteristics		
Age		
<25	68 (16.9)	72 (15.3)
25–34	213 (48.5)	197 (46.9)
>=35	147 (34.5)	159 (37.8)
Education		
<=High school or GED	231 (50.8)	208 (47.3)
Some college, no degree	78 (20.7)	83 (17.6)
Bachelor's degree or higher	119 (28.5)	135 (35.1)
Race/Hispanic origin		
Non-Hispanic white	184 (46.7)	175 (42.3)
Non-Hispanic black	159 (35.8)	161 (34.5)
Hispanic	54 (11.9)	60 (15.2)
Non-Hispanic other	23 (5.6)	26 (7.9)
Indication of Paternity		
Married	261 (61.7)	258 (63.0)
Unmarried with PA form	167 (38.3)	171 (37.0)
Infant Birth Outcomes		
Infant gestational age at birth (weeks)		
Preterm, <37	206 (10.2)	199 (9.5)
Term, >=37	222 (89.8)	230 (90.5)
Infant birthweight (grams)		
Low birthweight, <2500	118 (8.0)	115 (7.2)
Normal birthweight, >=2500	310 (92.0)	314 (92.8)

Abbreviations: PA = Paternity Acknowledgement, GED = General Educational Development.

[a]Distribution of select paternal characteristics comparisons between study arms are made using a Chi-squared test at the significance level of 0.05. All comparisons exceed the significance level.

[b] Unweighted sample size; sample size may vary due to missing.

[c] Weighted percentage. Father analysis weight is his sampling weight.

https://doi.org/10.1371/journal.pone.0262366.t002

questionnaires during in-home visits. The study achieved a 56% response rate among resident fathers and a 37% response rate for nonresidential fathers of nine-month old infants, suggesting that reaching this latter group of fathers may be particularly challenging. Response rates from these studies add to the research showing that contacting fathers in-person may yield higher response [19].

In the current study, a unique aspect was testing two approaches to reach fathers via survey methodology. In this study, no major differences were noted between the two arms in terms of demographics, including whether parents were married or unmarried. Given the similarity of response rates between the two arms, future decision-making regarding the preferred approach for implementing a similar type of study might depend on staffing needs or resources available for reaching a representative sample of fathers. An alternative study design, such as using a hybrid approach where the two methodological arms are merged, could also be

Table 3. Distribution of study arm and select characteristics by survey participation—The Pregnancy Risk Assessment Monitoring System for Dads study, October 2018–July 2019, Georgia, USA.

Study arm/Characteristics from the birth certificate	Sampled fathers (N = 857)	
	Respondents	Non-Respondents
	n[a] (%[b])	n[a] (%[b])
Study Arm		
Direct-to-Dads	132 (47.9)	296 (49.8)
Indirect-to-Dads	134 (52.1)	295 (50.2)
Paternal Demographic Characteristics		
Age		
<25	31 (12.4)	109 (17.8)
25–34	129 (50.0)	281 (46.7)
>=35	106 (37.6)	200 (35.5)
Education		
<=High school or GED	123 (45.0)	316 (50.9)
Some college, no degree	47 (17.0)	114 (20.2)
Bachelor's degree or higher	96 (38.0)	158 (29.0)
Race/Hispanic origin[c]		
Non-Hispanic white	121 (47.3)	238 (43.1)
Non-Hispanic black[d]	73 (25.6)	247 (39.7)
Hispanic[d]	50 (19.5)	64 (10.8)
Non-Hispanic other	19 (7.6)	30 (6.4)
Paternity type[c]		
Married[c]	193 (73.3)	326 (57.3)
Unmarried with PA form[c]	73 (26.7)	265 (42.7)
Infant Birth Outcomes		
Infant gestational age at birth (weeks)		
Preterm, <37	122 (9.4)	283 (10.1)
Term, >=37	144 (90.6)	308 (89.9)
Infant birthweight (grams)		
Low birthweight, <2500	60 (6.8)	173 (8.0)
Normal birthweight, >=2500	206 (93.2)	418 (92.0)

Abbreviations: PA = Paternity Acknowledgement, GED = General Educational Development.

[a] Unweighted sample size; sample size may vary due to missing.

[b] Weighted percentage. Father analysis weight is his sampling weight.

[c] Chi-squared test significant, $p<0.05$.

[d] Benjamini and Hochberg-adjusted Chi-squared test significant, $p<0.05$ for difference between respondents and non-respondents (obtained by post-hoc analysis).

https://doi.org/10.1371/journal.pone.0262366.t003

considered. For example, researchers could initially contact fathers directly and then use the indirect approach whereby mailings are addressed to mothers when attempting to reach non-respondent fathers. Nonetheless, the Indirect-to-Dads approach may be less burdensome on staff and resources as compared to the Direct-to-Dads approach, as efforts may be included along with ongoing sampling of mothers in PRAMS or similar maternal-infant health surveillance surveys. The Indirect-to-Dads approach would also need to be balanced against the theoretical burden placed on mothers as the vehicle for delivery of the survey to fathers. Additionally, telephone contact was far more labor intensive compared with the other two modes of data collection, with web-based survey completion being the least labor intensive. The lack of adequate contact information for fathers in birth certificate files and external

Table 4. Prevalence of select demographic and health characteristics and behaviors among respondents—The Pregnancy Risk Assessment Monitoring System for Dads pilot study, October 2018–July 2019, Georgia, USA.

Select characteristics	n[a]	% (95% CI)[b]
Worked for pay during infant mother's pregnancy	240	92.1 (86.3–95.5)
Household income by federal poverty level (FPL)		
0–100% FPL	46	21.3 (15.2–29.1)
101–200% FPL	70	28.1 (21.5–35.8)
>200% FPL	123	50.6 (42.5–58.7)
Current insurance coverage		
Private	160	63.3 (55.3–70.7)
Public	14[c]	6.2 (3.2–11.6)[c]
None	81	30.5 (23.6–38.4)
Since Infant's Mother's Pregnancy or Since Infant's Birth		
Attended any health care visit	123	48.6 (40.8–56.4)
Had a primary care physician	134	54.8 (47.0–62.5)
Type of healthcare visit[d]		
Regular checkup at your family doctor's office	82	67.1 (55.6–76.9)
Visit for an illness or chronic condition	33	28.2 (19.0–39.7)
Visit for an injury	10[c]	8.0 (3.5–17.0)[c]
Visit for family planning or birth control	7[c]	8.2 (3.5–18.0)[c]
Visit for depression or anxiety	[e]	[e]
Visit to have teeth cleaned by a dentist or dental hygienist	62	55.9 (44.4–66.7)
Body mass index		
Underweight	10[c]	5.7 (2.8–11.4)[c]
Normal weight	59	24.5 (18.4–31.8)
Overweight	104	39.2 (31.8–47.2)
Obese	80	30.6 (23.7–38.4)
Any contraceptive use		
No, not currently in a sexual relationship	17[c]	5.9 (3.1–10.7)[c]
No, in a sexual relationship but not doing anything to prevent pregnancy	43	15.6 (10.8–22.2)
Yes	197	78.5 (71.4–84.2)
Any cigarette smoking[f]	43	18.5 (12.8–25.9)
Any e-cigarette use[g]	11[c]	4.3 (2.1–8.8)[c]
Any alcohol use[h]	152	84.3 (75.9–90.2)
Any heavy drinking[i]	[e]	[e]
Any binge drinking in past 30 days[j]	31	13.1 (8.4–19.8)
Any marijuana use[k]	13[c]	5.1 (2.5–10.1)[c]
Any depressive symptoms[l]	29	10.2 (6.4–15.8)
General perception of health		
Excellent	68	25.4 (19.3–32.8)
Very good	100	38.9 (31.6–46.7)
Good	73	30.4 (23.5–38.3)

(*Continued*)

Table 4. (Continued)

Select characteristics	n[a]	% (95% CI)[b]
Fair	19	5.2 (2.8–9.6)

[a] Unweighted sample size; overall unweighted sample size is 268.

[b] Weighted percentage denominators for some measures may differ due to missing data. Father analysis weight is the product of his sampling weight, non-response weight and non-coverage.

[c] Relative standard error (RSE) for the estimate is between 30–50%; estimates should be interpreted with caution.

[d] Among respondents who had attended any healthcare visit since their infant's mother was pregnant or since their infant's birth. Respondents were asked to check all types of visits they had attended.

[e] RSE>50% or standard error equal to zero; results not shown.

[f] Defined as smoking any cigarettes on an average day since the baby was born.

[g] Defined as smoking any e-cigarettes on an average day since the baby was born. E-cigarettes were defined as electronic cigarettes and other electronic nicotine vaping products (such as vape-pens, e-hookahs, hookah pens, e-cigars, e-pipes) which are battery-powered devices that use nicotine liquid rather than tobacco leaves, and produce vapor instead of smoke.

[h] Defined as consuming any alcoholic drink in an average week since the baby was born. A drink was defined as 1 glass of wine, wine cooler, can or bottle of beer, shot of liquor, or mixed drink.

[i] Defined as consuming 14 or more alcoholic drinks in an average week since the baby was born.

[j] Defined as consuming 5 or more alcoholic drinks in on at least one day in the past 30 days.

[k] Reported use of marijuana since the baby was born.

[l] Defined as reporting "always" or"often" feeling down, depressed, or hopeless or having little interest or pleasure in doing things he usually enjoyed since the baby was born.

https://doi.org/10.1371/journal.pone.0262366.t004

databases made contact by telephone especially challenging. While attempting to locate and reach fathers directly could theoretically be a better approach to survey fathers with lower response rates, this approach requires more intensive use of resources to identify the father's contact information.

Based on the PRAMS-ZPER study [9] and our findings in Georgia, earlier postnatal engagement of men with a father-focused survey may also be advantageous. The PRAMS-ZPER survey used in-hospital assessments to reach fathers shortly after their infant's birth. This timing, combined with in-person contact, may prove beneficial for reaching more fathers overall and to garner increased interest in subsequent reporting on new fatherhood experiences that may impact father or family health. Online survey completion also holds promise for data collection, as a quarter of PRAMS for Dads respondents opted to complete surveys online. The use of a web-based option for survey completion required less staffing time, as no data entry or telephone calling was required. Future public health surveillance systems aimed at reaching new fathers can consider postnatal timing of survey and determine the most appropriate study design based on available resources, data collection mode (e.g., in-person, mailings, web, telephone), and timely access to databases with information needed for contacting fathers.

Father health and healthcare characteristics and behaviors

Population-based estimates from PRAMS for Dads on select indicators of fathers' mental and physical health in Georgia appear to be similar to estimates from other studies examining these characteristics in men. For example, the prevalence of postnatal depressive symptoms (10.2%) in our sample is slightly lower than the North American prevalence estimate (12.5%) reported in a meta-analysis of paternal perinatal depression studies published between 1980 and 2015 [29]. The study also highlighted that the highest prevalence of depression was

observed 3–6 months after the birth of a child (13.0%), approximately the same period as PRAMS for Dad's data collection. The prevalence of men who had obesity (30.6%) or overweight (39.2%) in our sample was also comparable to the overall prevalence of obesity for men in Georgia (32.6% obese, 38.4% overweight; BRFSS) [30].

Select health behaviors assessed in this study are also similar to those found in state-sponsored representative surveys. For example, the 2019 BRFSS survey reported 19.0% of adult men in Georgia were current tobacco smokers, and 20.0% engaged in binge drinking during the prior month [30]. We found 18.5% of fathers used cigarettes on an average day, and 13.1% engaged in binge drinking since their infant was born. While the measures of cigarette use and binge drinking were not directly comparable due to differences between our study (sampling fathers) and Georgia BRFSS (sampling all adult men) as well as differences in questions used to assess use, these findings suggest behaviors of men who recently became fathers in Georgia may be similar to those of the adult male population in Georgia.

Among respondents, 15.6% were currently sexually active with the infant's mother but not using contraception, increasing risks of rapid repeat pregnancy. Prevention of rapid repeat pregnancy reduces the likelihood of short interpregnancy intervals (less than 18 months), which are associated with adverse maternal and child outcomes [31]. Future analyses of PRAMS data from mothers matched with PRAMS data for fathers will provide a more complete picture of contraceptive use among couples with a recent live birth in Georgia.

Limitations

Our findings from the pilot study of fathers with a recent live birth are subject to several limitations. Most notable is the overall response rate (31.7%), with lower response rates from unmarried and non-Hispanic Black fathers; in comparison, Georgia PRAMS (mothers with a recent live birth) had a response rate of 59% in 2018 and 61% in 2019 (https://www.cdc.gov/prams/prams-data/response-rate-tables/2019-response-rate-table.html). The web-based option available for PRAMS for Dads, but unavailable for PRAMS, makes comparisons in response rates inexact. Nevertheless, our lower response rate among fathers compared with mothers is consistent with two earlier studies observing the same among parents in the newborn period [19, 32]. Relying on birth certificate data to obtain father's contact information is another limitation as it only includes their physical (residential) address, unlike for mothers, which generally includes both their mailing address and telephone number. The limitations of and reliance on birth certificate data then meant that, during the telephone phase of the Direct-to-Dads arm, mothers were contacted to retrieve mail non-respondent fathers' contact information, an approach that subsequently utilized mothers to reach fathers. Further, in reaching fathers via two methodological arms, there may be biases for each approach, including an overrepresentation of fathers already interested in fatherhood and health behaviors in the Direct-to-Dads arm, while the Indirect-to-Dads arm fathers may provide survey responses made to appeal to their partners, or overseen by partners. While the study enabled testing for differences in sociodemographics, a more nuanced examination of selection bias was not possible, and future research should consider the objectives of and potential biases when considering best approaches for reaching fathers. Finally, given we limited our analysis to those fathers listed on birth certificate as married or unmarried with a signed paternity acknowledgement form, it may not capture same-sex, adoptive, surrogate, those unmarried fathers unable to sign (incarcerated, deployed) or absentee fathers. Of the latter, it is important to note that 20% of infants with mothers sampled for Georgia PRAMS had no father listed on their birth certificate. Whether this indicates that the father is absent or there are other reasons for not acknowledging paternity on the birth certificate is unknown.

Public health implications

Studies accounting for contextual factors linked to health behaviors and using representative samples of fathers can help capture the full lifecourse experiences of men who become fathers in the United States. While this study advances the approaches useful in reaching this understudied population, there are family-level considerations inherent in these efforts. In the Indirect-to-Dads approach, requiring mothers to facilitate the provision of surveys to fathers may contribute to increased maternal burdens of assuming responsibility for family health and wellbeing. In turn, one way to reduce these burdens may be to reduce bias within medical systems that may minimize expectations of fathers' roles and responsibilities to their families, especially in the area of health care utilization [33].

The PRAMS for Dads study lies at the unique intersection of family and men's health around the time of the birth of a new infant. This study contributes to our understanding of the important role becoming a father may play in men's health, health behaviors, and healthcare use in this time period, and the importance fathers can play in their families' lives. Studies such as PRAMS for Dads can help quantify men's health behaviors and service needs, which can be used to inform recommended clinical services such as screening for alcohol use, substance use, depression, oral health, and weight management [34–38]. Targeted focus in these areas may lead to better understanding of and interventions aimed at men's increased morbidity from chronic conditions [39], riskier behaviors and reduced life expectancy. Researchers also suggest incorporating discussion and measurement of masculinity norms into health promotion, as endorsement of these norms is linked to riskier health behaviors [40, 41]. Prioritizing and expanding studies focused on further understanding men's health during the transition to parenthood can elucidate this time as a potential lever for change. Advancing understanding of health and wellbeing for fathers can provide valuable information used to improve programming, policy, and health for fathers and families.

Supporting information

S1 Table. PRAMS for dads pilot survey questions and references.
(DOCX)

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