HEALTH
UNIVERSITY OF UTAH

Utah Poison Control Center
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Marijuana Adverse Health Effects

Proposal: Prepare report for Utah Legislature on adverse human health effects from acute and/or chronic exposure to marijuana

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1. Objective: Summarize available evidence on adverse human health effects from acute and/or chronic exposure to marijuana for the Utah State Legislature

2. Project Scope
   a. Comprehensive search of available literature that describes adverse and toxic human health effects related to acute and chronic exposures to marijuana

   b. Prepare an initial report summarizing available evidence

   c. Provide follow-up reports every 6 months for a period of two years

   d. Update legislature every 6 months on adverse health effects reported to the Utah Poison Control Center

3. Technical capability: The Utah Poison Control Center (UPCC) is a 24-hour resource for poison information, clinical toxicology consultation and poison prevention education. Staff of the UPCC include clinical and medical toxicologists and specialists in poison information. Clinical and medical toxicologists are board certified by the American Board of Applied Toxicology and the American College of Medical Toxicology, respectively. Specialists in poison information are pharmacists and nurses with additional training in clinical toxicology and are nationally certified as specialists in poison information. The UPCC's expertise is in the acute and chronic adverse health effects of substances including: medications, natural products, drugs of abuse, plants, household and environmental chemicals.

4. Deliverables: Written report summarizing adverse human health effects

5. Timeline: Initial report completed in 3 months with updates every 6 months for a period of 2 years

6. Project Budget: $20,000

1) Marujuana Adverse Health Effects

Objective- Summerize available evidence on adverse human health effects from acute and/or chronic exposure to marijuana for legislature

2) Assessing tht Prevelence of Maternal Substance Use in Utah as a Guide for Intervention Stategies to Improve Maternal and Neonatal Outcomes

Objective- The prevelaence of prenatal cannabis, opiod, and other drug positivity amoung women delivering infants in Utah is important in monitoring trends and potential risk for women and children in Utah. The passage of the medical cannabis law in Utah may alter the patterns of drug use by women of child bearing years.

Projecteted budget for 1: $30, 0000
Projected budget for 2-$270,000 for an initial one year surveillance study

Total budget- $300,000

Performance Measures

1) **Marijuana Adverse Health Effects**- Report to committee in a written report summarizing adverse human side effects. Initial report in completed in months, with an update every 6 months for 2 years.
2) **Assessing the Prevalence of Maternal Substance Use in Utah as a Guide for Intervention Strategies to Improve Maternal and Neonatal Outcomes-** Statewide testing of the dugs found in mothers system during pregnancy. Results compared to previous study done in 2010.

Assessing the prevalence of maternal substance use in Utah as a guide for intervention strategies to improve maternal and neonatal outcomes.

Background: In this rapidly changing environment, the prevalence of prenatal cannabis, opioid and other drug positivity among women delivering infants in Utah is important in monitoring trends and potential risk for women and children in Utah. A survey completed in 2010, 6.8% of umbilical cord samples were positive for one or more substances. Opioids were most frequent at 4.7% and cannabis least frequent at 0.4% of 850 samples.

Study Significance: The passage of medical cannabis law in Utah may alter the patterns of drug use by women in the child bearing years. Thus, the University of Utah Health in collaboration with Intermountain Healthcare propose an annual and ongoing system to assess the prevalence of maternal substance use in Utah. This is critical step in developing intervention strategies to improve maternal and neonatal health.

Study Design: We will perform drug assays on segments of umbilical cord collected anonymously for deliveries occurring at urban, rural and frontier hospitals across the state. Hospitals will be selected to ensure sampling of umbilical cords that are representative of the proportion of women who live in urban, rural and frontier regions in order to accurately estimate the overall prevalence of substance use. In addition, we will compare the prevalence of detected substance use at time of delivery in Utah as compared to prevalence from the study conducted in 2010.

Study Method: Umbilical cord segments are routinely collected as part of standard infant care. The cord segment in a specimen cup with a de-identified study participation identification number. Non-identifiable demographic information on the mother and infant will also be collected. The umbilical cord specimens will be sent to ARUP Laboratories in Salt Lake City, UT where drug assays will be performed. Drugs detected on the ARUP umbilical cord assay include: opioids, cocaine, amphetamines, benzodiazepines, marijuana and alcohol.

Sample size: A sample size of 1455 achieves 90% power to detect a 20% difference in prevalence of substance use in 2019 compared to the prior study in 2010 using a two-sided exact test with a significance level (alpha) of 0.05. We plan to obtain > 2000 samples each year, approximately 4% of Utah births.

Human subjects review board approval will be obtained prior to study initiation.

Securing support from the State of Utah is critical first step to the initiation and sustainability of this project. We will also seek funding from a national sources including the NIH, DOJ and other agencies.

Request: $250,000 as initial 1 year funding for maternal drug surveillance study to establish infrastructure and develop cord sample analysis process.