

Public Health Surveillance Health Assessment Chronic Pain Study

A Presentation to the Legislative Health and Human Services
Committee by the New Mexico Department of Health

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Outline

- Public Health Surveillance
 - Surveillance 101
 - Key Public Health Surveillance Datasets
- Health Assessment
 - Assessment Role of Government
 - Indicators of New Mexico Health Status
- Pain Study



Ebola Virus Disease (EVD) Preparedness in New Mexico

- To date, completed 21 day contact monitoring on over 70 returned travelers
- Designated Ebola assessment hospitals
- Trained 2 EMS companies to transport Ebola suspect patients
- Ongoing EVD competency training for health care workers, clinical laboratories, EMS personnel and other partners



ENVIRONMENTAL PUBLIC HEALTH SURVEILLANCE

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Surveillance of Environmental Health Related Health Outcomes

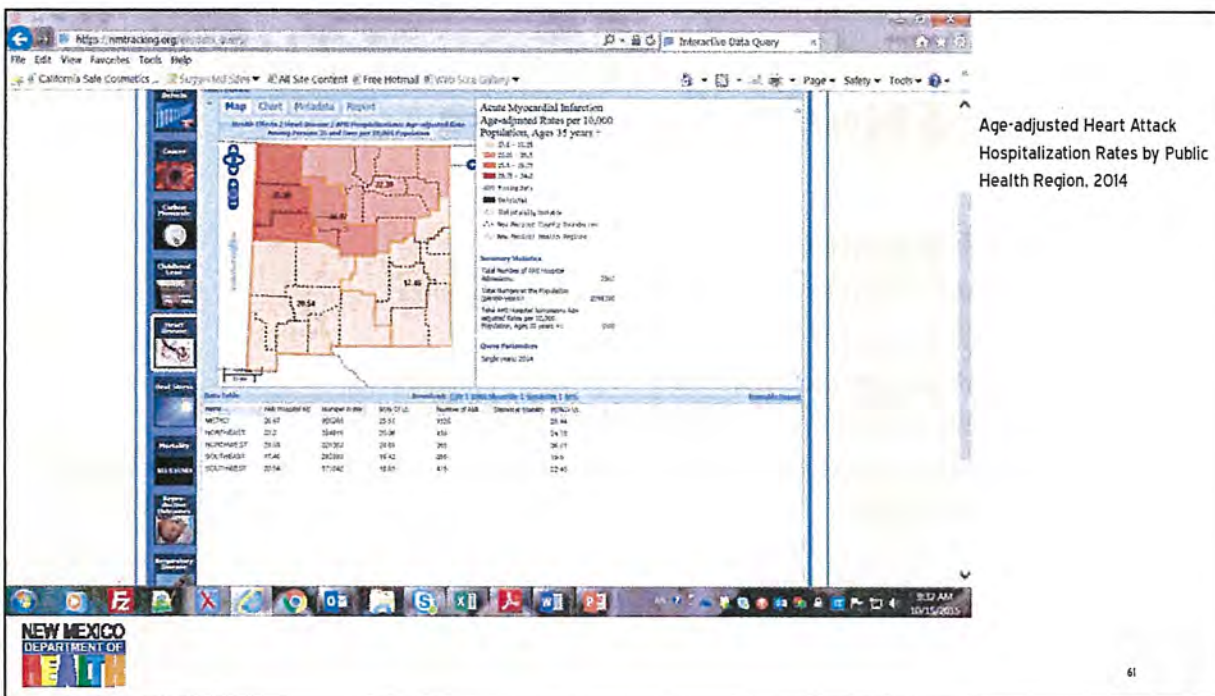
- How can the environment potentially affect the health of New Mexico residents?
 - The Environmental Health Epidemiology Bureau (EHEB) is funded by several CDC grants to try and answer this question and then develop interventions.
 - Environmental Public Health Tracking (EPHT):
 - One-stop source that combines environmental exposure data with health data + maps
 - Track and understand how environment might affect the health of New Mexicans
 - <https://nmtracking.org>



Surveillance of Environmental Health Related Health Outcomes

- Environmental Public Health Tracking
 - What kind of data are collected and analyzed?
 - Cancer data (examples: leukemia, brain cancer, bladder cancer)
 - Birth defects data: 12 birth defects (includes Down Syndrome)
 - Key hospitalization data: heart attacks, asthma, carbon monoxide poisoning
 - Exposure data: Particulate matter (PM_{2.5}) and ozone
 - Notifiable conditions: uranium concentrations in urine, mercury concentrations in blood, arsenic concentrations in urine





Surveillance of Environmental Health Related Health Outcomes

- Environmental Public Health Tracking
 - How can these data be used?
 - Examine PM_{2.5} concentrations and emergency department visits during wildfire events: Wallow Fire. Develop tools to reduce residents' exposures.
 - Work with physicians on poisonings, such as mercury poisoning
 - Blood mercury of 576 ug/L
 - Over 100 ug/L considered high exposure



Surveillance of Environmental Health Related Health Outcomes

- **Asthma Control Program**

- Asthma hospitalizations and emergency department (ED) visits
- Number of adults and children who have asthma
- Environmental asthma triggers among New Mexicans with asthma
- Percentage of residents with asthma that have well-controlled asthma
- Intervention: use of promotoras in the homes of people with asthma to reduce asthma triggers and thus ED visits



Surveillance of Environmental Health Related Health Outcomes

- **Four Corners States Biomonitoring Consortium**

- Biomonitoring: directly assess exposure to chemicals through blood and urine (and sometimes hair)
- Assessing exposure to heavy metals in urine and testing these metals in private well wells: arsenic, mercury, uranium, cadmium, manganese, and selenium
- Exposure to insecticide 2,4 D (chronic exposure of expectant mothers may result in birth defects).



Surveillance of Environmental Health Related Health Outcomes

- On Call
 - EHEB staff members take calls from physicians, public, and the Poison Control Center: Mon through Fri, 8 am to 5 pm
 - Types and examples of calls?
 - Private well drinking water—arsenic and source
 - Air quality—formaldehyde from flooring
 - Occupational injury—mining accident resulting in sulfuric acid and hydrogen sulfide exposure
 - Housing issues: mold, bed bugs



Hospital and Emergency Department Data

- Inpatient Hospital Discharges
 - Chronic diseases
 - Acute conditions
 - Ambulatory care sensitive conditions
- Emergency Department Encounters
 - Injury and substance abuse
 - Mental health encounters

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Disease Registries

- Cancer (Tumor) Registry
- Violent Death Reporting System
- Child blood lead



Birth Certificate Data

- Birth and fertility rates
- Risk factors and health outcomes
 - Infant birth weight (high or low)
 - Preterm-births
 - Births to Teens
 - Births to single mothers
 - Late or no prenatal care
 - High-risk infants born at tertiary care facilities
 - Weight gain during pregnancy
 - Inter-pregnancy interval



Death Certificate Data

- Overall death rates
- Life expectancy
- Cause-specific deaths
 - Diabetes-related deaths
 - Alcohol-related motor vehicle crash deaths
 - Heart disease deaths
 - Chronic liver disease and cirrhosis
 - Suicide deaths
 - Chronic lower respiratory disease



Behavioral Risk Factor Surveillance System (BRFSS)

- Health Behaviors
 - Smoking, alcohol use
 - Physical activity, overweight
- Access to Health Care
 - Health insurance coverage
 - Unable to get needed care due to cost
- Clinical Preventive Services
 - Adult immunization
 - Cancer screening
- Chronic Diseases
- Mental and Physical Health Status



Pregnancy Risk Assessment and Monitoring System (PRAMS)

- Health care coverage for delivery and prenatal care
- Smoking and alcohol use before and during pregnancy
- Pregnancy intention and contraceptive use
- Breastfeeding
- Well baby care
- Infant sleep position
- Mother's post-partum depression
- Exposure to tobacco smoke in the home



Youth Risk and Resiliency Survey (YRRS)

- Nutrition, overweight, physical activity
- Violence at school / in relationships
- Substance use
 - Drug & alcohol use
 - Tobacco use (cigarette and other)
- Mental health
 - Persistent feelings of sadness and hopelessness
 - Suicidal thoughts, suicide attempts
 - Caring and Supportive Relationship in the Family



Data are Used for evidence-based decisions

- Disease surveillance and outbreak investigation
- Syndromic surveillance
- Healthcare acquired infection surveillance and prevention
- Public information, press releases (food borne, plague, Hanta virus, etc.)
- Emergency management and planning (Ebola, wildfires, etc.)
- Health promotion program planning
- Policy decision-making
- Community health assessment



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PUBLIC HEALTH ASSESSMENT

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