SOFAR:

SUPPORTING OUR FAMILIES THROUGH ADDICTION AND RECOVERY

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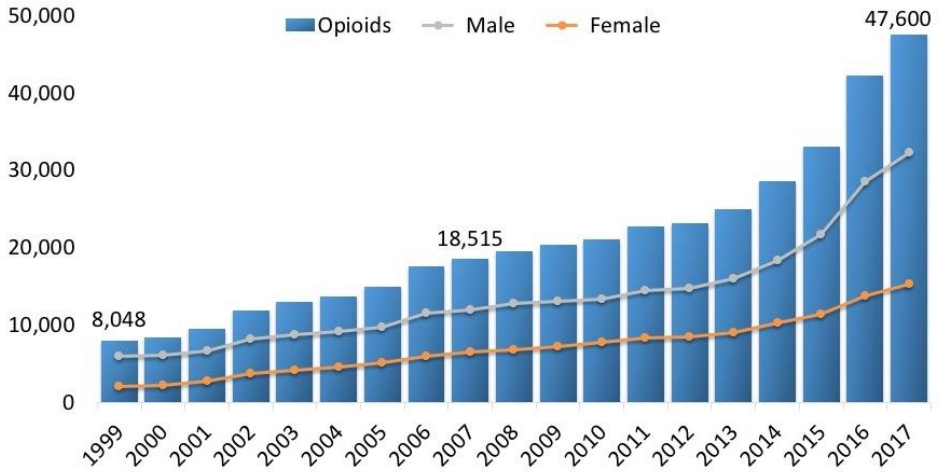
Background: The U.S. Opioid Epidemic

- Since 1990s, increasing opioid use and overdose in all age groups
  - Fastest growth in adolescents/young adults
  - Most overdose deaths ages 25-44 years

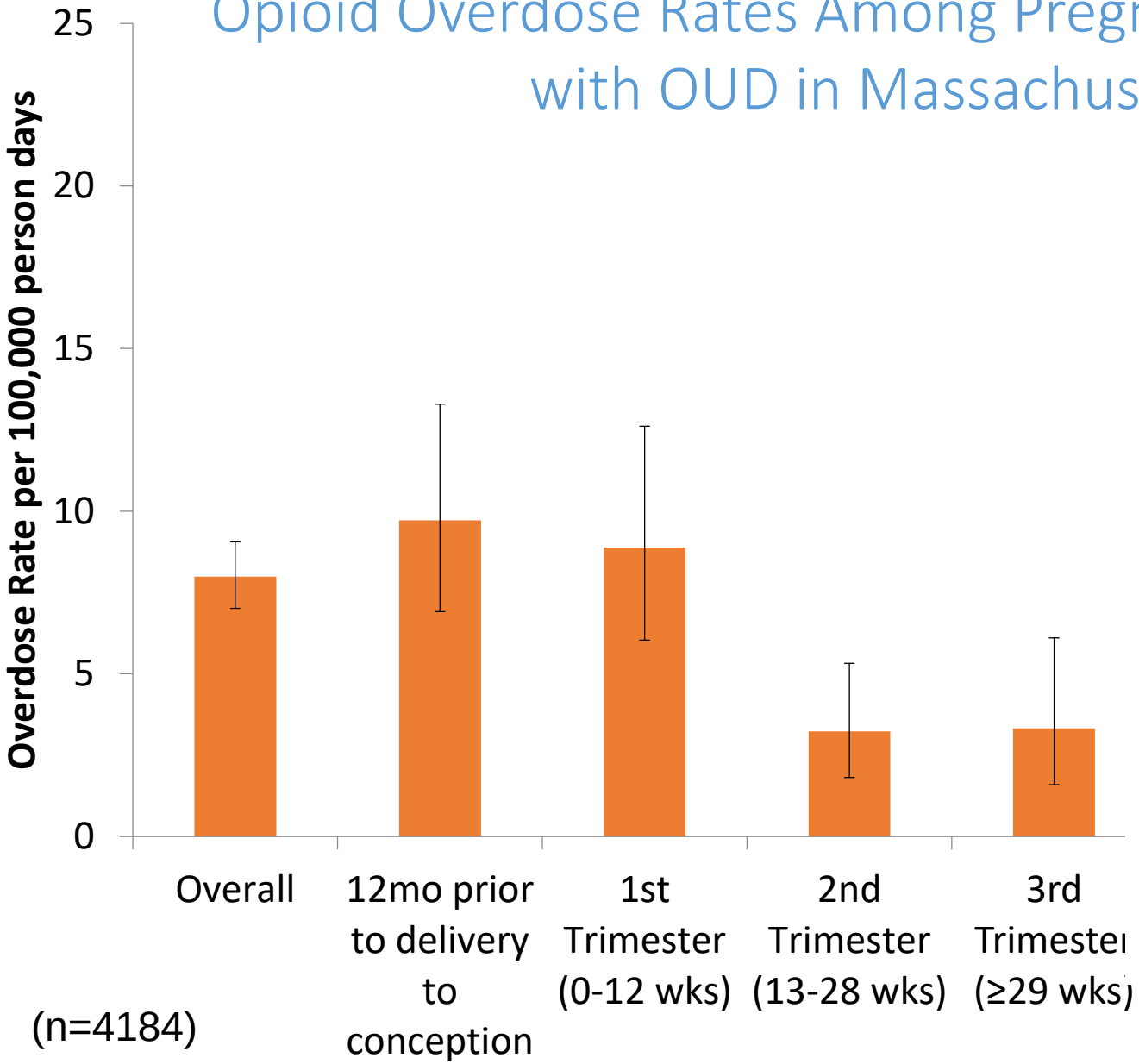
- 12.3% of U.S. children have a parent with a SUD
  - Parental SUD is a factor in 1/3 of infant foster care placements



Source: : Centers for Disease Control and Prevention, National Center for Health Statistics. Multiple Cause of Death 1999-2017 on CDC WONDER Online Database, released December, 2018

Figure 1: National Overdose Deaths Involving Any Opioid—Number Among All Ages, by Gender, 1999-2017. Centers for Disease Control and Prevention, National Center For Health Statistics

Opioid Overdose Rates Among Pregnant and Postpartum Women with OUD in Massachusetts (2011-2015)



(n=4184)

- Opioid use among U.S. women giving birth has increased 5-fold since 1999
- Pregnancy is a time of high motivation; MAT use peaks around delivery

Schiff et. al, *Obstetrics and Gynecology, 2018*

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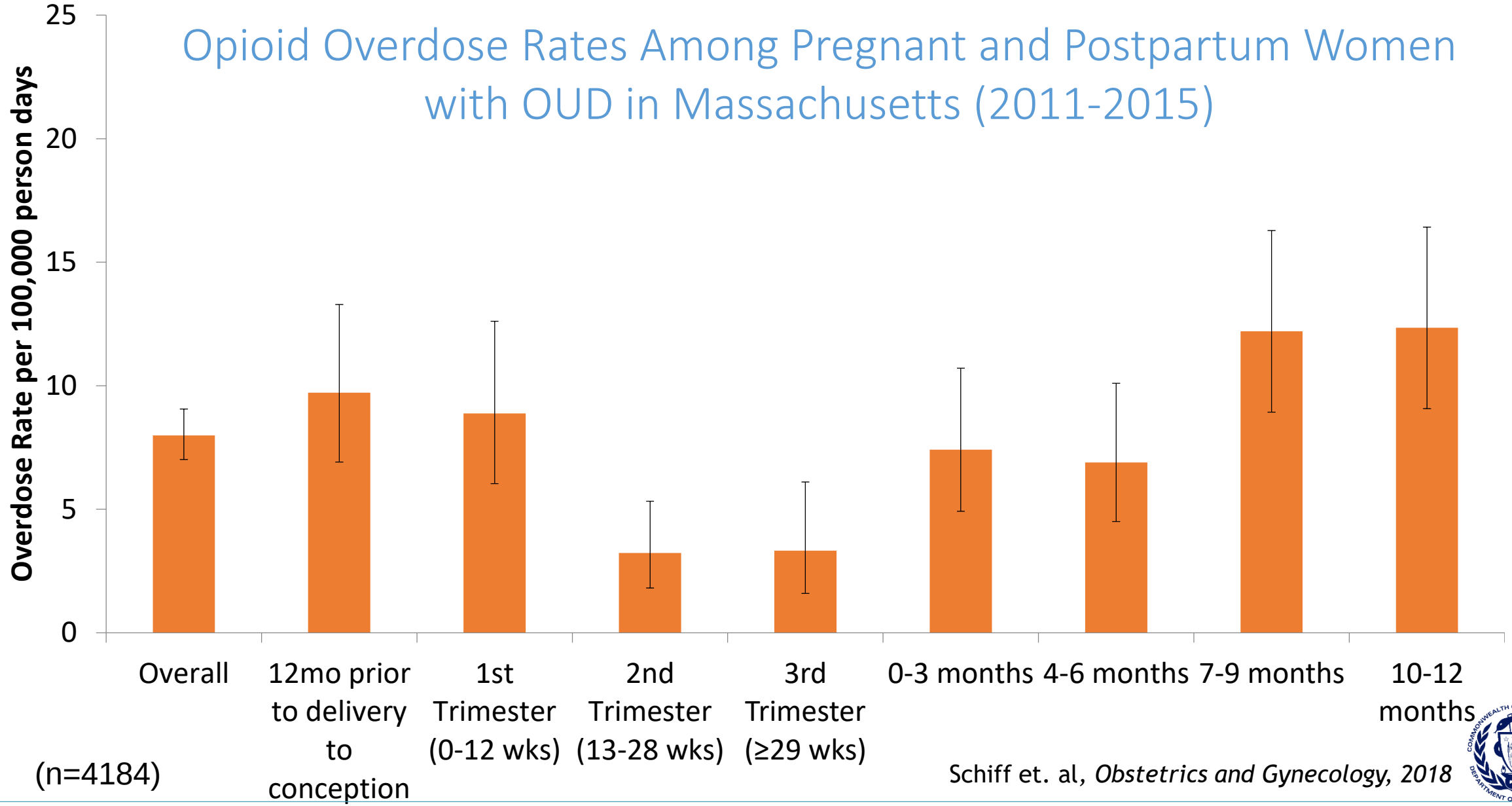

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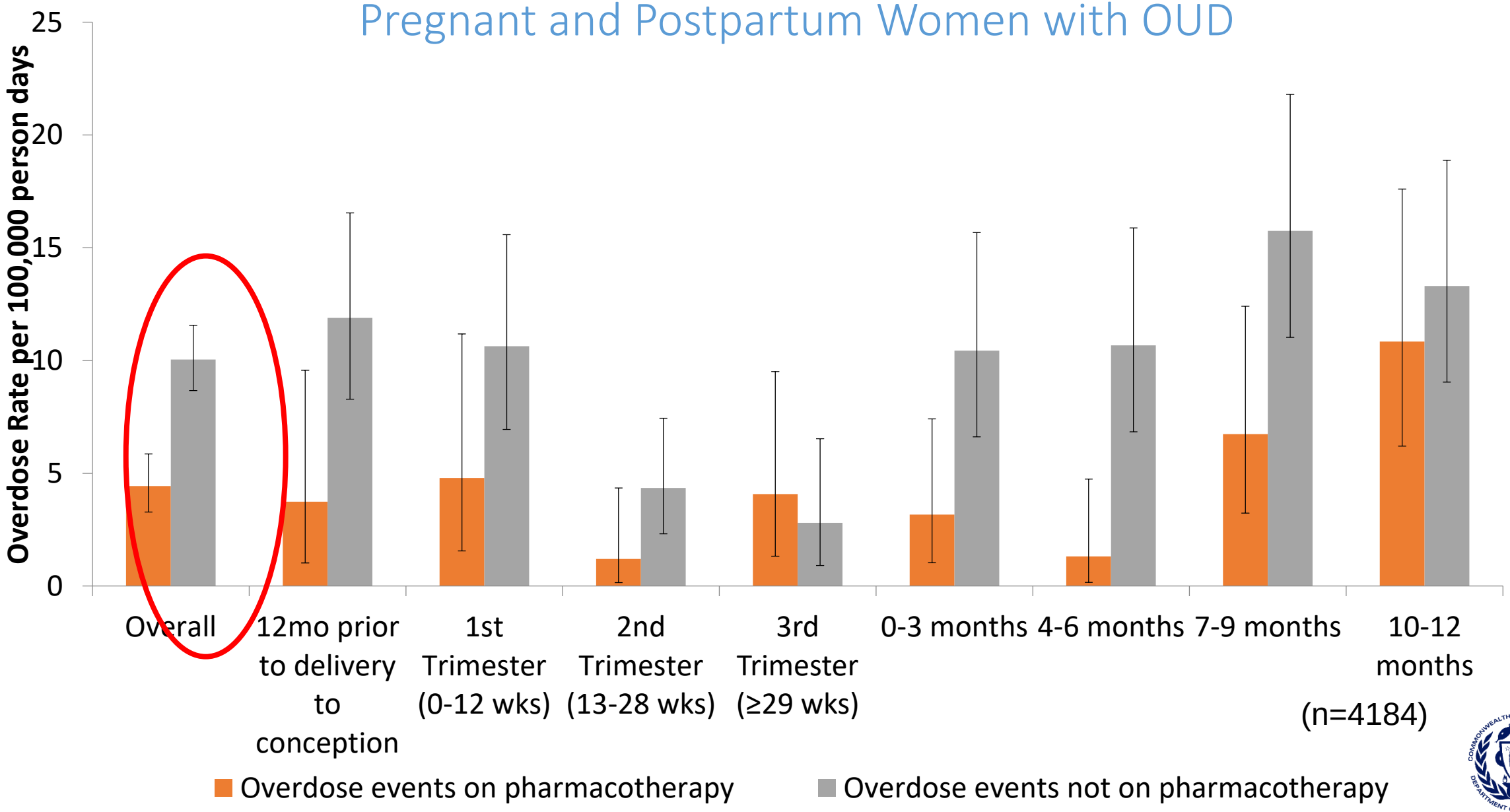
Opioid Overdose Rates by Receipt of Pharmacotherapy Among Pregnant and Postpartum Women with OUD



Why Are Postpartum Women Vulnerable?

- Loss of access to special services for post-partum women
- High rates of postpartum depression and anxiety
- Shame and stigma about infant Neonatal Abstinence Syndrome (NAS) or NOWS (Neonatal Opioid Withdrawal Syndrome)
- Stresses of having a new baby, often managing alone
- Grief of being separated from baby or loss of older children
- Desire to discontinue MAT due to **stigma**

Credit to Davida Schiff, MD

After NAS: Medical outcomes of opioid exposure

- Longer-term withdrawal vs. ongoing neurobehavioral dysregulation
- Higher risk for eye abnormalities, including strabismus and nystagmus
- 60-75% of pregnant women with OUD are infected with hepatitis C. Vertical transmission is 2.8%

Social impacts of family opioid use

- Children in households affected by SUD at higher risk for abuse, neglect by a parent or another adult; higher rates of foster placement
- Home safety
- Loss of household predictability and security
- **Attachment**
- Additional caregiving burden on children and youth in families with SUD to care for parents and siblings
- 10x increased risk of future substance abuse in children

Adverse Childhood Experiences

- People with at least five ACEs are 7- to 10-fold more likely to report drug use problems, addiction, and IV drug use, as well as increased rates of heart disease, diabetes, cancers
- Protective factors can mitigate the effects
  - positive school environment, extracurricular activities, hobbies, high-quality peer relationships, supportive relationships with caring adults
- Encourages a multigenerational view of health, seeking to impact familial cycles of substance use

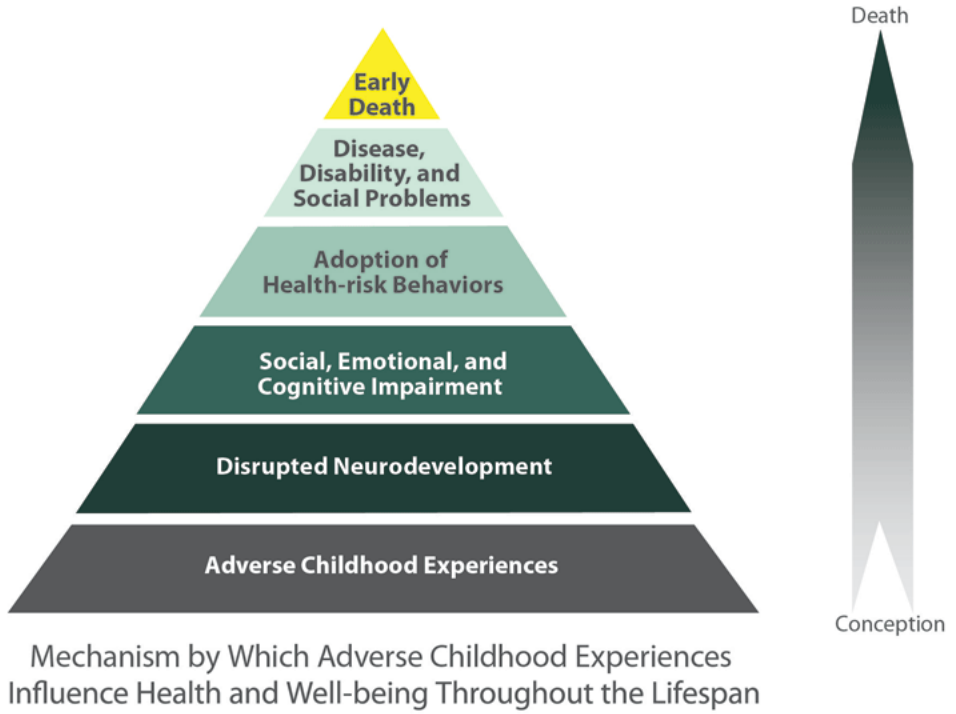


Figure 2: ACEs pyramid showcasing effects on Health and Well-being Throughout the Course of Life. Adverse Childhood Experiences Presentation Graphics. Centers for Disease Control and Prevention.

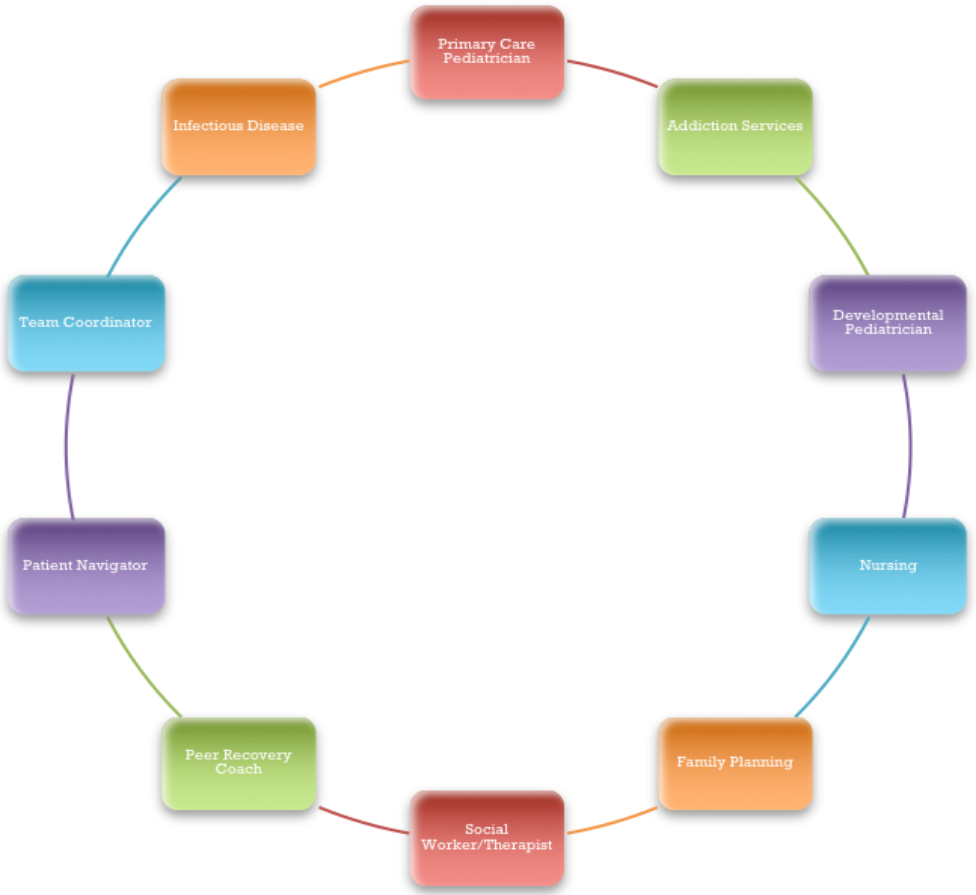
Supporting Our Families Through Addiction and Recovery (SOFAR)

- BMC is a regional leader in substance use treatment
  - Office-Based Addiction Treatment (OBAT)
  - Project RESPECT provides prenatal and addiction care
  - CATALYST
  - NOWS care: Eat, Sleep, Console
  - The Grayken Center

- SOFAR Program launched July 2017 in pediatric primary care clinic, in response to perceived need for specialized, continuous, wraparound care for opioid-impacted families

SOFAR: Supporting Our Families Through Addiction and Recovery

Integrated Team Care in One Setting



Pediatrics core team:

- Primary care pediatricians
- Social worker/Care management
- Patient Navigator
- Developmental and behavioral pediatrician

- Available consultation by:
  - Infectious Disease
  - Ophthalmology

Co-located services for parents:

- Addiction-trained MDs for parents (Med/Peds, FM)
- Addiction-trained nurse prescriber
- Social workers and therapists for parents
- Same day family planning

The SOFAR model

- Enhanced primary care: Weekly pediatrician visits x4 weeks for first month of life, monthly visits for first 6 months, q 6 weeks until age 1.
- During primary care visits:
  - Well child care
  - Social work intake and ongoing care
  - Relapse prevention
- Ophthalmology at 4 months
- Development:
  - Referral for High Risk Infant development program at 2 months, and full developmental assessment at 2 years.
  - All infants referred to Early Intervention by 4 months (often a re-referral)
- Parents:
  - Addiction care and primary care with adult providers, co-location when possible
  - Relapse prevention at every visit
  - Moms screened with Edinburgh Postpartum Depression Scale
  - Contraception plan reviewed early and often; same-day family planning available
- Community services: Connection with community agencies for home visiting, parenting support

So Far in SOFAR

First 3.5 years:

- Almost 300 families enrolled, most as newborn
- 207 active enrollees (=156 families)
- Data on 69 infant enrollees in year one:
  - 4 sets of twins
  - One maternal death
  - 7 paternal deaths: 6 from overdose, one cancer
  - 17 maternal relapses
  - 12 directly into foster care after birth

What We've Learned

Maternal characteristics:

- Vulnerability, trauma histories, stigma (including MAT use)
- Poor executive functioning
- Many have lost custody of other children
- Many have had previous recovery periods
- History of incarceration, ongoing legal difficulties
- Loss of partners, parents, siblings, friends, to overdose
- Unstable relationships, housing
- High rates of post-partum depression/anxiety
- High motivation at the beginning of child's life
- High anxiety, high rates of ER use

“I just went home from the hospital a couple of weeks ago. My 6-year-old daughter is in the custody of relatives because of my relapse. I moved into a treatment program about a month before he was born, because I want to get it right this time and be the best mom I can be. They have such strict rules. I wasn’t allowed to stay overnight with the baby when he was in the hospital, and I hated the idea that he was alone without me. My boyfriend is only allowed to visit us at the program once a week. I need more help than that, and he wants to be with us. I’m not sure I can do this.”

-Mother, age 26

Unique Needs of Substance Exposed Families

Infant Medical

- The newborn period is hard!
  - Mild withdrawal symptoms: crying, fussiness, increased tone, loose stools, sneezing.
  - Skin breakdown in diaper areas
  - Increased metabolic demand due to symptoms of withdrawal
  - Growth and feeding difficulties
- Hepatitis C exposure
- Ocular co-morbidities

Parent Medical

- Maternal postpartum hormonal changes affecting medication treatment dose
- Postpartum care: > 60 % miss post-partum follow-up visit
- Hepatitis C infection
- Family planning/inter-conception care
- 72% have documented mental health diagnosis

Unique Needs of Opioid-Impacted Families

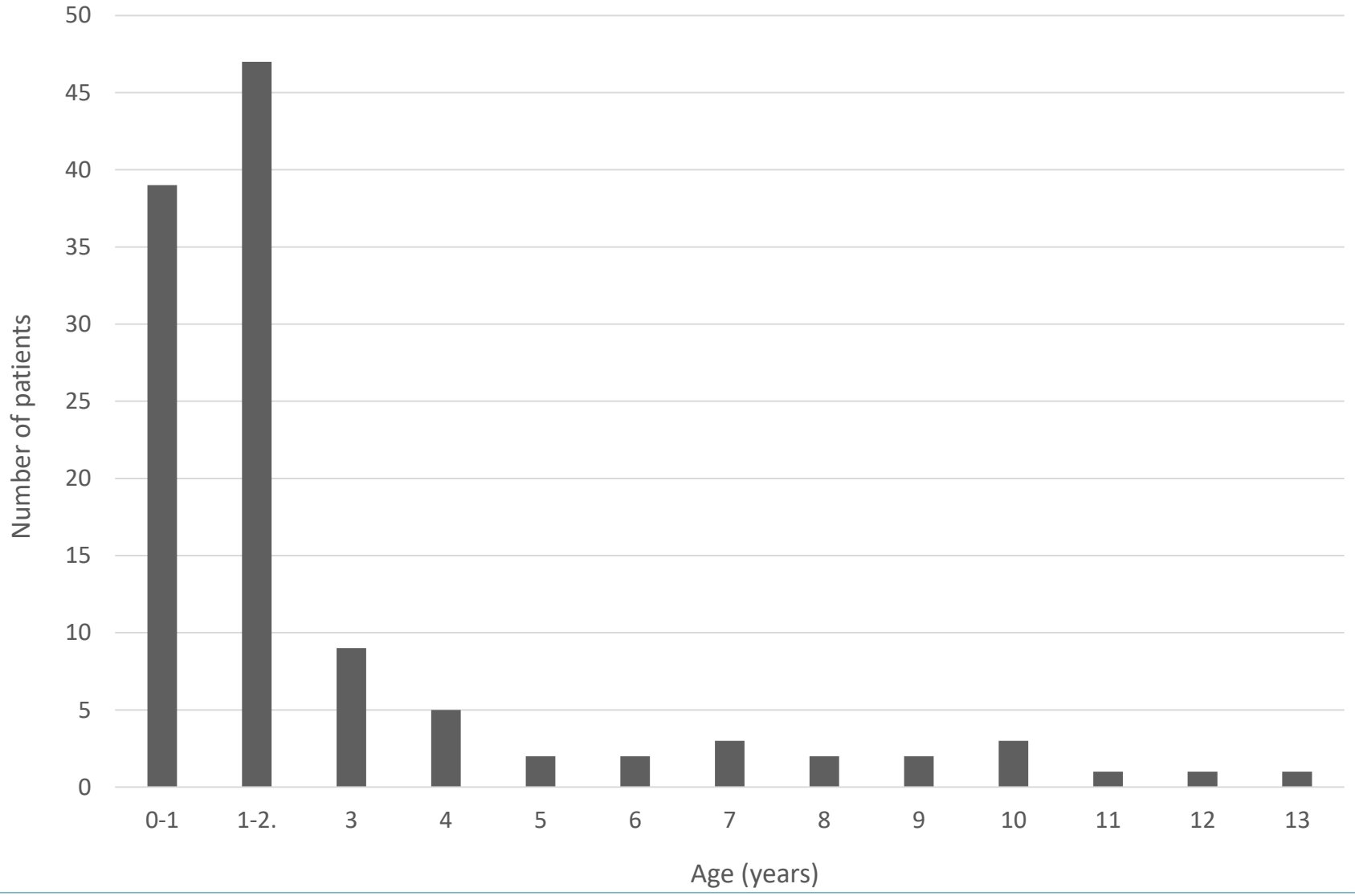
Psychosocial

- Trauma histories
- Postpartum depression
- Stresses of having a new baby
- Limited familial supports for individuals with substance use disorders
- Stigma

Safety

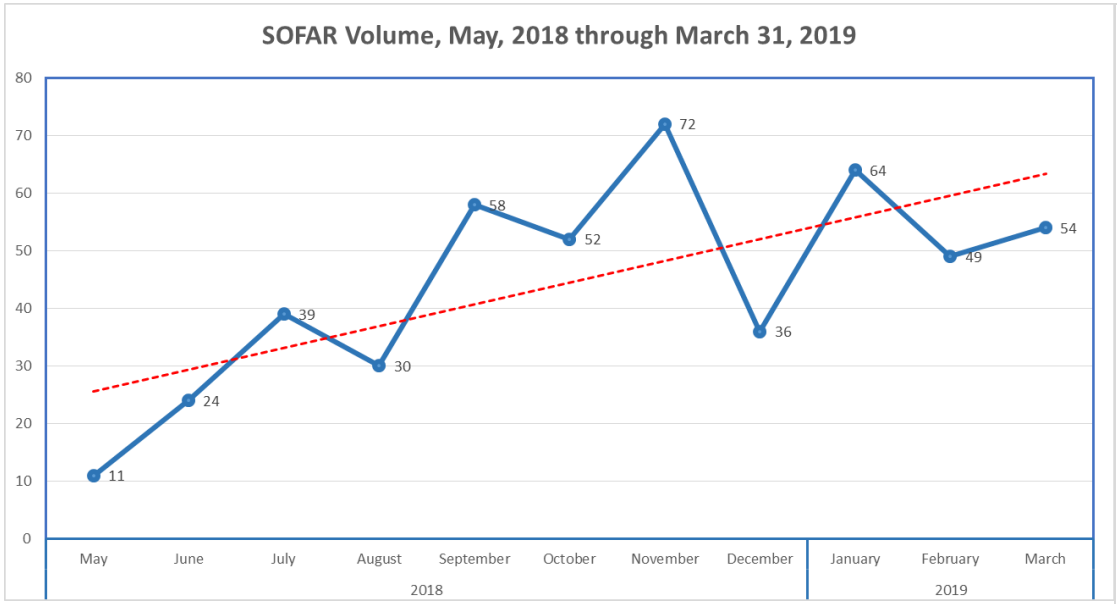
- Risk of parental relapse
- Parenting/coping skills
- Unstable housing
- Social determinants of health

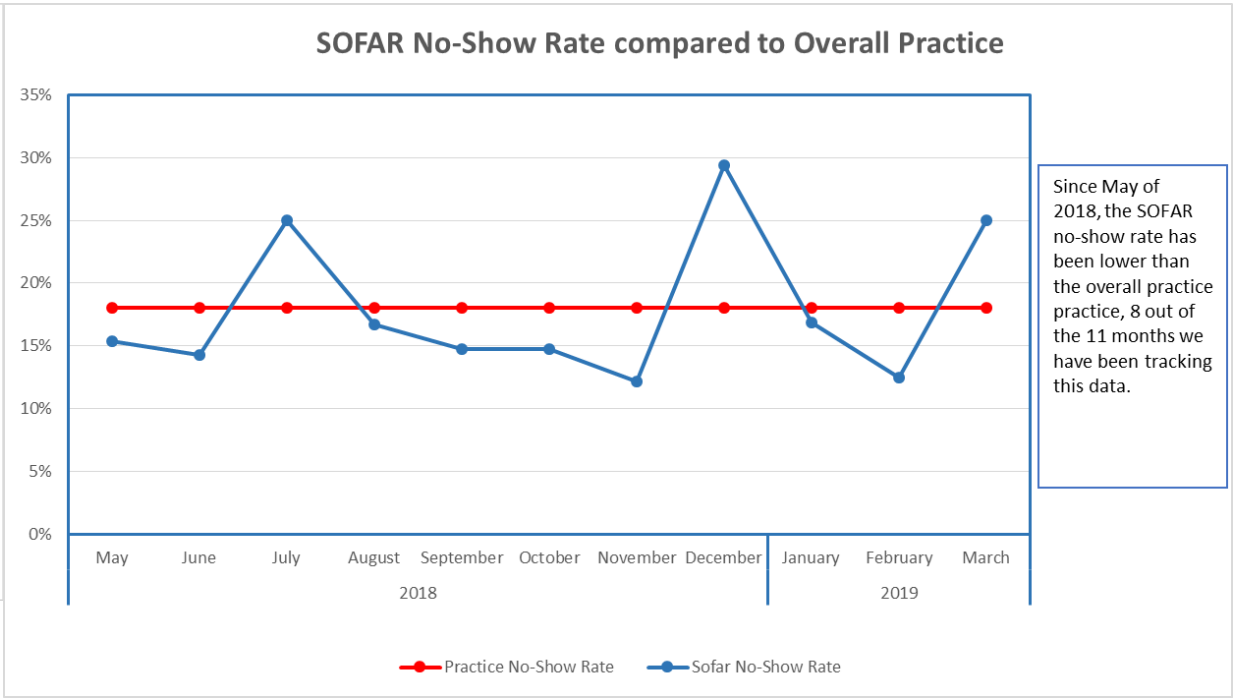
The SOFAR cohort:



(N= 109 patients)

SOFAR Volume and No-Show Rate





Since May of 2018, the SOFAR no-show rate has been lower than the overall practice practice, 8 out of the 11 months we have been tracking this data.

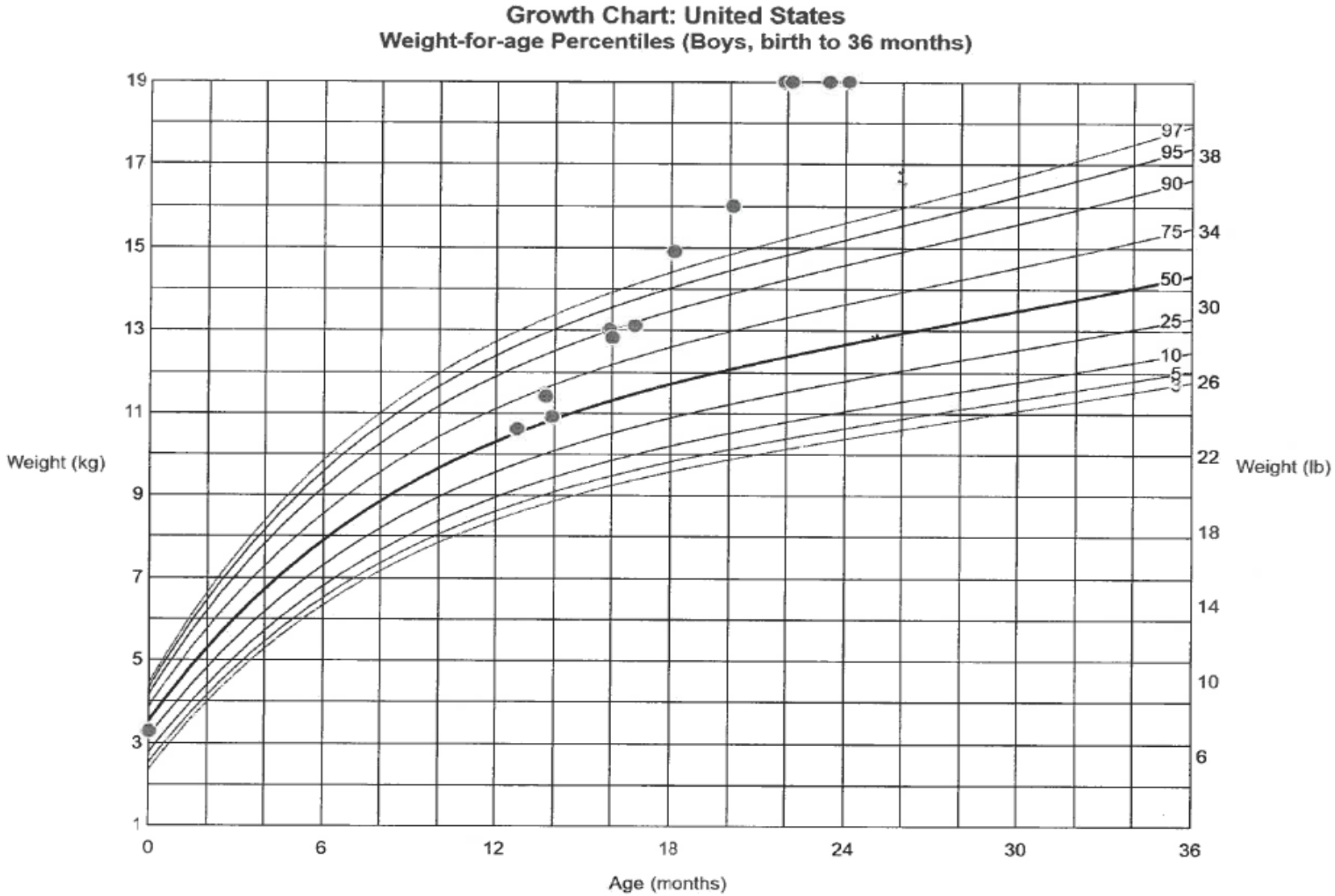
Hepatitis C

- 75% of mothers are Hepatitis C infected at delivery
- Over first 18 months: 3 infants Hepatitis C +, one also HIV+
- Of our first 37 mothers who were viremic at delivery:
    - 16 have been treated successfully at BMC
    - 12 are in being treated now
    - 4 cleared spontaneously
    - 3 treated successfully elsewhere

Total successfully cleared virus: 35/37 = 95.0%

Lesson learned: Feeding

- Infants are challenging after discharge, hard to care for and console, creating distress and risk for mothers
- High rates of concern about gassiness, formula intolerance, feeding difficulties
- Feeding as comfort



"I feel so guilty that I wasn't there for his first year, that I just feed him all the time."

Other themes

- Health care/ED utilization
- Grandparents as caregivers
- Parent-child attachment
- Needs of older children/siblings are great

Figure 1: Frequency of Primary Admission Diagnoses

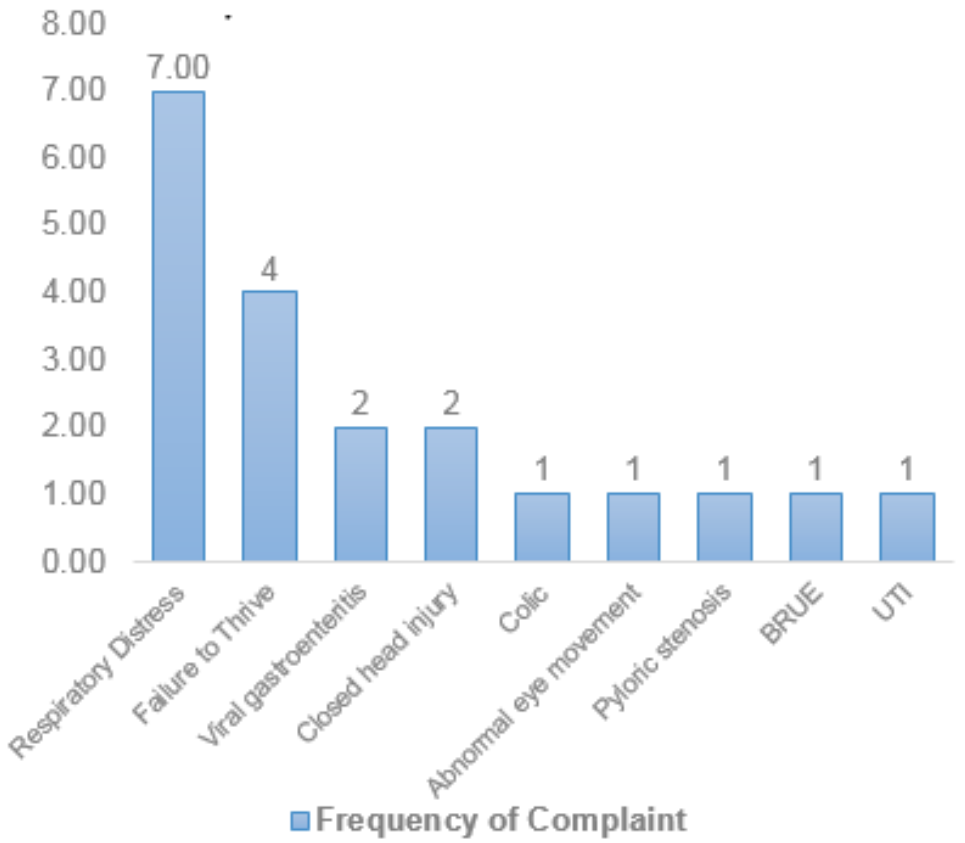


Figure courtesy of Daria Murosko, MD

Foster Care

- Children removed from parents due to relapse (ACE)
- Older children reunited with parents
- Issues particular to older kids: dysregulation, school, behavior, ADHD, executive function difficulties, attachment, mood disorders

- Future risk for SUD
- We don’t support reunification very well
  - Parents seek guidance about getting it right
- Need **family** therapy

Challenges to providing bi-generational care

- Logistics
  - Travel distance, many appointments for family members
  - Uber health pilot has helped
  - Navigation is critical
- Coordinating with residential treatment facilities
  - Groups, therapy appointment, CPS visits
- Secondary trauma to clinicians
  - Huge toll on team
- Communication with parents' care providers
- Preventing SUD in the next generation
  - Multigenerational SUD, age at first use, distress tolerance in children
  - Teaching parents how to talk with their children about their history

Recommendations and future directions

- Non-stigmatizing, trauma-informed care
- Addressing the needs of the family
  - Logistical barriers and SDOH
  - Family-centered, multidisciplinary care by a consistent team
  - Attachment and mental health services
  - Older kids need programming
- Prevention
- National advocacy, social justice approach
- Developing a pediatric workforce
- Collaboration with adult providers and community agencies

- What are the gaps in our care for opioid-impacted families?
- What can we learn from other local health centers?
- How can we share SOFAR resources and lessons learned with other clinics?

Thank you!

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