Substance Use in Pregnancy

- Illicit drug use in pregnancy (2015)
  - 7.4% - pregnant women 18 to 25 years old
  - 4.7% - 15-44 years (less than non-pregnant 12.5%)
- Legal drugs in pregnancy
  - 13.6% smoke cigarettes (11.4% in 2014)
  - 9.3% use alcohol (8.8% in 2014)


440,000 infants exposed to illicit drugs and alcohol per year
- Only 5% detected at birth


Percentage of Women With an Opioid Pain Reliever in the 2nd or 3rd Trimester


**Improving Outcomes for Women and Infants**

- The rapid rise of opioid use disorder among pregnant women and infants with NAS caught many communities off guard
- Response to the prescription opioid epidemic have often not explicitly included pregnant women and infants
- Evidence base for clinicians, hospitals, federal and state governments is lacking

**Hospital Variability**

- There remain significant inter and intra-hospital variation in treatment and outcomes for NAS
- Recent study of US children’s hospitals:
  - Only 5/14 used the same pharmacotherapy >80% of the time
  - Two-fold differences in risk-adjusted length of stay
- Large international quality improvement collaborative of 199 hospitals
  - 44.8% had a policy to standardize scoring
  - 48.6% had a policy on breastfeeding a substance-exposed infant
  - 68.0% had a policy on pharmacologic treatment of NAS

**Comprehensive Approach**

- Recent focus on reducing LOS
  - Infants with NAS 2x as likely to be readmitted in 30 days than uncomplicated term infants
  - Short LOS increase risk or readmission
  - Many hospitals discharging home on medications
    - Shorter LOS - 11 (IQR 7-18) vs. 23 (IQR 14-35)
    - Longer LOT - 59 days (IQR 38-90) vs. 19 days (IQR 10-31)
    - Use of ED > in first 6 months (aOR 1.46, 95% CI 1.02-2.09)
Hepatitis C Prevalence Among Pregnant Women

Per 1,000 Live Births

Year

2009 2010 2011 2012 2013 2014

Tennessee US

3.8 4.7 5.4 7.0 7.8 10.0


Results: Hepatitis C Prevalence Among Pregnant Women, Tennessee 2014


Hepatitis C Prevalence Among Pregnant Women, US 2014


AAP Policy Statement

• Public Health vs. Punitive Response
  – Focus on prevention (improving access to contraception)
  – Universal screening for alcohol and drug use in women of childbearing age
  – Informed consent for drug testing
  – Improve access to comprehensive addiction and prenatal care
  – Improved funding for child welfare systems

Primary prevention strategies should be bolstered to educate the public about the addictive potential of prescription opioids and enhance access to reproductive health services, including effective forms of contraception such as LARC.

American Academy of Pediatrics

POLICY STATEMENT
Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of All Children

A Public Health Response to Opioid Use in Pregnancy

Stephen W. Patrick, MD, MPH, MS, FACP, and David M. Schiff, MD, FAAP COMMITTEE ON SUBSTANCE USE AND PREVENTION. Pediatrics. 2017;139(3):e20164070

@stephenwpatrick
To adequately ensure the safety of substance-exposed infants and to provide optimal care to families, social support services and child welfare systems are in need of additional funding.

Public Health Approach to NAS

- **Primary Prevention**
  - Access to contraception
  - Responsible prescribing
  - Tobacco cessation
  - Tobacco combined with opioid use increases risk of NAS
- **Secondary Prevention**
  - Screening, Brief Intervention, and Referral to Treatment
- **Tertiary Prevention**
  - Decrease variability in treatment
  - Prevent readmission

Patrick SW, Dudley J, Martin PM, et al., Pediatrics. 2015 May;135(5).

Moving Towards NAS Prevention

- **Pre-Pregnancy**
- **Prenatal**
- **Birth**
- **Neonatal**
- **Childhood and Beyond**

NAS Treatment Focuses on Birth

NAS Prevention Across the Life Course

- Pre-Pregnancy
- Prenatal
- Birth
- Neonatal
- Childhood and Beyond

- Public health systems to prevent opioid dependency
  - Prescription drug monitoring programs
  - Access to treatment
- Decrease proportion of unplanned pregnancies among women who abuse opioids (86%)

NAS Prevention Across the Life Course

- Pre-Pregnancy
- Prenatal
- Birth
- Neonatal
- Childhood and Beyond

- Identify substance use disorders in pregnancy
- Decrease overprescribing in pregnancy
- Evaluate co-morbidities in pregnancy (e.g., infectious, psychiatric)
  - Substance use may increase risk for Hepatitis C
  - Identify targets to reduce risk (harm reduction) for mother and infant

NAS Prevention Across the Life Course

- Pre-Pregnancy
- Prenatal
- Birth
- Neonatal
- Childhood and Beyond

- Improve identification of at-risk infants
- Decrease transfers to tertiary care facilities, improve and sustain treatment in the community
- Improve care standardization and decrease variability
NAS Prevention Across the Life Course

- Decrease readmission risk
- Understand long-term risk
- Find modifiable risks
  - Long medication tapers
  - Risk of developmental delay

Conclusions

- Prevention, effective interventions should occur across the continuum
  - Public health approaches
  - Focus on all substances (including legal)
  - Improving access to contraception (especially LARC)