

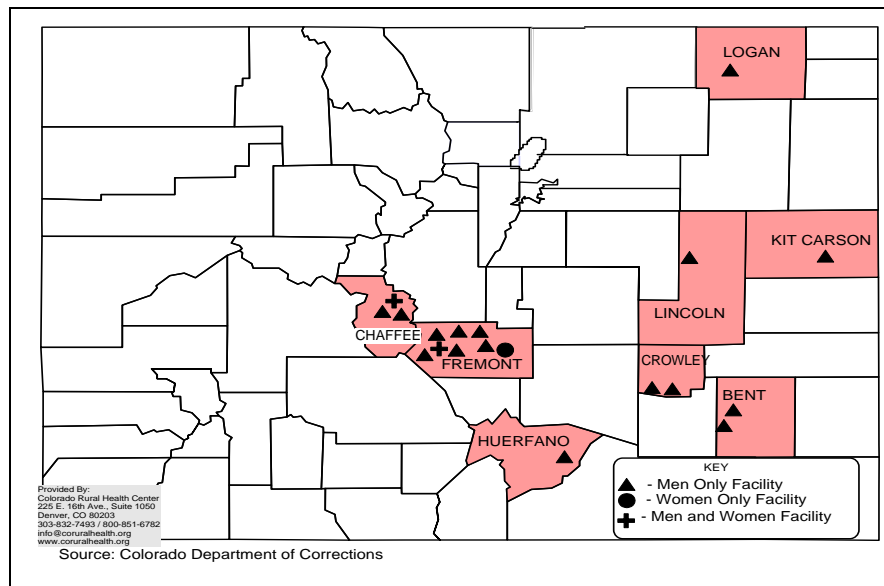
Prison Inmate Numbers Can Affect Rural County Data

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The total population for Crowley County, Colorado, as reported by the US Census Bureau in 2000, was **5,518**. However, this number includes **1,955** people housed in correctional facilities (otherwise known as inmates*). This means that about 35% of the population in Crowley County in 2000 were inmates. These inmates and the data about them - such as age, income, health status or race, are included in several of the more commonly used health and demographic statistics. As reported in the 2000 Census, there were 30,136 inmates in Colorado. While the prison population is small when compared to the overall population of the state (4,301,261), the health characteristics and total demographic makeup of prison populations can influence smaller, rural county health statistics.

Inmates in Rural Counties

Eight rural counties in Colorado have inmate populations making up more than five percent (5%) of their total population. *The map on the right shows State facilities in each county.*



County Name	Total County Population	Total Inmates In County	Percent of County Population In Correctional Facilities
Bent	5,998	693	11.6%
Chaffee	16,242	1,265	7.8%
Crowley	5,518	1,955	35.4%
Fremont	46,145	8,499	18.4%
Huerfano	7,862	754	9.6%
Kit Carson	8,011	461	5.8%
Lincoln	6,087	965	15.9%
Logan	20,504	1,390	6.8%

Source: 2000 Census, www.census.gov

*See note about inmate definitions on final page.



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"Enhancing healthcare services in Colorado by providing information, education, linkages, tools & energy toward addressing rural healthcare issues."

Impact on Demographic and Health Statistics

Inmate data may have an impact on reported demographic and health statistics for small counties with large prison populations. The presence of large inmate populations can influence statistics like gender (most prisons in rural Colorado house male inmates), average age, education levels, and race/ethnicity. Inmate data may also affect health statistics, as illustrated by the following.

Impact on Health Rates

Many health trends are expressed as a rate: birth rate, insurance rate, mortality rate, injury rate, etc. Where reporting health data as a rate, if the numerator of a rate does not include any inmates, and the denominator of the rate includes all inmates, then the rate will be underestimated. (If the numerator of a rate does include inmates, and the denominator of the rate excludes inmates, then the rate will be overestimated.)

Example 1

Assume that County A has a population of 46,145 in 2000, including 8,499 inmates. In that year, 10 residents of County A were killed in motor vehicle crashes. The motor vehicle death rate for the county was reported as $10/46,145 * 100,000$, or 21.7 deaths per 100,000 population. However, no inmates were killed in the crashes. (They were in prison.) The rate for County A can be recalculated as $10/37,646 * 100,000$. The revised rate is 26.6 deaths per 100,000 people, a rate that is higher than the 21.7 originally calculated, and better describes the population of the county outside prison. The revised rate is 23% higher than the unrevised rate that included the inmates.

Example 2

County B has a population of 5,518, including 1,955 inmates. In 2000, there were 48 live births in County B. The birth rate for the county was calculated as $48/5,518 * 1,000$, or 8.7 births per 1000 people. However, this rate includes the 1,955 inmates, and none of the births occurred to inmates. The rate for County A can be recalculated as $48/3,563 * 1,000$. The revised rate is 13.5 births per 1,000 population, a rate that is higher than the 8.7 birth rate originally calculated, and better describes the population of the county outside prison. The revised rate is 55% higher than the unrevised rate that included the inmates.

Suppose there were State dollars available for counties to implement traffic safety programs or programs targeting unintended births. And further suppose that the allocation of those dollars was based on need, which was determined by county health statistics including motor vehicle deaths or birth rates. It could make a substantial difference to these counties to use the numbers that more appropriately reflected their populations.

Note: The scenarios above are true examples of how prison populations can affect data. County A is actually Fremont County and County B is Crowley County. The population numbers are taken from the 2000 Census, and the birth and death data are from the Colorado Department of Public Health and Environment as reported on birth and death certificates.

Impact on Demographic Statistics

Additional demographic statistics that might be affected by inmate data include:

Age Distribution	Race/Ethnicity Distribution
Educational Attainment	
Marital Status	Gender

Impact on Health Statistics

Additional health statistics that might be affected by inmate data include:

Smoking/Tobacco Rates	HIV/AIDS Rates
Educational Attainment	Poverty Ratio
Cancer Rates	Diabetes Rates
Tuberculosis Rates	STD Rates

Example 3

Hepatitis C is another health statistic that can be affected by prison populations in residing in small, rural counties. In 2003, there were 36 reported cases of Hepatitis C in Logan County. The Hepatitis-C rate was calculated as $36/20,504 * 100,000$ or 175.6 per 100,000. However, this statistic includes the inmate population of Logan County. Without inmates in the calculation, the rate is much lower: $6/19,114 * 100,000$ or 31.4 per 100,000. It is clear to see that the rate is drastically different. Prison populations can affect the overall health statistics of the counties they reside because the Colorado Department of Corrections typically moves inmates with similar diagnosis to facilities designed to care for each particular condition (e.g. HIV/AIDS prisoners are located in Denver).

Source: Colorado Electronic Disease Reporting System (CEDRS)

Resources

As can be seen from these examples, generally used health and demographic statistics for rural counties with large inmate populations may not accurately reflect the health or demographic status of the general population outside prison. Because these data are often used to make decisions at Federal, State, and local levels about resource allocation, prioritization of effort, and needs assessments for this population, it is important to know when inmate data are included or excluded, so that corrections, if necessary, can be made. Census data produces two sets of numbers of total population and institutionalized population. When developing or reading the data, it is important to consider which data set is more appropriate based on the purpose for which it was collected or is being used.

Sources of information to help compile accurate county data include:

Population data:
Census Bureau

www.census.gov
http://factfinder.census.gov/servlet/SAFFPeople?_sse=on
(This link will help you get started).
Look for group quarters and then correctional institutions
for inmate data in 2000.

Birth and Death data:
Colorado Health Information Dataset:
<http://www.cdphe.state.co.us/cohid/index.html>

County population estimates: for years after 2000:
Colorado Department of Local Affairs (DOLA)
www.dola.colorado.gov/demog/Demog.cfm

The Colorado Department of Corrections has information
available on prison populations on an ongoing basis:.
www.doc.state.co.us/Statistics/9MRStart.htm

Some of the data
available on the U.S.
Census and the
Department of Local
Affairs websites
includes:
Number of inmates
Gender of inmates
Race of inmates

**Note: The Census Bureau classifies 'institutionalized populations' as 'patients or inmates.' This includes people in nursing homes, hospitals/wards and hospices for chronically ill, mental hospitals, and correctional institutions. Inmates in correctional institutions make up the vast majority of institutionalized populations. This includes prisons, federal detention centers, military disciplinary barracks and jails, police lockups, halfway houses used for correctional purposes, local jails, and other confinement facilities, including work farms.*

Source: Excerpt taken from "Census Bureau Definition of Group Quarter Population", www.census.gov

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