



A period prevalence study of perinatal substance exposure in a tertiary care center in Northern California

Korinne Van Keuren, DNP, RN, CPNP-AC, PNP-BC; Ruth Rosenblum, DNP, RN, CPNP-BC, Priya Jegatheesan, MD, FAAP; Rachel Khathuria, RN,BSN Balaji Govindaswami, MBBS, MPH, FAAP
California State University Northern California Consortium, Santa Clara Valley Medical Center



San José State UNIVERSITY

Background

The 2009 National Survey on Drug Use and Health found 4.5% of pregnant women age 15 to 44 reported use of illicit drugs such as marijuana, cocaine, hallucinogens, heroin, methamphetamines and prescription drugs (Substance abuse and mental health services administration, 2010). Care and treatment of women and children exposed to substances creates a large financial burden for the taxpayers and the economy. Each case of fetal alcohol syndrome prevented is thought to save \$860,000 in direct and indirect costs (ACOG: Committee Opinion Number 422, 2008). In 2007, the estimated cost of drug abuse to the United States was 193 billion dollars (The White House, 2014). Infants diagnosed with NAS from 2000 to 2009 had mean hospital charges which increased from \$39, 400 to \$53, 400 (CI 95%). Medicaid was the primary payer in 68.7% of patients in 2000 and rose to 77.6% in 2009 (Patrick, et al, 2012).

Purpose

At our tertiary care center women currently delivering babies are not screened using a valid substance abuse tool for pregnant women.

The aim of this study is to identify the need for a standardized tool and protocol to identify women and mothers who may be at risk for exposure to substances.

Methods

All women admitted to labor and delivery from May 3th 2013 to September 4th, 2013 at our tertiary care center had their charts retrospectively reviewed for answers to our screening questions: Do you use tobacco? Do you drink? Do you use drugs?

for substance abuse as well as the results of urine toxicology screens if sent.

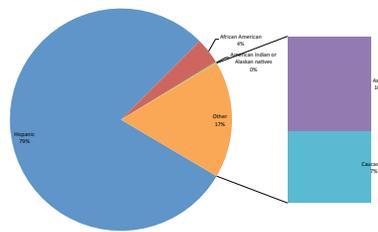
Data collected included maternal demographics, primagravida versus multiparous response to questions and results of toxicology screens if sent per standard practice

Maternal drug use is a public health concern as mother and baby are both affected. Schempf & Strobino, (2008) discuss the national incidence of substance use in 9.8% of all women and approximately 4% of pregnant women age 15-44.

Sample

The average maternal age was 28.2 years with 7.4 % teenagers and 17.26% of women being advanced maternal age (Figure 2). Thirty-one percent were married. The average gestational age was 38.7 weeks. Two hundred and eighty-six women (23%) were primagravidas with the remaining 861 were multipara's (Figure 3). The delivery outcomes for this group included, 10 stillbirths, 14 sets of twins and two intrauterine fetal demise.

Figure 1. Ethnic Distribution



Results

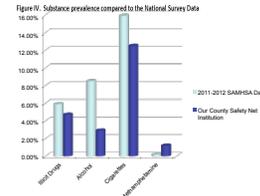
A total of one thousand one hundred forty-seven women were admitted to labor and delivery during May 4th to September 4th 2013.

One thousand one hundred and eleven women answered the screening questions regarding use of tobacco, alcohol and drugs. Two hundred and twenty-nine women (20%) answered positively to at least one screening question. Eight women in the cohort, self-disclosed poly substance use of alcohol, tobacco and drugs. Thirty-one admitted use of tobacco and drugs and fifteen claimed alcohol and tobacco use.

Results

Of the 1147 women admitted, 242 (21%) had toxicology screens sent for medical or self-report of substances. Twenty five screens were positive (2% of the total cohort) for substances, with eight of those false positive. Two women who answered the screening questions negatively had positive urine Toxicology screens.

The prevalence of Substance exposure in Pregnant women to any Substance, Screening questions and urine toxicology was 20% and 3% of women did not answer the screening questions.



Conclusions

Our methamphetamine exposure is 5 times greater than the Substance Abuse and Mental Health Services Administration, (2013) national survey data from 2011-2012 finding of 0.2%.

Administration of the screening questions must be standardized to optimize the identification of Substance exposure during pregnancy.



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Author contact information
Korinne Van Keuren ksvkca@gmail.com