

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



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 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 Superfund Site. As a follow-up to that survey, ATSDR and OSDH reviewed disease rates and other health information about the Ottawa County community focusing on:

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

Health Findings

What does this mean to persons living in Ottawa County?

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

See detailed information below.

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.

ATSDR and OSDH evaluated health information from several databases compiled between 1994 and 2005 that 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 among 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 those in the rest of the state and the nation.

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

Birth information



The rates of certain conditions in Ottawa County newborns, such as preterm births, birth defects, and newborn hearing loss, were similar to or lower than state or national averages.

Pre-term Births and Low Birth Weight Births

OSDH and ATSDR compared the rate of preterm births and low birth weight babies in Ottawa County from 1999–2002 to those from the state of Oklahoma and the rest of the United States.

ATSDR and OSDH determined that the rates of low birth weight and preterm births in Ottawa County were lower than state and national rates.

Birth Defects

ATSDR and OSDH compared Ottawa County and Oklahoma birth defect data from 1994–2002 and found that

- From 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 in Ottawa County over these seven years was much lower than that for the rest of the state.

Newborn Hearing Screening

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

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

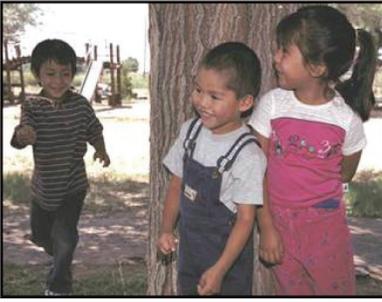
Special education

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 is, however, still slightly higher than state and national rates. The Ottawa County Health Department is pursuing an extensive, ongoing program that provides free blood lead screening services to children and pregnant women in the county.

Please call 918-540-2481 for more information about blood lead levels among children or to schedule an appointment to have them tested.

The Centers for Disease Control and Prevention (CDC) recommends testing preschool children ages 1–5 years for elevated blood lead levels. CDC is concerned about young children with a blood lead level of 10 micrograms or higher per deciliter of blood because studies have shown decreases in intelligence scores (IQ), decreased growth, and diminished hearing.

In the mid-1990s, about 30% of children in Ottawa County had blood lead 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, the U.S. Environmental Protection Agency has conducted clean-up activities at the Tar Creek Superfund site to reduce lead levels in residential soils.

Cancer Rates in Ottawa County

Determining cancer rates

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

For example, from 1997 to 2003, 248 of the 33,201 residents of Ottawa County developed lung cancer. After adjusting for age, the reported lung cancer rate for Ottawa County was 86 per 100,000 people. Staff then compared this rate to the age-adjusted state lung cancer rate of 84 per 100,000. These rates are very similar and show no significant difference between Ottawa County and the state.

Cancer results

ATSDR and OSDH compared cancer rates statewide in Oklahoma to cancer rates in Ottawa County—and in the five zip codes associated with the Tar Creek Superfund Site from 1997 to 2003. Staff found that the seven-year average cancer rates in Ottawa County and in the five-zip code area near the Tar Creek Superfund Site were similar to the statewide rates.

Other Health Conditions

Health conditions in Ottawa County



ATSDR and OSDH compared the percentages of adults in Ottawa County and in the state who reported specific diseases or risk factors in 2005. Staff found that the percentage in Ottawa County was similar to the states. For example, 10 out of every 100 Ottawa County adults reported having diabetes, while 9 out of every 100 Oklahomans reported having diabetes. A mathematical analysis of the data showed that any difference in the reported diseases or risk factors was due to chance variation.

Death from other health conditions

ATSDR and OSDH compared the 1999–2003 Ottawa County death rates for certain diseases with the state rate for the same diseases. Staff 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
- There is a small difference between the number of deaths from heart attacks in Ottawa County compared to the state number. This small difference may be due to chance variation.

Serious mental illness

Information regarding the rate of mental illness in Ottawa County was not available. However, 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 this information shows that the rate of serious mental illness in northeast Oklahoma is similar to the statewide rate (3.2% or 3.2 for every 100 adults in northeast Oklahoma vs. 3.3% or 3.3 for every 100 adults statewide).

Next Steps and More Information

What will happen next?

ATSDR will meet with the Indian Health Service, L.E.A.D. Agency, Inc. and American Indian tribes in the area to evaluate the feasibility of conducting a health outcome data review focused on those who live in and around the Tar Creek Superfund Site.

For more information about the *Public Health Assessment, Occurrence of Selected Health Outcomes in Ottawa County, Oklahoma*

Edd Rhoades, MD, MPH, deputy commissioner

- Family Health Services, Oklahoma State Department of Health
- 405-271-8172 or toll-free 1-800-522-0203

Steve Dearwent, PhD, epidemiologist

- ATSDR, Atlanta, GA office
- 770-488-3665 or toll-free 1-800-CDC-INFO (1-800-232-4636)

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

For the full report, *Public Health Assessment, Occurrence of Selected Health Conditions in Ottawa County, Oklahoma*, visit <http://www.atsdr.cdc.gov/sites/tarcreek>.

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
- 404-488-0711 or toll-free 1-800-CDC-INFO (800-232-4636)

When calling ATSDR's toll-free number, please ask for La Freta Dalton with ATSDR.

To access the ATSDR Tar Creek Web site

For further information about ATSDR's activities at the Tar Creek Superfund Site, including ATSDR's Plan for Tar Creek and other reports, visit <http://www.atsdr.cdc.gov/sites/tarcreek>.