

Summary of Plenary session presented by Dr. Carol Schneider
FETAL EFFECTS OF DRUG AND ALCOHOL USE

Dr. Schneider presented a practical update of the current understanding of the fetal consequences of drug and alcohol exposure in pregnancy. Some of the statistics and known effects are listed below:

- no drug use at all is actually most common among youth – 61%
- woman using drugs in pregnancy often has other risk factors for difficulties parenting her newborn
- Tobacco:
 - 2006 – 16% of youth 15-19 years of age were smokers (down 28% from 1999)
 - Only about ¼ of women stop smoking in pregnancy
 - Consequences for use in pregnancy:
 - Miscarriage
 - Preterm birth
 - Twice the risk of placental abruption
 - Fetal growth restriction – 250 gm<for 5-20 cigarettes/day, 350gm>20 cigarettes/day
 - stillbirth
 - Possible link to ADHD in childhood with fetal exposure
- Alcohol:
 - 15-17 year olds: 15% using alcohol 1-3x/week
 - 18-19 year olds: 30% using alcohol 1-3x/week
 - In Canada FASD is the leading cause of developmental and cognitive disabilities (1/100 births)
- Marijuana:
 - 98% of those who use marijuana also consume alcohol
 - Consequences of use in pregnancy:
 - Encephalocele, hydrocephaly, microcephaly
 - Heart abnormalities
 - Cleft lip and palate
 - Gut abnormalities including gastroschisis
 - Limb abnormalities
- Cocaine:
 - Consequences to fetus:
 - Constriction of blood vessels
 - Neurochemical effects
 - In-utero stressor (episodes of high adrenaline and cortisol)
 - Other consequences:
 - Abruption
 - PROM
 - Often associated with other drug exposures and other risk factors for poor fetal/neonatal outcomes such as poverty,

lack of prenatal care, poor nutrition, abuse, stress,
depression and lack of support

- Methamphetamines:
 - Approximately 5% of pregnancies in North America are exposed to Meth.
 - Fetal exposure very similar to maternal
 - Possible decreased weight, height, and head circumference to age 4, cognitive deficit
 - One study showed brain abnormalities, heart abnormalities, oral clefts and limb abnormalities
- Opiates:
 - In Canada not as much Heroin except in coastal cities
 - May have modest effect on birth weight
 - Neonatal withdrawal symptoms

Further information about Gastroschisis:

- dramatic increase in occurrence in teen Moms
- steady increase in birth prevalence in recent decades
- risk factors:
 - young maternal age - <25 years
 - lower socio-economic status
 - low maternal weight
 - risk for woman <19 is 10x that of a 30-40 year old woman
- possibly caused by a disruption in blood supply to the sac containing the gut at 5-9 weeks gestation
 - may have connection to oral decongestant use, aspirin, cocaine use, marijuana (association may be coincidental given high rate of marijuana use in youth age group)