

Health Data Findings and Recommendations for Ottawa County and the Tar Creek Superfund Site, Oklahoma



This is a joint product of the U.S. Department of Health and Human Services, Agency for Toxic Substances and Disease Registry and the Oklahoma State Department of Health.

Purpose

Inform the public about the Tar Creek Superfund Site in Ottawa County, Oklahoma, and the site-related public health activities of the Agency for Toxic Substances and Disease Registry (ATSDR), a federal public health agency, and the Oklahoma State Department of Health (OSDH).

Background

In 2004, Local Environmental Action Demanded (L.E.A.D.) Agency, Inc. released a survey regarding conditions at the Tar Creek site. As a follow up to that survey, ATSDR and OSDH reviewed disease rates and other health information about the community living in Ottawa County. The review focused on

- Children's health,
- Cancer, and
- Other health conditions in Ottawa County.

Health Findings

What does this mean to residents living in Ottawa County?

ATSDR and OSDH found that Ottawa County residents have a health status similar to that of other Oklahoma residents.

More detailed information follows.

Public health activities in Ottawa County

Rate refers to how often a disease or health condition occurs in a population.

For example, the death rate from cancer is often reported as the number of people dying from cancer for every 100,000 people. The rate of diabetes is reported as the number of adults with diabetes for every 100 adults.

As part of the review, ATSDR and OSDH evaluated health information from several databases compiled between 1994 and 2005. These databases included

- Oklahoma's cancer registry,
- Birth defects registry,
- Death certificates, and
- Newborn screening information.

The agencies also evaluated Oklahoma's behavioral risk factor surveillance system—a telephone survey that contains information about the rate of health conditions and risk factors in adults, such as arthritis, asthma, diabetes, high blood pressure, smoking, and obesity.

OSDH and ATSDR also compared information about the causes of death and rates of certain diseases and health conditions in Ottawa County with the death causes and disease rates in Oklahoma and the nation.

The complete OSDH and ATSDR findings are in the report, Public Health Assessment, Occurrence of Selected Health Outcomes in Ottawa County, Oklahoma.

Children's Health

Birth information

Factors affecting newborns in Ottawa County, such as preterm births, birth defects, and newborn hearing, were similar to or lower than state or national averages.

Preterm Births and Low Birth Weight Births

OSDH and ATSDR looked at the rate of preterm births and low birth weight babies in Ottawa County for the years 1999–2002 and compared them to the rate of the same health conditions for the state of Oklahoma and for the rest of the United States.

Using this information, ATSDR and OSDH determined that the rate of low birth weight in Ottawa County is lower than the state and national rates. The rate of preterm births in Ottawa County is also lower than the state and national rates.

Birth Defects

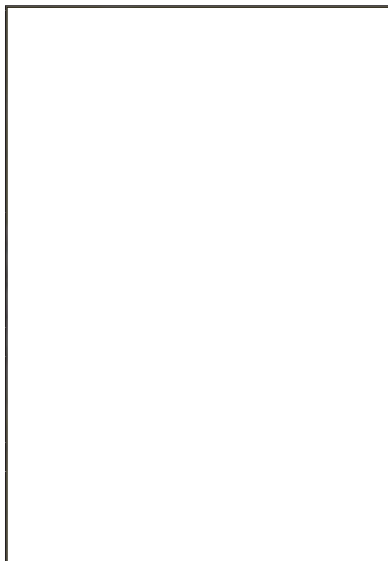
ATSDR and OSDH compared Ottawa County and Oklahoma birth defect data for the years 1994–2002 and found

- For 1994–2000, Ottawa County had a lower birth defect rate than the state but in 2001 and 2002 had a slightly higher birth defect rate, and
- The overall birth defect trend for the 9-year period in Ottawa County was much lower than that for the state.

Newborn Hearing Screening

From August 2002 through July 2004, one infant out of 633 infants born in Ottawa County was diagnosed with hearing loss. The national average is 1 to 3 infants diagnosed with hearing loss per 1,000 births.

Therefore, the occurrence of hearing loss in infants born in Ottawa County was similar to the national average.



Special education

ATSDR and OSDH reviewed the 2002 and 2003 health condition rates that could affect children in the county, including

- Autism,
- Specific learning disabilities, and
- Other health conditions, such as limited strength, vitality or alertness in a school or learning environment.

The Ottawa County rates for these conditions were similar to or lower than the rates for the State of Oklahoma as a whole.

Blood lead screening

Currently only about 3% of preschool children in Ottawa County have elevated blood lead levels. This rate is, however, still slightly higher than the state and national rates. The Ottawa County Health Department is pursuing an extensive, ongoing childhood blood lead screening program and is providing free blood lead screening services to children and pregnant women in the county.

Please phone 918-540-2481 for more information about blood lead levels in children or to schedule an appointment to have your children tested.

The Centers for Disease Control and Prevention (CDC) recommends testing of preschool age (1–5) children to identify elevated blood lead levels. Research has shown that blood lead levels over 10 micrograms per deciliter of blood in young children may cause harmful health effects.

In the mid-1990s, about 30% of children in Ottawa County had blood levels above 10 micrograms per deciliter. Since that time, Ottawa County health officials have conducted educational programs aimed at reducing lead exposure and at increasing the number of preschool children tested. In addition, to reduce lead levels in residential soils, the U.S. Environmental Protection Agency has conducted clean-up activities at the Tar Creek site.

Cancer Rates in Ottawa County

Determining cancer rates

To learn more about the cancer rates in Ottawa County, ATSDR and OSDH staff compared the number of reported new cancer cases and cancer deaths to the number of cancer cases and deaths reported for the state of Oklahoma.

ATSDR and OSDH staff then determined the rate of cancer per 100,000 people and compared the rate for Ottawa County to the state cancer rate.

Determining cancer rates, continued

For example, from 1997 to 2003, 248 out of the 33,201 residents of Ottawa County developed lung cancer. After adjusting for age, the lung cancer rate for Ottawa County would be reported as 86 per 100,000 people. We then compared this rate to the age-adjusted, state lung cancer rate of 84 per 100,000.

Cancer results

By comparing cancer rates in Oklahoma to cancer rates in Ottawa County—and in the five zip codes associated with the Tar Creek Superfund Site—ATSDR and OSDH found that from 1997 to 2003,

- the 7-year average cancer rate in Ottawa County was similar to the state rate, and
- the 7-year average cancer rate in the five-zip code area near the Tar Creek Superfund Site was also similar to the state rate.

Other Health Conditions

Health conditions in Ottawa County



ATSDR and OSDH compared the percentage of adults in Ottawa County and in the state who reported specific diseases or risk factors in 2005. We found that the percentage of adults with various diseases or risk factors in Ottawa County was similar to the state percentage.

For example,

- 10 of every 100 Ottawa County adults report having diabetes, while 9 out of every 100 Oklahomans report having diabetes.

A mathematical analysis of the data showed that any difference in the reported diseases or risk factors was due to chance variation.

Deaths from other health conditions

ATSDR and OSDH compared the 1999–2003 Ottawa County death rate for certain diseases with the state rate for the same diseases. We determined that

- The death rates for diabetes, high blood pressure, Alzheimer's Disease, atherosclerosis (hardening of the arteries) and kidney disease are similar to or below the rates for the state; and
- A small increase appears between the number of deaths from heart attacks in Ottawa County compared to the state number. This difference may be due to chance variation.

Serious mental illness

Information regarding the rate of mental illness in Ottawa County was not available. But data for the seven counties that make up the northeast region of Oklahoma were available from the Oklahoma Department of Mental Health and Substance Abuse Services.

A review of mental health information for northeastern Oklahoma shows that

- The rate of serious mental illness in the seven counties that make up the northeast region is 3.2% (or 3.2 cases for every 100 adults) compared to 3.3% (or 3.3 cases for every 100 adults) statewide, and
- The rate of serious mental illness in northeast Oklahoma is similar to the statewide rate.

Next Steps and More Information

What will happen next?

- OSDH and ATSDR will present to the community their health outcome data findings for Ottawa County.
- OSDH and ATSDR will meet with the Ottawa County Health Department to discuss these findings. The agencies will determine whether any additional health education activities are warranted.
- ATSDR will have discussions with the Indian Health Service, LEAD Agency, and American Indian tribes in the area to evaluate the feasibility of conducting a health outcome data review focused on American Indians who live in and around the Tar Creek Superfund Site.

For more information about the health assessment

To inquire about the Public Health Assessment for Occurrence of the Selected Health Outcomes in Ottawa County, Oklahoma contact:

Edd Rhoades, M.D., M.P.H.
Deputy Commissioner, Family Health Services
Oklahoma State Department of Health
405-271-4200 or toll-free 1-800-522-0203

Steve Dearwent, Ph.D., Epidemiologist
ATSDR, Atlanta, GA Office
404-498-0488 or toll-free 1-800-CDC-INFO.

When calling ATSDR's toll free number, please ask for Steve Dearwent with ATSDR.

For more information about site activities/ meetings or to discuss health concerns

Jennifer Lyke, ATSDR Regional Representative
Dallas, TX Office
Toll-free 1-800-533-3508 or 214-665-8362

La Freta Dalton, Health Communication Specialist
ATSDR, Atlanta, GA Office
404-498-1743 or toll-free 1-800-CDC-INFO (800-232-4636)

When calling ATSDR's toll-free number, please ask for LaFreta Dalton with ATSDR

To access the ATSDR Tar Creek Web site

Further information, including ATSDR's Plan for Tar Creek and its Public Health Assessment entitled *Occurrence of Selected Health Conditions in Ottawa County, Oklahoma*, is available at <http://www.atsdr.cdc.gov/sites/tarcreek>.