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A Prospective Birth Cohort Study Involving Environmental Uranium Exposure in the Navajo Nation

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Navajo Stakeholder Workshop: Health Panel

Tuba City, Arizona
September 15, 2010



ATSDR Updates

- **ATSDR received \$2M allocation in FY2010**
- **ATSDR met with Navajo Nation representatives in September 2009 to discuss knowledge gaps**
- **Funding Opportunity Announcement (FOA)--investigator initiated applications to design and conduct epidemiological studies on the health effects of non-occupational exposure to uranium among Navajo mothers and their infants**
 - priority areas of this research are health outcomes associated with uranium exposure during prenatal, perinatal and early postnatal life periods
- **FOA was posted in March 2010 and closed May 2010**
- **Anticipate a 3 year project period**



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- **Evaluate potential associations with uranium exposure during pregnancy and adverse birth outcomes (research)**
 - Limited epidemiological and toxicological data available on the association between uranium exposure and adverse birth and reproductive outcomes
 - Uranium is a teratogen, epidemiological studies are needed to document individual biomarker exposure to uranium
 - Well defined and accessible cohort (Navajo mothers) who utilize only a select few providers (IHS clinics or 638 contractual equivalents)
 - Increased exposure potential for the cohort due to both elevated naturally occurring uranium levels as well as historical mining and milling activities



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- **Increase the use of prenatal care among Navajo mothers (applied public health goals)**
 - Strong evidence linking the early and consistent use of prenatal care with positive reproductive results
 - Only 61% of Navajo mothers with live births receive prenatal care in the first trimester as compared to 83% of all US mothers
 - Infant mortality rate among Navajos is 8.5 deaths per 1000 live births, compared to 6.9 deaths per 1000 live births among all races
 - Postnatal mortality rates for Navajo infants are 2.1 times higher than the US for all races



Study Partners

- **Project lead**
 - Johnnye Lewis, Ph.D., DABT (University of New Mexico)
- **Indian Health Service (IHS)**
 - study participant medical interactions
- **Navajo Division of Health (NDOH)**
 - community participation and engagement
- **ATSDR**
 - funding/oversight, epidemiologic and laboratory support

Kick-off meeting planned October 13-16, 2010

