Retrospective Review of Neonatal Abstinence Syndrome (NAS) Incidences and Drug Classes of Intrauterine Exposures in Admissions in 2011 vs 2016 at the NICU in Kentucky Children’s Hospital

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Neonatal abstinence syndrome was first described by Dr. Loretta Finnegan in the 1970’s and since then the incidence and the type of substance abuse has dramatically changed. An IRB approved retrospective chart review of all admissions at Kentucky Children’s Hospital Neonatal Intensive Care Unit was undertaken to evaluate the change in the incidence, related factors, and outcomes including length of stay, and necessary interventions between period’s January – June 2011 and January – June 2016. This presentation focuses on the overall incidence of NAS as a percentage of overall admissions and trends the most commonly abused substances by the infant’s mother prior to delivery. Table 1 shows the change in incidence of neonates with NAS syndrome admitted to our NICU here at the Kentucky Children’s Hospital. Table 2 shows the changing trends of the substances abused by pregnant women at Kentucky Children’s Hospital.

Conclusion: Despite efforts to decrease both prescription and non-prescription substance abuse, the trend at Kentucky Children’s hospital shows a substantial and dramatic increase in the number of substance abuse cases and infants born with NAS. Traditionally, methadone was the main medication used as treatment for opioid addiction, but our study shows a dramatic increase in the use of suboxone for treatment of opioid withdrawal in pregnant women. While there were no abusers of heroine in the 2011-year group, there is a substantial number of women abusing heroine in the 2016 group, which is following the national trend of opioid abuse. Our main concern is if there is a nationwide increase in the trend of substance abusers, are our current strategies adequate to contain this opioid epidemic? Preemptive counselling and education may be an avenue to reduce opioid addiction in women and perhaps this should be aimed early to women of conceivable age to decrease the incidence of substance abuse and thereby the number of infants born with NAS.