

# Institute for Social Research and the Division of Government Research

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## Highlights

- From 1990 to 2001, the state population increased 21%, while the serious injury DWI crash rate declined 48%.
- Bernalillo County had a sharp drop in alcohol-involved crashes between 1996 and 1997.
- The patterns in counties and county groups do not necessarily mirror the statewide pattern.
- In Santa Fe/Los Alamos, the arrest rates and crash rates appear to be more closely related than in other county groups.
- San Juan County's arrest rate was 40% higher than the statewide rate in 1993, and 74% higher in 2001.
- McKinley/Cibola had an increase in population and a decrease in the rate of alcohol-involved serious Injury crashes close to the statewide average.
- Valencia/Torrance had a substantial population increase and a very large decrease in the serious injury DWI crash rate.
- In Chaves County, both the crash and arrest rates have been consistently below the statewide rates.
- In the Northeast, crash and arrest rates have been consistently higher than the statewide rates.
- Overall, in 2001, four county groups had arrest rates that were substantially higher than the rest of the state. Five county groups had

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## Report in Brief:

# Comparison of Trends in Alcohol-Involved Crashes Among New Mexico Counties

## Introduction

In the 1990's, numerous state and local government agencies have implemented programs intended to lower DWI rates in New Mexico. With so many programs created in a short period, it is difficult to evaluate the effectiveness of individual programs. However, by examining the differences in the trends in alcohol-involved crashes with injuries across counties, patterns may emerge that could identify effective strategies.

This study compares crash data over time from 1990 through 2001 – the most recent data available – across counties, and groups of counties. The measures used are the number of alcohol-involved crashes with injuries per 100,000 population, and the number of DWI arrests per 100,000 population.

## Methodology

For reasonably stable population-based rates, it is necessary to have a large enough population that there are more than a few incidents per year. This method requires arranging New Mexico's 33 counties into 15 groups. Counties that were grouped together were contiguous and to the extent possible, similar in terms of demographic and economic factors. The county groupings are shown in the Table 1.

## Statewide Trends

From 1990 through 1992, there was little change in the rate of alcohol-involved crashes with injuries. A steady downward trend characterized the period from 1993 through 1996 and a sharp decline between 1996 and 1997 and a continuing decline to 2001. Overall, the rate of alcohol-involved crashes with injuries declined 48% between 1992 and 2001.

The sudden drop between 1996 and 1997 is concentrated in Bernalillo County, where the rate declined by 32%. For the rest of the state the rate dropped by 14% for the period.

The number of DWI arrests per 100,000 people declined from 1993 through 1997 by 25%. The rate of alcohol-involved injury crashes declined 31% over the same period. After 1997, the rate of decline in the arrest rate slowed, declining by only 6% from 1997 through 2001.

On the statewide level, there appear to be turning points in 1993 and 1997. However, the patterns in the counties and county groups are not mirror images of the statewide pattern.

## County Comparisons

Table 2 shows the change in population and in the alcohol-involved crashes with injuries rate from 1990 to 2001. The state

numbers of alcohol-involved crashes with injuries that were substantially larger than the rest of the groups. These are also the county groups with the largest populations.

## Policy Implications

- Programs begun in the 1990's and focusing on DWI arrests, prevention, and treatment may have had a positive effect.
- Recent DFA supported studies suggest that some counties and ethnic groups have successfully reduced alcohol-involved crashes.
- A statewide strategy and mission involving multi-agencies, a continuum of care, sanctions, and proven practices should be produced.
- Taken as one, recent studies show cumulative results and general successes. Well-designed impact evaluations are needed to assess the reasons for differences across counties and ethnic groups. Successful programs should be identified and replicated.
- Standard data collection and objective measures should be expanded in order to evaluate programs.

## Summary

This study compares crash data from 1990 through 2001 – the most recent data available – across counties, and groups of counties. Counties are grouped together based on adjacency and where demographics and economic factors are similar. The study does not establish a linkage between programs and crash trends. The focus is on the patterns of change over time. Highlights from county groups are also provided and several policy implications are offered for policy makers.

population increased 21%, while the alcohol-involved crashes with injuries rate declined by 48%.

Two county groups had very large growth in population: Valencia and Tarrant (52%) and Sandoval (45%). Three other groups, Doña Ana, Otero/Lincoln, and Santa Fe/Los Alamos had population growth greater than 25%. The eastside of the state had very low population growth over this period, in most cases less than 10%. The population of Lea County decreased 2%.

Statewide, the rate of alcohol-involved crashes with injuries declined by 48% between 1990 and 2001. The four county groups with the largest decreases were Valencia/Tarrant, Chaves, Bernalillo, and Southwest NM. The four county groups with the smallest de-

creases were Sandoval, Santa Fe/Los Alamos, Otero/Lincoln, and Lea.

## Summary

This paper represents a review of alcohol-involved crashes in New Mexico counties. In reviewing the county patterns, there are apparent effects in different years depending on the area. Table 3 summarizes apparent effects by year.

In 2001, four county groups had arrest rates substantially higher than the rest of the state: McKinley/Cibola, Rio Arriba/Taos, NE New Mexico, and San Juan. Five counties had numbers of alcohol-involved crashes with injuries that were substantially larger than the rest of the groups: Bernalillo, Santa Fe/Los Alamos, McKinley/Cibola, San Juan, and Dona Ana. These are also the county groups with the largest populations.

Table 1. Population and Alcohol-Involved Serious Injury Crash Rates for 2001

Group	Counties	2001 Population	2001 Alcohol Involved Serious Injury Crash Rate
<b>Statewide</b>	All	1,841,441	65.7
<b>McKinley/Cibola</b>	McKinley, Cibola	103,287	109.4
<b>Rio Arriba/Taos</b>	Rio Arriba, Taos	71,965	107.0
<b>NE New Mexico</b>	Colfax, Guadalupe, Harding, Mora, Quay, San Miguel, Union	70,325	101.0
<b>San Juan</b>	San Juan	114,575	94.3
<b>Santa Fe/Los Alamos</b>	Santa Fe, Los Alamos	139,513	77.6
<b>SW New Mexico</b>	Catron, Grant, Hidalgo, Luna, Sierra, Socorro	96,251	75.8
<b>Lea</b>	Lea	54,384	73.6
<b>Otero/Lincoln</b>	Otero, Lincoln	82,142	68.2
<b>Dona Ana</b>	Dona Ana	176,380	61.2
<b>Eddy</b>	Eddy	51,247	58.5
<b>Sandoval</b>	Sandoval	92,578	57.2
<b>Valencia/Tarrant</b>	Valencia, Tarrant	84,688	49.6
<b>E. Central</b>	Curry, DeBaca, Roosevelt	65,200	47.5
<b>Bernalillo</b>	Bernalillo	567,503	46.5
<b>Chaves</b>	Chaves	61,406	45.6

Although the alcohol-involved crash rate has declined in the last decade, there continues to be a pressing need for a continuum of research to guide policies and practices related to DFA funded programs.



## References

Lacey, JH and Jones, RK (2000) *Evaluation of Changes in New Mexico's Anti-DWI Efforts*, Mid-America Research Institute of New England for the National Highway Traffic Safety Administration, Washington DC ([http://www.nhtsa.dot.gov/people/injury/research/NewMexico\\_dwi/NewMexico\\_DWI.html](http://www.nhtsa.dot.gov/people/injury/research/NewMexico_dwi/NewMexico_DWI.html))

Table 2. Population Change and Alcohol-Involved Serious Injury Crash Rates between 1990 and 2001

Group	Counties	% Change in Population 1990-2001	% Change in Alcohol Involved Serious Injury Crash Rate 1990-2001
<b>Statewide</b>	All	+21%	-48%
<b>Valencia/Torrance</b>	Valencia, Torrance	+52%	-63%
<b>Chaves</b>	Chaves	+6%	-55%
<b>SW New Mexico</b>	Catron, Grant, Hidalgo, Luna, Sierra, Socorro	+22%	-53%
<b>Bernalillo</b>	Bernalillo	+18%	-53%
<b>Dona Ana</b>	Dona Ana	+29%	-51%
<b>Rio Arriba/Taos</b>	Rio Arriba, Taos	+25%	-51%
<b>NE New Mexico</b>	Colfax, Guadalupe, Harding, Mora, Quay, San Miguel, Union	+12%	-50%
<b>Eddy</b>	Eddy	+5%	-49%
<b>San Juan</b>	San Juan	+25%	-47%
<b>McKinley/Cibola</b>	McKinley, Cibola	+22%	-45%
<b>E. Central</b>	Curry, DeBaca, Roosevelt	+6%	-44%
<b>Sandoval</b>	Sandoval	+45%	-37%
<b>Santa Fe/Los Alamos</b>	Santa Fe, Los Alamos	+27%	-37%
<b>Otero/ Lincoln</b>	Otero, Lincoln	+28%	-32%
<b>Lea</b>	Lea	-2%	-23%

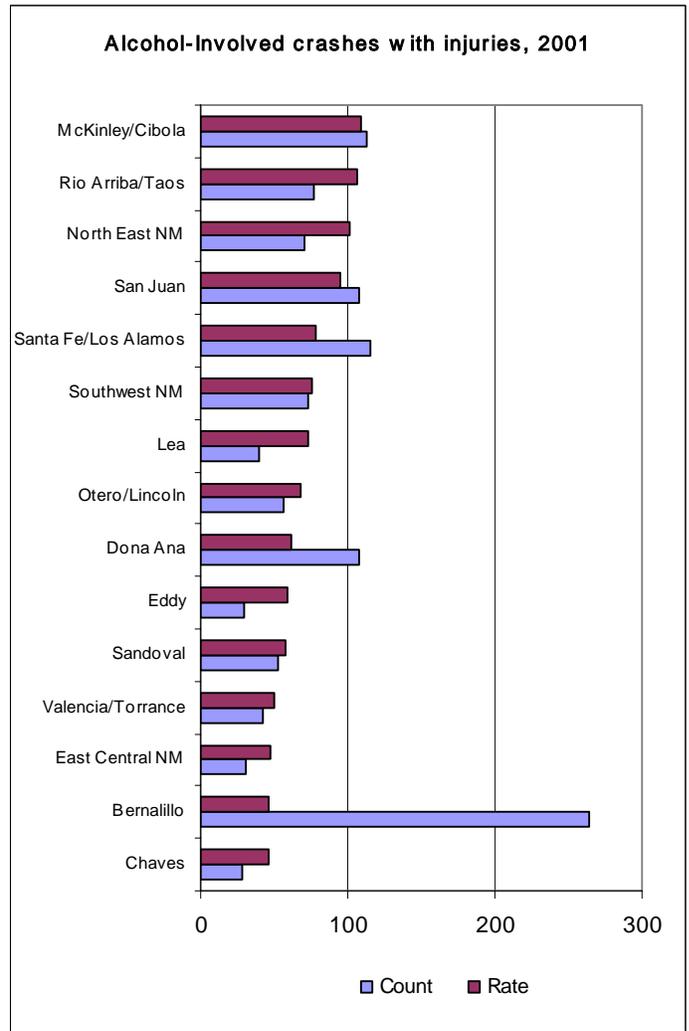
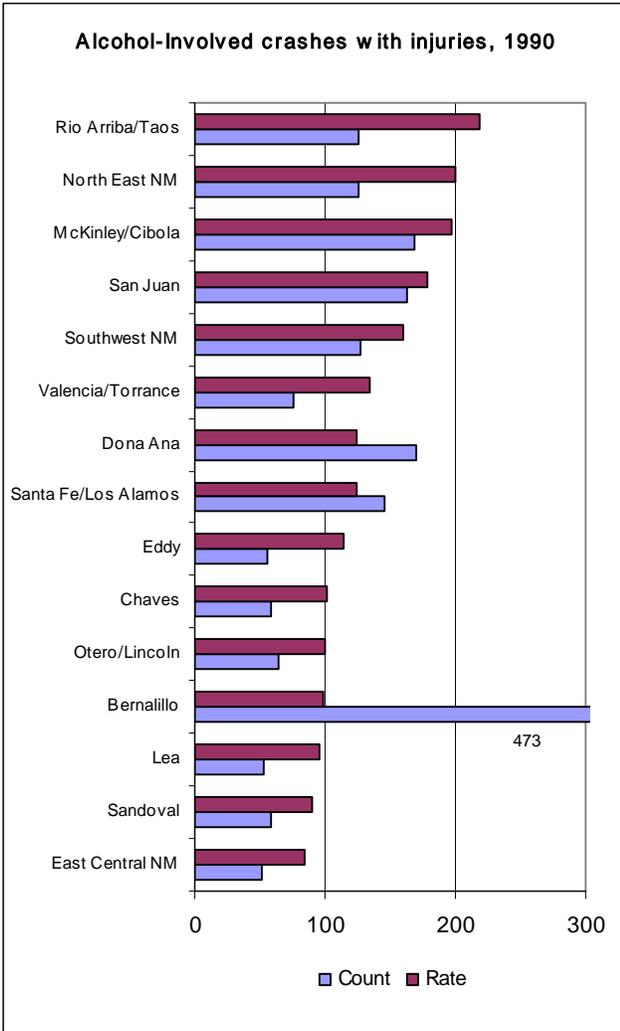
Table 3. represents a summary of counties that experienced sizeable effects in the study period.

Table 3. Counties with Apparent Effects by Year

Year	Counties with effects	Counties with possible effects
1993	Statewide, McKinley/Cibola, Sandoval	Eddy
1994		Rio Arriba/Taos
1995	Dona Ana, SW New Mexico, San Juan	Sandoval
1996	Santa Fe/Los Alamos, Otero/ Lincoln, NE New Mexico	
1997	Statewide, Bernalillo, Valencia/ Torrance, Lea	East Central New Mexico, San Juan, McKinley/Cibola

## Alcohol-Involved Crashes with Injuries

The charts below show the number and rate of alcohol-involved crashes with injuries by county group for 1990 and 2001. The counties are shown in order of decreasing rate in each year. The statewide rate in 2001 was about half the rate in 1990.



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