Bernalillo County Community Health Profile

July 2009

Prepared for the Bernalillo County Community Health Council

www.berncountyhealth.org

BERNALILLO COUNTY
Community Health Council

ACKNOWLEDGEMENTS

Thanks to the many community members, Council partners, and Council members who participated in the review and development of the Bernalillo County Health Profile. A special thanks to all the Council members who participated in the Health Profile Steering Committee, and in particular to Marsh McMurray-Avila, Melissa Crain, Daryl Smith, and Charm Lindblad for their contributions to both content and editing. Another special thanks to Tom Scharmen from NMDOH Region 3 for preparing the Albuquerque/Bernalillo County Health Equity Assessment Tool (HEAT) maps included in the profile, and for providing ongoing feedback throughout the profile development process. Without our funding from the New Mexico Department of Health and the fiscal sponsorship of Bernalillo County, none of this would be possible. LJS Consulting, Inc. and contractors were a pleasure to work with and have taken our health profile to a new level; we are fortunate to have such expertise available to us. Thank you to all of the Council members who contribute their time and expertise to the Council and our communities on a daily basis.

Bernalillo County Community Health Council Members, 7/17/09

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I. INTRODUCTION

DEFINITION AND PURPOSE OF THE PROFILE

"A community health profile is a comprehensive compilation of information about a community. The data in a profile reflects the health of a given community from many different angles. The information may include data already collected and published about a community or information collected by the organizations or individuals creating the profile. A comprehensive profile will include many indicators; those related to selected priorities can be chosen as key indicators that a community monitors as part of keeping a pulse on community-wide changes.

The profile includes both quantitative and qualitative data, as well as a local analysis and interpretation of that data. It is a comprehensive compilation of information—both data already collected and published and information collected by the organizations and individuals creating the profile.

The objectives of the plan are to:

- Compile community data and interpretation of that data in one place, so that local health data can be reviewed and used by many sectors of the community;
- Clearly present a community's health needs and issues so that they can be prioritized for action;
- Identify health indicators and sources of data that can be used to monitor change and progress in addressing priority health issues; and
- Form the basis for the Community Health Improvement Plan and other community planning documents.[1]"

Due to Bernalillo County's size and diversity, it is challenging to present a "picture" of the community's health, which can be used to prioritize public health needs, issues, and problems. The Community Health Profile is a critical first step in identifying community health needs and problems, which then serve as the basis for establishing priorities in the Community Health Improvement Plan' (CHIP).

[1] Health Assessment & Planning Guidebook", 2006, New Mexico Department of Health

ROLE OF THE BERNALILLO COUNTY COMMUNITY HEALTH ALLIANCE

BERNALILLO HEALTH COUNCIL

COUNCIL VISION

A community that supports the ability of everyone to meet his or her full potential.

COUNCIL MISSION

To improve the health and quality of life in Bernalillo County through coalition building, health assessment and prioritization and community action.

In its role as the comprehensive health planning council for Bernalillo County, the Bernalillo County Community Health Alliance is responsible for preparing and updating the Bernalillo County Community Health Profile.

The Bernalillo County Community Health Council members are appointed by the County Commissioners and include community members, health and social service providers, educators, and other private and public employees that serve County residents. The Council strives to improve the health and wellbeing of all Bernalillo County residents and neighborhoods through a variety of strategies and activities:

- By developing a Community Health Profile to identify and map our community's health resources, needs and characteristics.
- By identifying and prioritizing important issues related to individual, familial, school and neighborhood health.
- By working in partnership with other individuals, groups and agencies to promote health awareness and to provide community education about health issues.
- By creating action plans, strategies and activities to achieve the systemic changes needed to meet the varied health needs of all Bernalillo County residents.

The Health Council Profile Steering Committee was responsible for approving the scope of work for the profile and monitoring and reviewing the project's progress, through monthly meetings.

DATA SOURCES

Much of the data in this report is available at the New Mexico Department of Health web site, www.health.state.nm.us. Including, data from two important surveys:

- The Behavioral Risk Factor Statistical Survey and
- The Youth Risk and Resiliency Survey.

In addition, the Department of Health Indicator Based Information System for Public Health (NM-IBIS) provides access to numerous County level public health datasets and information on New Mexico's priority health issues, ibis.health.state.nm.us

Other Bernalillo County documents that referenced in this profile are posted on the Health Council web site, www.berncountyhealth.org.

Finally, most of the maps included in this profile were created utilizing the Albuquerque/Bernalillo County Place Matters Health Equity Assessment Tool (HEAT). The tool uses social determinant and health outcome data at the census tract level to assess health equity. The Place Matters Team is one of 16

national teams studying assessment and policy solutions to local health outcome disparities and related social determinants of health, http://www.commonhealthaction.org/pmdl/resources.asp. Most of the HEAT maps are based on 141 census tracts, which were aggregated into thirty-three 'communities' representing coherent neighborhoods in the city of Albuquerque and surrounding county. Social determinant and health outcome data calculated for the 33 communities. In the future the HEAT team will be soliciting community input regarding other definitions of communities, for example: coalitions of neighborhood associations, police beats, state representative districts, etc. These community-defined areas will provide valuable information for future health profiles.

II. BERNALILLO COUNTY OVERVIEW

GEOGRAPHY AND COMMUNITIES

Bernalillo County covers 1,169 square miles. It includes the City of Albuquerque, the incorporated municipalities of Los Ranchos de Albuquerque and Tijeras as well as many unincorporated communities, parts of Isleta, Laguna, and Sandia Pueblos, and part of the To'hajiilee Navajo Reservation.

The geography of the county is very diverse. It includes parts of the Rio Grande as well as the Sandia Mountain. It includes plains and mountains, desert and pine forests. In spite of the relatively high density, Bernalillo County includes ranches, farms, federal, and city open space.

Bernalillo County is primarily urban. It has a population density of 477.4 persons per square land mile and 205.0 housing units per square land mile. New Mexico's population density is 15.0 persons per square mile and 6.4 housing units per square mile.

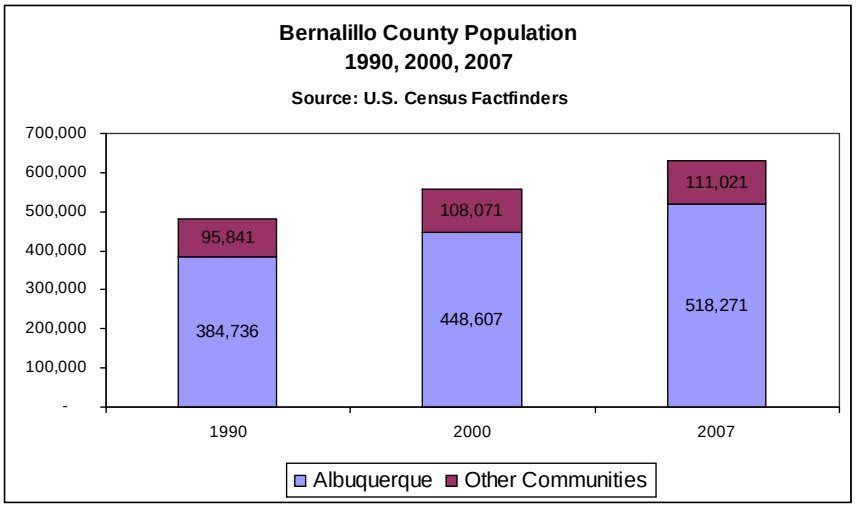
Bernalillo County neighborhoods are very diverse in terms of income and race/ethnic breakdowns. In order to assess the impact of social determinants on health outcomes, the Bernalillo County Place Matters Team[2] has developed a Health Equity Assessment Tool (HEAT), which is based on social determinant and health outcome data at the census tract level. In March 2009, the Place Matters team aggregated the 141 Bernalillo County census tracts into thirty-three "communities" which include a number of "coherent neighborhoods". Over the past few years the Place Matters Team has been using HEAT to develop very useful community level information about important community health issues in Bernalillo County. Some of the information is included in this profile, and substantial additional information is posted on the Council web site, www.berncountyhealth.org.

POPULATION

Bernalillo County has experienced significant population growth. It has grown from a of population less than 500,000 in 1990 to a population of 628,292 in 2007, a 30% increase. Albuquerque's population has increased by nearly 35%; the remainder of the County by 11%.

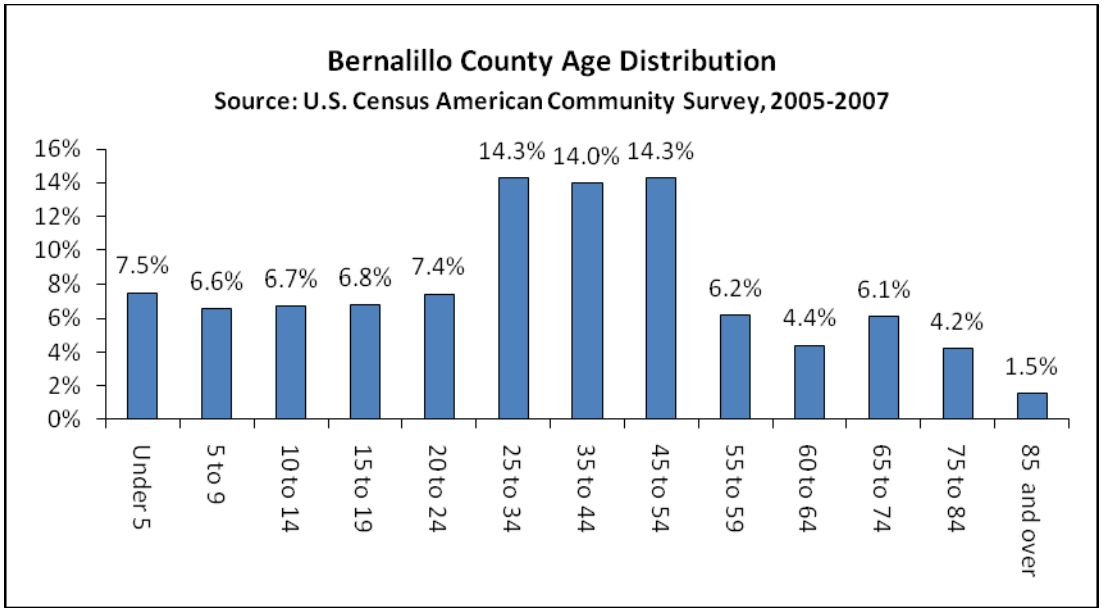
[2] The Place Matters Team is one of 16 national teams studying assessment and policy solutions to local health outcome disparities and related social determinants of health.
http://www.commonhealthaction.org/pmdl/resources.asp

Figure II-1 Bernalillo County Population: 1990, 2000, 2007



The median age of Bernalillo County residents was 35.5 years in 2007. Approximately a quarter of the population was under 18 years of age, and 12% was 65 years and older. 51% of the population was female; 49% male (Figure IV-4).

Figure II-2 Age Distribution (US Census, 2005-2007)



RACE AND ETHNICITY

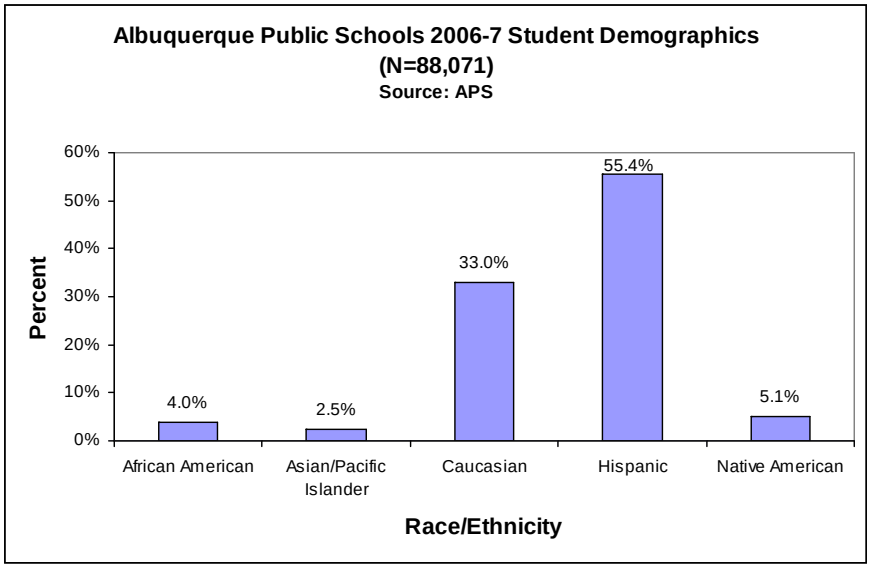
The majority of Bernalillo County residents are White 71.7%. There are small populations of American Indians, Blacks, and Asians in the County. 44.8% of County residents are Hispanic (race not specified).

Table II-1 Race/Hispanic Ethnicity 2006

BERNALILLO COUNTY RACE/ HISPANIC ETHNICITY, 2005-7 ESTIMATE (POP.618,845)	
White	71.7%
Black/AA	3.8%
American Indian	5.6%
Asian	2.7%
Native Hawaiian	0.2%
Other Race	19.4%
Hispanic	*44.8%*
Note: Total is greater than 100% due to rounding Source: U.S. Census Bureau, http://census.gov	

The Albuquerque Public School (APS) district covers all public schools in Bernalillo County. It collects student demographics every year using a combination of race and ethnicity, offering the choice of either Anglo *or* Hispanic. Among students in the public schools, 55.4% were Hispanic in 2006-7 school year, a much higher percentage than the U.S. Census Bureau's estimate of 44.8% of the entire population. Although the APS population is not the same as the general population, this difference may indicate a greater number of Hispanics in Bernalillo County in the future. (Note: The Albuquerque Public School (APS) demographics only include children enrolled in APS. It does not include students enrolled in private or parochial schools, or those who have dropped out. It does not reflect the overall racial/ethnic makeup of the City since birthrates vary between different ethnic groups.)

Figure II-3 Albuquerque Public Schools Race/Ethnicity



LANGUAGES/PLACE OF BIRTH

Eleven percent of the people living in Bernalillo County from 2005-2007 were foreign born. Eighty-nine percent of the population was born in the United States, including 49 percent who were born in New Mexico.

Among people at least five years old living in Bernalillo County from 2005-2007, 30 percent spoke a language other than English at home. Of those speaking a language other than English at home: 84% spoke Spanish; 16% spoke some other language; 32% reported that they did not speak English "very well." 9.6% of the total population reported that they did not speak English "very well".[3]

INCOME/POVERTY

The median income of households in Bernalillo County was $45,022. Between 2005 and 2007, eighty-two percent of the households received earnings and 19 percent received retirement income other than Social Security. Twenty-four percent of the households received Social Security. The average income from Social Security was $13,953. Some households received income from more than one source[4].

From 2005-2007, 15 percent of people in Bernalillo had incomes below the Federal Poverty Level (FPL) Table II-2. Twenty-one percent of related children under 18 were below the poverty level, compared with 9 percent of people 65 years old and over. Eleven percent of all families and 31 percent of families with a female head of household and no husband present had incomes below the poverty level.

[3] U.S. Census Bureau, 2005-7 Community Survey, Bernalillo County. http:/factfinder/census.us
[4] Ibid.

Figure II-4 Poverty by Population Category

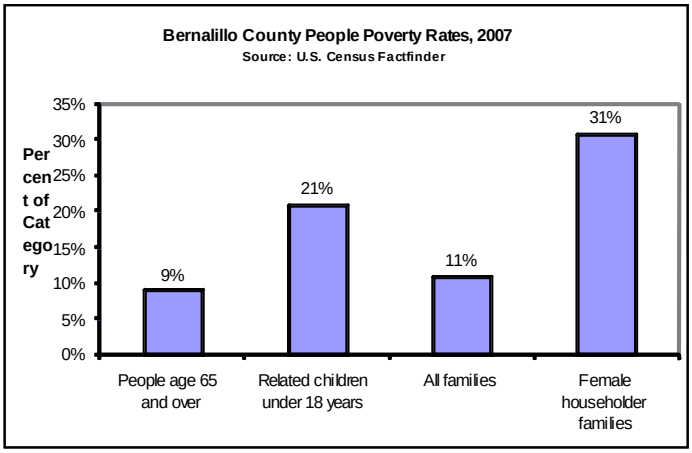


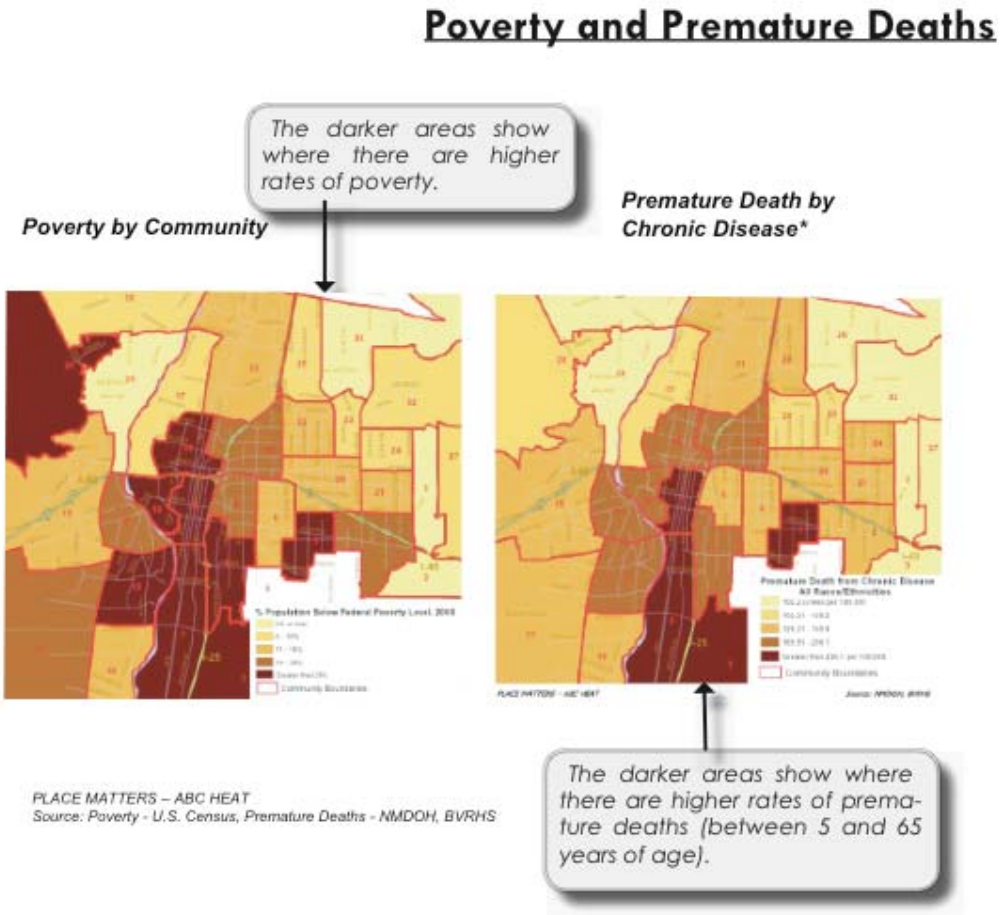
Table II-2 Federal Poverty Level

Household Size	100%	135%	185%	235%
	ANNUAL INCOME			
1	$10,212	$13,786	$18,900	$23,998
2	$13,692	$18,492	$25,330	$32,184
3	$17,172	$23,182	$31,776	$40,354
4	$20,652	$27,888	$38,206	$48,540
5	$24,132	$32,578	$44,652	$56,710
6	$27,612	$37,284	$51,082	$64,896
7	$31,092	$41,974	$57,528	$73,066
8	$34,572	$46,680	$63,958	$81,252

Based on the 2000 census, nearly one-quarter (23.4%) of the Bernalillo county population resided in a census tract where 20% or more of the population was below the poverty level. Bernalillo County census tracts with the highest percent of residents living at or below the federal poverty level have the lowest educational attainment (31.5% of persons 25 years and older without high school degree), lowest family income (44% of families with income less than $25,000), highest unemployment (9.2% civilian unemployment), and highest rates of premature death.[5] Figure II-5 demonstrates the relationship between poverty and premature deaths in Bernalillo County neighborhoods.

[5] Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, A Report to the Bernalillo County Environmental Health Department, March 2009 (ABC HEAT).

Figure II-5 Poverty and Premature Death



PREMATURE DEATH REFERS TO SOMEONE DYING BEFORE THE AGE OF 65

It is important to note that "living below poverty" does not accurately reflect how many people are struggling to meet their basic needs. The Economic Policy Institute calculates "Basic Family Budgets" for many communities across the nation, including Albuquerque, www.epi.org. The "Basic Family Budget" gives a more realistic measure of how much it costs to support a family based on the actual cost of housing, food, child care, transportation, health care, other necessities and taxes For example, based on the Economic Policy institute calculations, a family in Albuquerque with two parents and two children needs an annual income of 268% of the federal poverty level to meet their basic needs (Table II-3).

Table II-3 Federal Poverty Level and Basic Family Budget

Federal Poverty Level and Basic Family Budget			
Federal Poverty Level (2008)	Basic Family Budget for Albuquerque Families Source: Economic Policy Institute www.epi.org (12/2008)		
	Household Size	Basic Family Budget	% of Poverty
$10,404	1 parent 1 child	$31,632	309%
$14,004	1 parent 2 children	$40,608	297%
	2 parents 1 child	$37,620	275%
$17,604	1 parent 3 children	$56,988	332%
	2 parents 2 children	$46,068	268%
$21,204	2 parents 3 children	$61,776	299%

INCOME BASED ASSISTANCE PROGRAMS

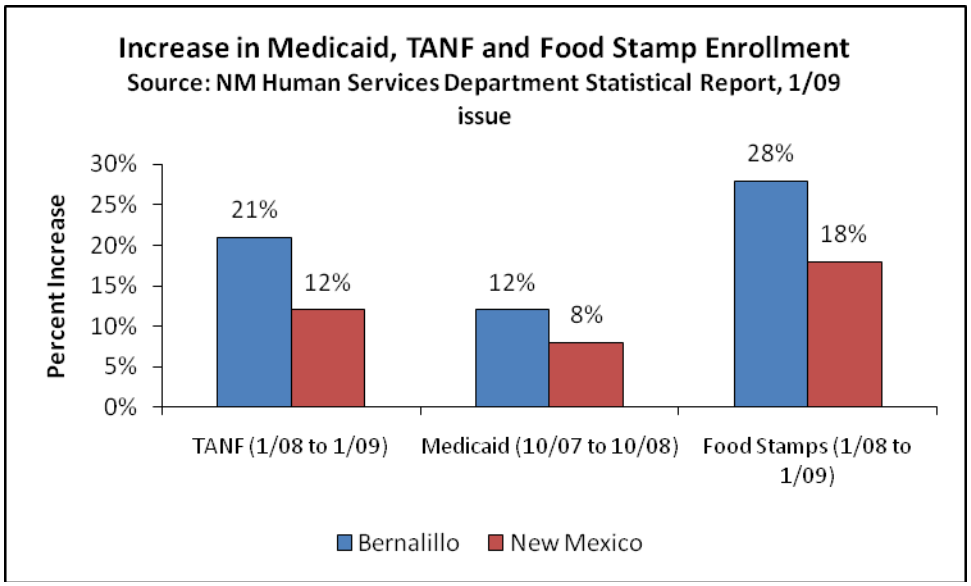
Income based assistance programs for New Mexico residents are presented below Table II-4. Additional medical assistance programs specific to Bernalillo County residents are listed in Chapter XIV, Health Access.

Table II-4 New Mexico Income Based Programs for Residents

WHO'S ELIGIBLE FOR WHAT?		
ELIGIBLE POPULATION	***ELIGIBLE FAMILY INCOME (percent of poverty)***	***GOVERNMENT SUBSIDIZED PROGRAM***
Children 0 - 18	up to 235% of poverty	Children's Medicaid or Children's Health Insurance Program - no monthly premiums
Children 0 - 18	over 235% of poverty	PAK - (Health Insurance) Premium Assistance for Kids
Children 0 - 5	up to 235% of poverty	WIC - Food assistance and nutritional counseling
Adults 19 - 65	up to 100% of poverty	State Coverage (Health) Insurance (SCI) - no monthly premiums
Adults 19 - 65	up to 200% of poverty	State Coverage (Health) Insurance (SCI) - premiums $90 - $110/month
Pregnant Women	up to 185% of poverty	Medicaid for pregnant women - no monthly premiums
Pregnant Women	over 185% of poverty	PAM - (Health Insurance) Premium Assistance for pregnant women - one time premium $150 - $300
Pregnant Women	up to 235% of poverty	WIC - Food assistance and nutritional counseling
General population	up to 185% of poverty	Family Planning Medicaid
General population	up to 150% of poverty	Low Income Heating and Air Conditioning Program (LIHEAP)
General population	up to 100% net/165% of gross income	Food Stamps - $155/month for family of 1 to $1140/month for family of 12
General population	up to 85% of poverty.	TANF - Temporary Assistance to Needy Families
Definitions of "income" vary by program.		
for information about eligibility criteria, enrollment, and benefits: http://www.newmexicoresources.org/index.cfm		

Over the past year, enrollments in three income assistance programs, Temporary Assistance for Needy Families (TANF), Medicaid, and Food Stamps have increased at a substantially higher rate than the State as a whole. Food stamp enrollment has increased by 28% in Bernalillo county, compared to 18% in the rest of the state. It is unclear why enrollment is increasing at such a high rate; it may reflect a general decrease in income in Bernalillo County or an increase in the number of low-income families moving to Bernalillo County.

Figure II-6 Medicaid, TANF, and Food Stamp Enrollment Race/Ethnicity 2006



HOUSING/HOMELESSNESS

From 2005-2007, Bernalillo County had a total of 271,000 housing units, 7 percent of which were vacant. Of the total housing units, 68 percent was in single-unit structures, 26 percent was in multi-unit structures, and 6 percent was mobile homes. Thirty percent of the housing units were built since 1990.

From 2005-2007, Bernalillo County had 251,000 occupied housing units. 65 percent of the units were owner occupied and 35 percent renter occupied. The median monthly housing costs for mortgaged owners was $1,237, non-mortgaged owners $347, and renters $664. Thirty-four percent of owners with mortgages, 11 percent of owners without mortgages, and 46 percent of renters in Bernalillo County spent 30 percent or more of household income on housing. In Bernalillo County, the fair market rent for a two-bedroom apartment is $671. County residents need to earn at least $12.90 per hour (working 40 hours a week) in order to keep the cost of rent and utilities at 30% of their salaries[6].

Reports about affordable housing and homelessness in Bernalillo County are posted on the Council web site, www.berncountyhealth.org.

Homelessness

Without homes, people also lose access to education, regular health care, employment and most of the things that many of us take for granted as part of our everyday lives. Extended homelessness has been shown to lead to early death at an average age of between 42 and 52, due to many untreated chronic health conditions as well as the hardship of living outdoors.[7] In 2009, a total of 3232 homeless people were counted in Albuquerque during one night[8]. NMCEH conducted a survey of homeless people in Albuquerque in 2007. (http://www.nmceh.org/pages/AlbuquerqueSurveyReport-Sept2007.pdf). Major findings of the survey are:

[6] National Low Income Housing Coalition web site 4/16/09, www.nlihc.org

[7] New Mexico Coalition to End Homelessness Website, 3/10/09 http://www.nmceh.org/

[8] Biannual Point in Time (PIT) count of homeless people, conducted by the New Mexico Coalition to End Homelessness.

- Affordable housing is critical in preventing and helping people exit homelessness.
- Many people who experience homelessness in Albuquerque are employed or would like to be employed.
- People lose their housing when they experience a crisis.
- People who experience homelessness in Albuquerque cannot access the services they need.
- Families make up a significant portion of the homeless population.
- Many people who are homeless in Albuquerque had never been homeless before.
- Many people who are homeless in Albuquerque have been homeless for less than a year.

EDUCATION

Based on the U.S. Census, from 2005-2007 approximately 75% of Bernalillo County adults over 25 years of age had at least a high school diploma. In addition, 32% had a bachelor's degree or higher. Fourteen percent were dropouts; they were not enrolled in school and had not graduated from high school[9].

Table II-5 Education Level, County and State

	Bernalillo		New Mexico
Less than 9th Grade Education	21129	6.9%	11.4%
Less than High School Diploma	54957	17.9%	24.9%
NM Higher Education Department, State Plan for Adult Education and Family Literacy, April 2006 http://hed.state.nm.us/cms/kunde/rts/hedstatenmus/docs/817175219-07-24-2008-13-40-13.pdf			

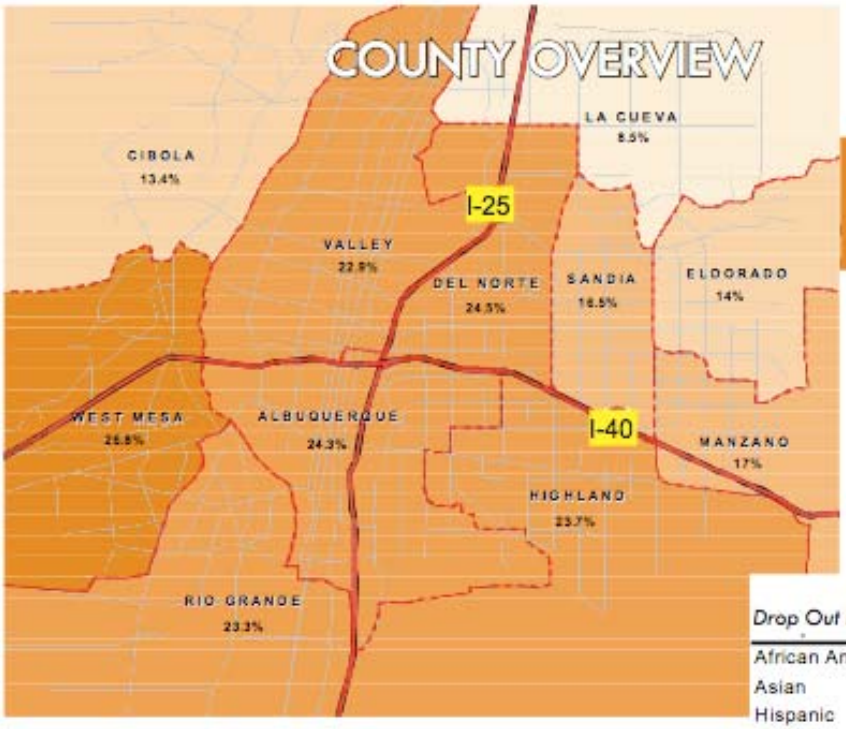
School dropout rates vary by ethnicity and schools. In 2003-2004, the group with the highest dropout rate was American Indians, followed closely by Hispanics and African Americans. Asians and Anglos had the lowest dropout rates.

Figure II-7 presents a summary of APS drop-out rates by school from 2002-2007. The rates vary from 8.5 for La Cueva High School to a high of 26.8 for West Mesa High School. The drop-out rate is defined as Students who completed 40 days of 9th grade, did not graduate with their class, did not return a subsequent year, and for whom no valid transfer can be validated (cohort method).

[9] U.S. Census

Figure II-7 APS High School Drop Out Rates

Albuquerque Public Schools
High School Drop Out Rates



This map shows drop out rates for Albuquerque Public School students. The darker the color, the more drop outs there are. Therefore, West Mesa has the highest rate of drop outs and La Cueva the lowest.

Drop Out Rate by Race and Ethnicity 2008

African American	18%
Asian	7%
Hispanic	20%
Native American	25%
White, Non-Hispanic	15%
ALL	**17.8%**

PLACE MATTERS – ALBUQUERQUE BERNALILLO COUNTY HEALTH EQUITY ASSESSMENT TOOL

Dropout* Rates, Albuquerque Public High Schools, 2003 - 2008

High School	2003	2004	2005	2007	2008	Average
Albuquerque	31.6%	23.1%	25.3%	22.1%	19.3%	**24.3%**
Cibola	13.3%	10.5%	14.6%	13.8%	14.7%	**13.4%**
Del Norte	26.8%	21.4%	23.1%	26.4%	24.6%	**24.5%**
Eldorado	15.4%	10.2%	15.4%	13.0%	16.1%	**14.0%**
Highland	27.9%	25.0%	21.5%	20.9%	23.3%	**23.7%**
La Cueva	9.1%	6.4%	9.6%	11.1%	7.4%	**8.5%**
Manzano	18.5%	14.1%	15.2%	15.8%	21.4%	**17.0%**
Rio Grande	36.2%	26.1%	23.8%	19.2%	11.4%	**23.3%**
Sandia	16.8%	18.3%	15.2%	17.8%	14.5%	**16.5%**
Valley	25.7%	20.7%	26.9%	22.4%	18.7%	**22.9%**
West Mesa	28.3%	25.6%	26.6%	29.0%	24.3%	**26.8%**
District	**23.0%**	**18.4%**	**20.0%**	**19.2%**	**17.8%**	**19.7%**

*Students who completed 10 days of 9th grade, did not graduate with their class, did not return a subsequent year, and for whom no valid transfer can be validated (cohort method). No data reported for 2006.

Source: APS-SIS, January 2009

Adult Literacy

Low literacy is defined as an inability to read, write, and use numbers effectively. The ability to read, write, and perform basic calculations significantly impacts an individual's ability to function in our society. Sixty-four percent of all jobs require literacy greater than level II. The New Mexico Literacy Coalition estimates that 54% of Bernalillo County's residents have a Literacy Level II or below[10].

Health care interventions are far less successful with patients who are illiterate. In a recent study for the Agency for Health Care Research and Quality, the association between low literacy and adverse health outcomes was evaluated. The study group concluded that low reading skill and poor health are clearly related. However, conclusions about the effectiveness of interventions to mitigate the effects of low literacy remain less well supported at this time.

Low literacy may have a direct, negative effect on health, and is particularly important for conditions that require substantial and complex self-care on the part of the patient, because of the barriers to accessing and using health information, particularly written information. A January 2003 report from the Institute of Medicine named health literacy as a top priority for improving the quality and delivery of health care in the United States, a recommendation supported by research findings. Studies show that a high proportion of hospital patients are unable to understand basic written medical instructions and that elderly managed care patients with low health literacy are more likely to be admitted to hospitals"[11]. More research is need to determine whether the association between low literacy and adverse health outcomes is mainly direct (meaning that outcomes could be improved by interventions designed to overcome limitations in reading and quantitative reasoning) or indirect (such that outcomes might be better addressed by focusing on other underlying causes of health disparities such as poverty, lack of access to care, or racism).[12] Low literacy may be a marker for other conditions, such as poverty and lack of access to health care that leads to poor health.

TRANSPORTATION

Based on the 2000 census, six percent of Bernalillo households did not have access to a car, truck, or van for private use and thirty six percent had one vehicle. Thirty-nine percent had two vehicles and another 19 percent had three or more. Seventy-eight percent of Bernalillo County workers drove to work alone from 2005-2007, 12 percent carpooled, 2 percent took public transportation, and 4 percent used other means. The remaining 4 percent worked at home. Among those who commuted to work, it took them on average 21.7 minutes to get to work.

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[10] http://www.nmcl.org/profile.htm#Literacy%20and%20Related%20Statistics%20for%20New%20Mexico%20Counties:

[11] "Literacy Status Among Major Predictors of Healthiness, The Nation's Health, June/July 2003, The Newspaper of the American Public Health Association
Berkman ND, DeWalt DA, Pignone MP, Sheridan SL, Lohr KN, Lux L, Sutton SF,
Swinson T, Bonito AJ. Literacy and Health Outcomes. Evidence Report/Technology
Assessment No. 87 (Prepared by RTI International–University of North Carolina
Evidence-based Practice Center under Contract No. 290-02-0016). AHRQ Publication No.
04-E007-2. Rockville, MD: Agency for Healthcare Research and Quality. January 2004
http://www.ahrq.gov/clinic/epcsums/litsum.htm

[12] Interventions to Improve Health Outcomes for Patients with Low Literacy
A Systematic Review
Michael Pignone, MD, MPH,1 Darren A DeWalt, MD,1,2 Stacey Sheridan, MD, MPH,1 Nancy Berkman, PhD,3 and Kathleen N Lohr, PhD3
http://www.pubmedcentral.nih.gov/articlerender.fcgi?tool=pubmed&pubmedid=15836553

ABQ Ride is the public transit provider in the greater Albuquerque area. It is a department of the Albuquerque City government and operates traditional fixed route, express bus or Bus Rapid Transit (BRT), and paratransit service (Sun Van) for people with mobility disabilities. The bus system operates 37 routes during weekdays and 22 routes on weekends (some of these do not operate on Sunday). Most routes operate every 15 to 60 minutes on weekdays. The long headways on many routes make transferring challenging between routes. Night and weekend service is only available on a limited number of routes, making it difficult for people with untraditional work hours to use ABQRide. There is very limited service outside of the Albuquerque City limits.

County residents who receive TANF benefits or those with incomes 150% of the federal poverty level are eligible for the Job Access door-to-door taxi program. The Job Access program, operated by the Middle Rio Grande Council of Governments, operates 24 hours a day, 365 days in areas of Bernalillo County west of Carnuel. Trips must be job-related and "not accessible" by transit.

In addition to ABQRide, other health and social service providers provide transportation services within the County, including Medicaid transportation providers and the City of Albuquerque Senior Transportation Program.

III. COMMUNITY PERCEPTIONS OF PROBLEMS AND STRENGTHS

To solicit community input on priority community health concerns, the Bernalillo County Community Health Council sponsored a Community Health Survey from November 2008 to January 2009. The survey was designed to provide insights into the concerns and strengths of County residents, and will be used to guide development of the Bernalillo County Community Health Improvement Plan. The survey was distributed through the Health Council email distribution list as well as to the Neighborhood Associations located in the unincorporated areas of Bernalillo County. Respondents were asked to forward the survey to other interested community members. There were a total of 410 respondents. It should be noted that since the survey was not randomly distributed to Bernalillo County residents it does not necessarily reflect the opinions of the general public; in addition, the majority of the survey respondents provide health and social services to County residents.

To obtain more detailed community input, two focus groups were held - in December 2007 and January 2008. The first focus group was held with ten promatoras/community health workers. The second focus group was held with ten representatives of Neighborhood Associations located in the City of Albuquerque. The focus group summaries are posted at www.berncountyhealth.org.

COMMUNITY PROBLEMS

The survey respondents and focus group participants were asked to identify the "three biggest problems facing residents of Bernalillo County". "Health access/health system capacity" was identified as the area of greatest need by both the survey respondents (81% of respondents) and the focus group participants. In responding to this open-ended question, many respondents identified health access and health capacity as one problem. Other problems identified most frequently were personal financial issues (e.g. poverty, jobs) were identified by 43% of the survey respondents, followed by crime (31%) and education (22%). The Neighborhood Association representatives also identified the built environment as an area of high concern.

The survey respondents were also asked to score a list of twenty-six community problems, (1 = not a problem, 5 = a big problem) which were identified by the Health Council. Sixteen of the problems received an average score of over 3.5, with alcohol abuse, drug abuse, crime, and lack of behavioral health services receiving the highest scores.

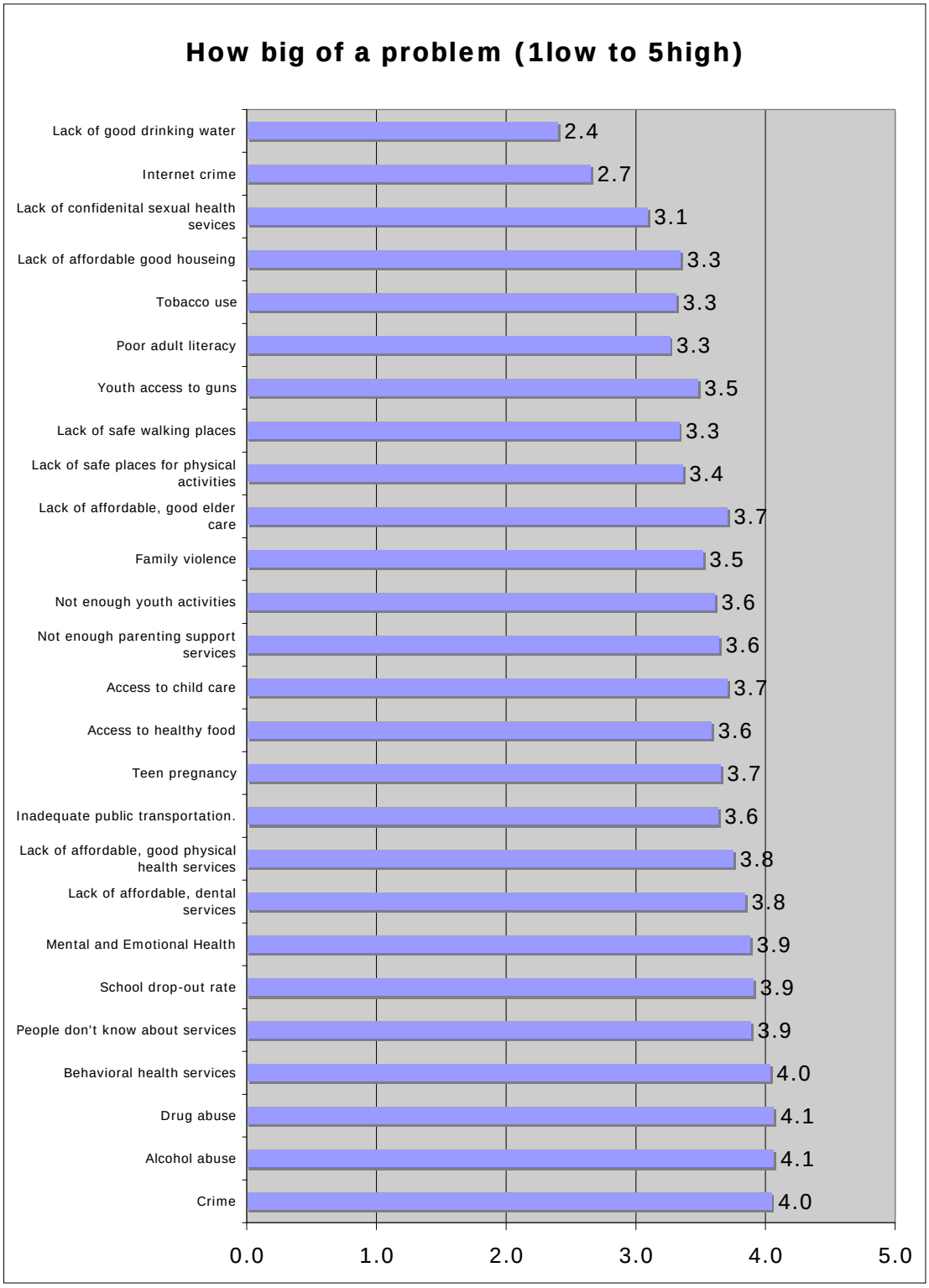
Based on the responses to the survey questions and the focus groups, the Bernalillo County Community Health Council identified the following five top community health priority concerns as focus areas.

- Health Access/System Capacity
- Personal finances/poverty
- Crime
- Education
- Substance abuse (alcohol and drugs)

Table III-1 Perception of Community Problems

PERCEPTION OF COMMUNITY PROBLEMS FACING COUNTY RESIDENTS		
SELF-IDENTIFIED PROBLEMS (314 respondents)*	#	% of respond-ents
health access/capacity (30 behavioral health)	253	81%
personal financial issues (e.g. poverty, jobs)	135	43%
Crime	96	31%
education (e.g. adult education, literacy, high-school drop-outs)	68	22%
built environment	37	12%
wellness (e.g. obesity, healthy foods, physical activity)	36	11%
housing/homelessness	31	10%
substance abuse	29	9%
access (did not specify health services)	29	9%
Transportation	26	8%
child-related	16	5%
environmental health	15	5%
specific health issues	9	3%
teen pregnancy	6	2%
services for immigrants (excluding health care access)	3	1%
Other miscellaneous problems	97	NA
*respondents were asked to identify the three biggest problems facing residents of Bernalillo County.		
Source: Bernalillo County Community Health Survey, January 2009		

Table III-2 Community Perception of Problems



COMMUNITY STRENGTHS

The survey respondents most frequently identified social/community services, education, and family as community strengths. Specific strengths that were identified include:

- Social/Community Services – community centers, job development centers, non-profits, indigent programs, charity support, public services, early intervention programs, shelters, detox centers, fitness/wellness classes, senior centers, food banks, community education/activities/art, homeless services, funding for programs, cooperative extension, clinics, counseling services, lunch programs, and outreach programs.
- Education – public schools, teachers, school meetings, preschools, equitable education, charter and alternative schools, University of New Mexico, parent/teacher groups, tutoring, grants, CNM, trying new approaches, school-based wellness, serving fresh fruits/veggies, and personnel.
- Family – support, unity, structure, connections, extended families, strength, concern, resiliency, and values.

Table III-3 Community Strengths

Community Strengths		
Number	Type Strength	Number times mentioned
1	Social/Community Services	73
2	Education	70
3	Family	65
4	Healthcare	53
5	Government	48
6	Community/Advocacy Groups & Leaders	41
7	The People	36
8	Collaboration / Partnering	24
9	Neighborhood Unity	23
10	Environment	19
11	Community Values	18
12	Service Providers	16
13	Diversity & Culture	15
14	Communication & Information	14
15	Public Involvement & Motivation	12
16	Economy & Economic Development	11
17	Faith-based	10
18	Transportation	6

IV. RISK AND RESILIENCY

A healthy community and healthy individuals involve many factors, including access to health care, safe environments, positive behaviors, and much more. In this section, we will address some of the risk and resiliencies of Bernalillo County residents. This section is based on responses to the following surveys:

- *Behavior Risk Factor Surveillance System*
- *New Mexico Youth Risk and Resilience Survey*
- *Developmental Assets, A Profile of Your Youth*

Each of these surveys is also referred to in other sections of this report.

BEHAVIOR RISK FACTOR SURVEILLANCE SYSTEM[13,14]

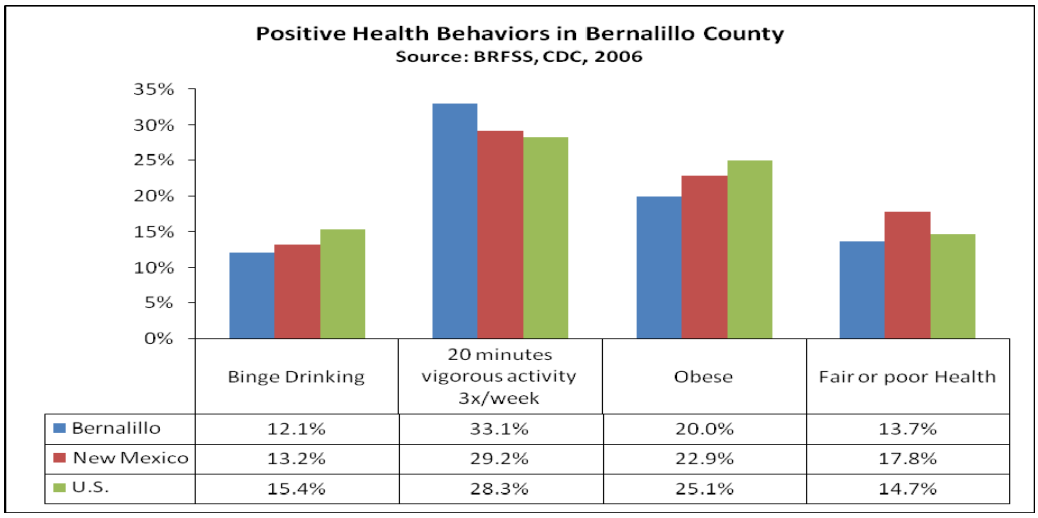
The Behavior Risk Factor Surveillance System (BRFSS) is a national telephone survey under the auspices of the Centers for Disease Control and Prevention (CDC). Its purpose is to identify the prevalence of behaviors that can lead to disease and injury. Approximately 350,000 people are interviewed each year; 6,581 people were surveyed in New Mexico, 1,296 in Bernalillo County. It is a random sample survey of adults 18 and older with land line telephones. Since unemployed and low-income people are less likely to have telephones, particularly land line telephones, this group is probably underrepresented in the survey. The survey does not include people living in group home situations, such as retirement homes. The CDC provides a group of core questions that are asked in every state in the nation. Each state conducts its own survey and can include additional questions. New Mexico included questions regarding a number of topics ranging from gambling to health care access for children. Optional questions and state-added questions cannot be compared to the rest of the nation. There was a 77.9% response rate to the questionnaires.

New Mexico compared favorably to the rest of the nation on several issues. In 2006, more New Mexicans reported that they visited a dentist or a dental clinic. Bernalillo County compared favorably to the state or the nation on binge drinking rates, participation in vigorous activities, obesity rates, and fair or poor health (Figure IV -1).

[13] Health Behaviors and Conditions of Adult New Mexicans 2006, New Mexico Department of Health, Epidemiology and Response Division. http://www.health.state.nm.us/

[14] Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data.* Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2006, 2007.

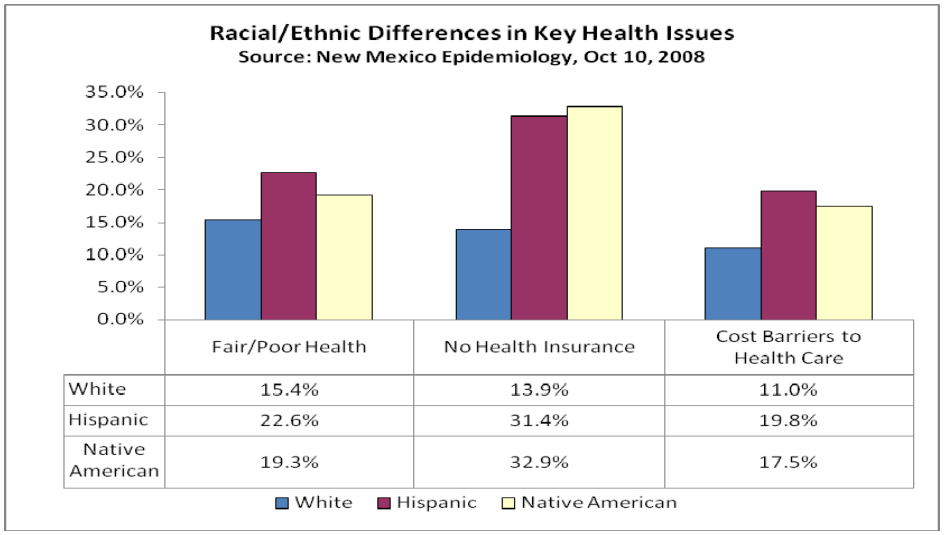
Figure IV-1 Positive Health Behaviors



	Binge Drinking	20 minutes vigorous activity 3x/week	Obese	Fair or poor Health
Bernalillo	12.1%	33.1%	20.0%	13.7%
New Mexico	13.2%	29.2%	22.9%	17.8%
U.S.	15.4%	28.3%	25.1%	14.7%

There were significant racial/ethnic differences in the prevalence of various health behaviors and conditions in New Mexico.

Figure IV-2 Racial/Ethnic Differences on Key Health Risks



	Fair/Poor Health	No Health Insurance	Cost Barriers to Health Care
White	15.4%	13.9%	11.0%
Hispanic	22.6%	31.4%	19.8%
Native American	19.3%	32.9%	17.5%

White Hispanic Native American

YOUTH

New Mexico Youth Risk and Resiliency Survey[15]

The New Mexico Youth Risk and Resiliency Survey (YRRS) is part of the national Youth Risk Behavior Surveillance System (YRBSS). It is a survey of public high school students, grades 9-12 and middle school students, grades 6-8. 76 of 89 New Mexico School Districts participated. Schools and classrooms within each district were systematically selected to participate. The response rate for the state was above the 60% requirement to be considered adequate to represent the population; however, the Bernalillo

[15] 2007 New Mexico Youth Risk and Resiliency Survey (YRRS) High School (Grades 9-12), Bernalillo County. New Mexico Department of Health.

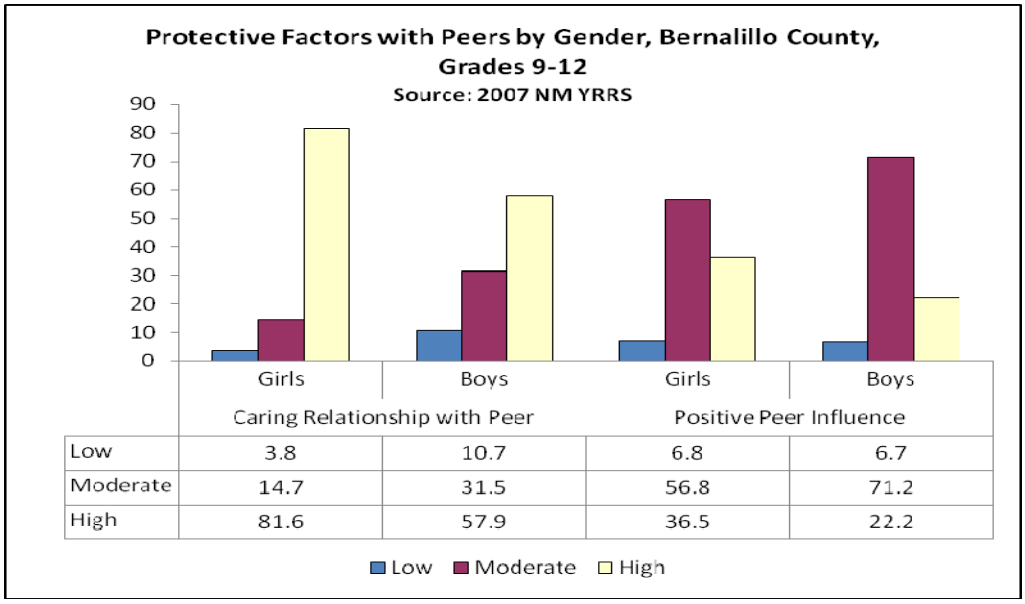
County rate was 49%, below the required rate. Therefore, Bernalillo County data should be interpreted with caution; they may not reflect the population. Furthermore, no survey can control the truthfulness of the responses given. Although trend data is available, the low response rate results in very large confidence intervals; in other words, it is difficult to know whether differences between years are statistically significant. The most recent year available is included here.

Protective Factors

In 2007, 80.2% of Bernalillo County high school respondents responded favorably to "At school, I try hard to do my best work" and 86.8% reported plans to continue their education after high school. These results were similar to New Mexico results.

Close relationships are a key factor in well-being. For high school students, it is also important that the influence of peers be positive. Only 3.8% of girls reported a low-level caring relationship with a peer. A high percentage of boys, 10.7% reported low-level caring relationship with a peer. (Figure IV-3) Girls and boys were equally likely to report low levels of positive peer influence.

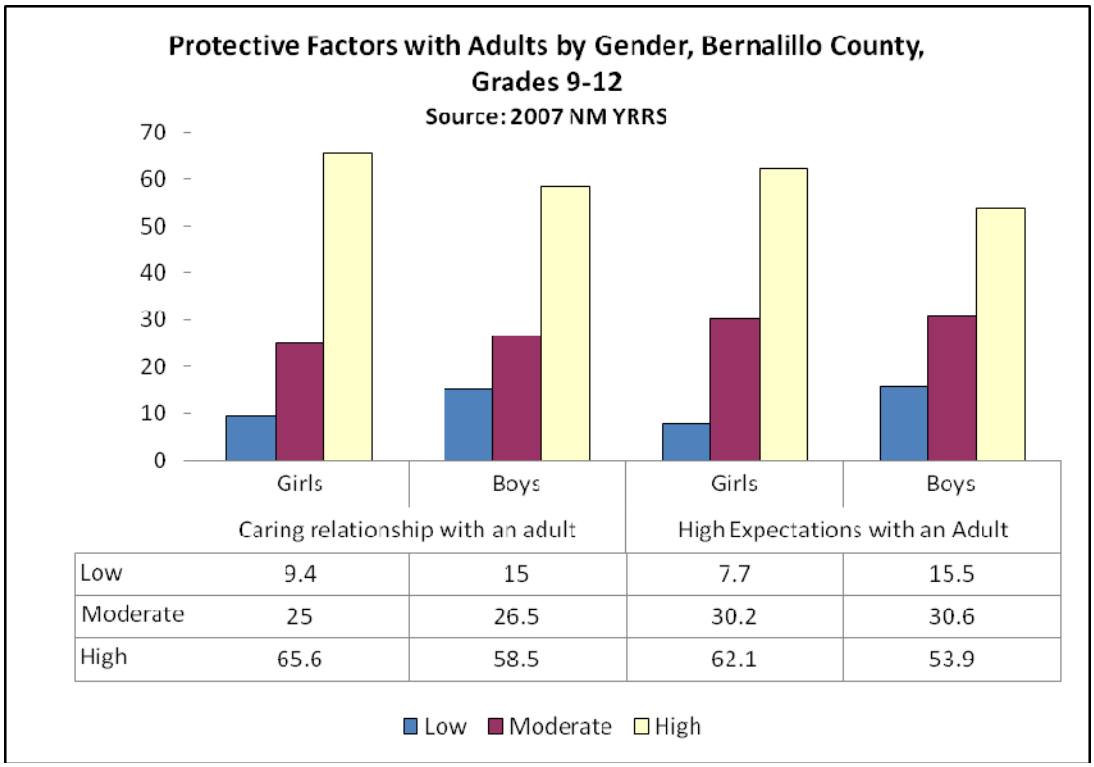
Figure IV-3 Youth Protective Factors: Peers



	Caring Relationship with Peer		Positive Peer Influence	
	Girls	Boys	Girls	Boys
Low	3.8	10.7	6.8	6.7
Moderate	14.7	31.5	56.8	71.2
High	81.6	57.9	36.5	22.2

Most respondents reported a high to moderate level caring relationship with an adult and that they had a relationship with an adult who had high expectations for them. However, 9.4% of girls and 15% of boys reported low level caring relationships with an adult. 7.7% of girls and 15.5% of boys reported that their relationship with an adult did not involve high expectations. (Figure IV-4)

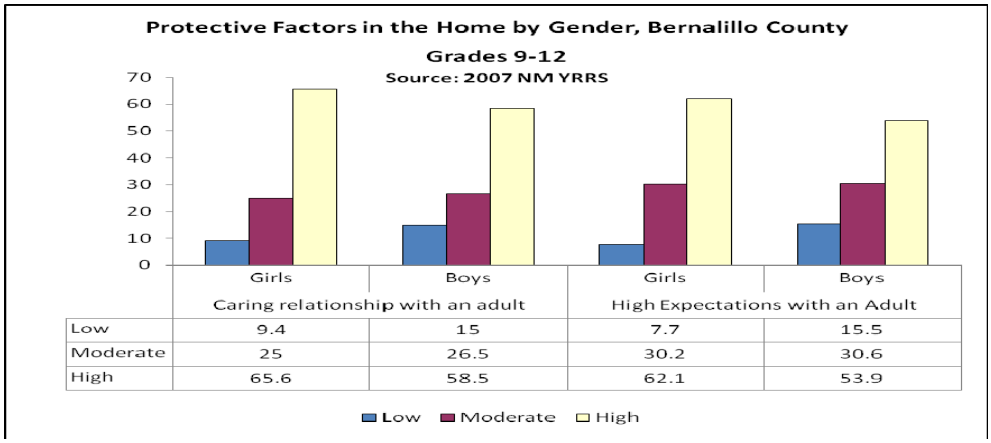
Figure IV-4 Youth Protective Factors: Adults



	Caring relationship with an adult		High Expectations with an Adult	
	Girls	Boys	Girls	Boys
Low	9.4	15	7.7	15.5
Moderate	25	26.5	30.2	30.6
High	65.6	58.5	62.1	53.9

Although high school students are often focused on school or other activities, home situations are still critical to their well being. Most students reported at least a moderate level caring relationship with an adult, and high expectations at home. However, this was less true for boys than girls, and 9.4% of girls and 15% of boys reported low-level caring relationships with parents or adults at home (Figure IV-5).

Figure IV-5 Youth Protective Factors: Family



	Girls	Boys	Girls	Boys
	Caring relationship with an adult		High Expectations with an Adult	
Low	9.4	15	7.7	15.5
Moderate	25	26.5	30.2	30.6
High	65.6	58.5	62.1	53.9

Developmental Assets

The Development Assets survey[16] is based on 40 assets that help young people avoid risk-taking behavior. Use of this tool has shown that youth with higher levels of assets are involved in fewer risk-taking behaviors. The survey defines 40 *assets*, 20 *external* and 20 *internal*. It also defines *risk* and *thriving* behaviors.

External Assets

These are what we hope are provided by the family, school, and community:

- support (family love, communication)
- empowerment (safety, the community values youth)
- boundaries and expectations (from family and school)
- constructive use of time (youth programs, creative activities)

Internal Assets

These are what we hope are within every young person:

- commitment to learning (do homework, read for pleasure)
- positive values (caring, honesty)
- planning and decision making (not get into fights, being a friend)
- positive identity (self esteem, positive view)

The more of the assets each individual possesses, the less likely they are to engage in 24 *risk behaviors*, including:

[16] Developmental Assets: A Profile of Your Youth, Executive Summary. Albuquerque Public Schools, Prepared by the Search Institute, July, 2004.

- Alcohol and drug use
- Vandalism
- Using a weapon or carrying a weapon for protection
- Suicide attempts
- Smoking
- Hitting someone
- Threatening people
- Sex
- Hurting someone
- Eating disorders

A high number of assets is associated with *thriving behaviors*, including:

- School success
- Informal helping
- Maintaining good health
- Leadership
- Overcoming adversity.

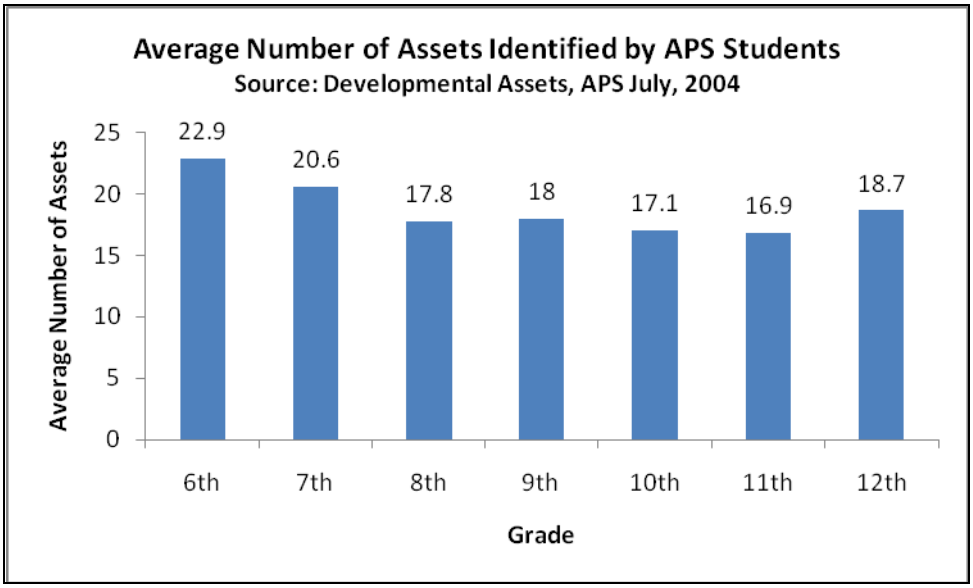
The 2004 APS survey included 3,153 students between 6th and 12th grades. Results are available by school and at the summary level.

Survey highlights of Albuquerque Public Schools' students include:

- 73% of students felt that their families provided high levels of love and support
- 58% felt their best friend modeled responsible behavior, although only 27% felt that adults modeled responsible behavior
- 58% spent more than 3 hours per week involved in organized activities; 57% spent one or more hours involved in religious activities
- 51-65% responded positively on all measures of commitment to learning (except leisure reading, 25%)
- 71% felt optimistic about their future

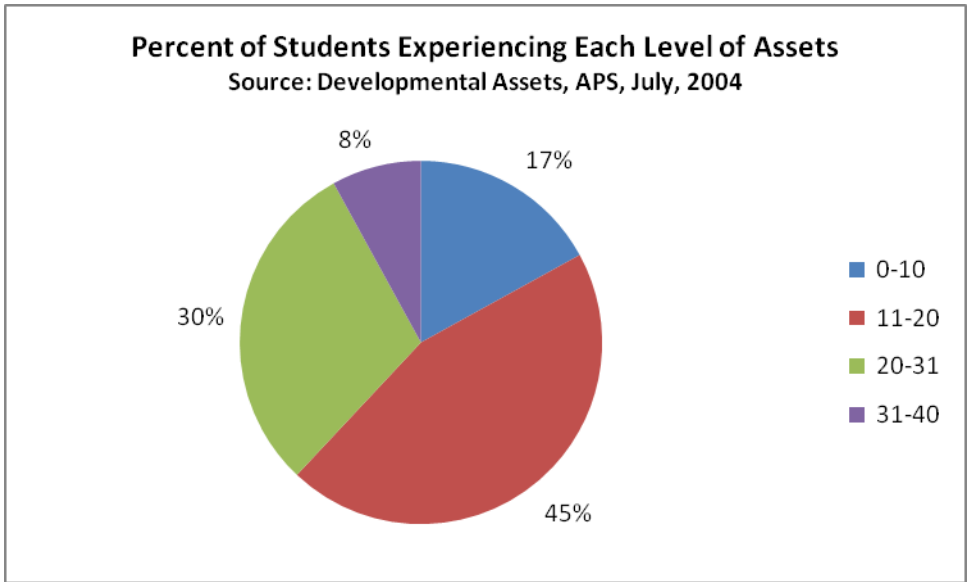
For all grade levels, the average number of assets was 18.5. There were noteworthy differences between grade levels as shown in Figure IV-6.

Figure IV-6 Number of Assets Identified by APS Students



Only 8% of APS students fell in the top category of 31-40 assets. 17% fell in the category of 0-10 assets. (Figure IV-7)

Figure IV-7 Students Experience High and Low Levels of Assets



Research indicates that students with:

- 31-40 assets engage in an average of one risk behavior and 6.1 thriving behaviors
- 0-10 assets engage in an average of 9.1 risk behaviors and 3.0 thriving behaviors

V. ENVIRONMENTAL HEALTH

AIR QUALITY

Air quality is related to the prevalence of respiratory diseases such as asthma, irritations of the eyes, throat and nose, cancer, cardiovascular disease, and birth defects. Under the 1990 Clean Air Act Air Quality, the US EPA sets limits on the concentrations of criteria air pollutants. The National Air Quality Standards (NAAQS) include health-based primary standards and welfare-based secondary standards for allowable concentrations of particulates smaller than 10 microns (PM10), particulates smaller than 2.5 microns (PM2.5), levels of carbon monoxide (CO), ozone (O3), nitrogen dioxide (NO2), sulfur dioxide (SO2), and lead. In addition, levels of metals (e.g. arsenic, beryllium, cadmium, chromium, manganese and nickel) and toxics (e.g. chloromethane, dichloromethane, Freon, benzene, toluene, and others) are monitored. In Bernalillo County, the Albuquerque Air Quality Division is responsible for implementation of the 1990 Clean Air Act. It monitors air quality, regulates compliance and implements enforcement. The Air Quality Control Board issues permits for industries that may affect air quality. The Board has members from the City of Albuquerque and the County. Table 1 lists the numbers of permitted emitters and air quality monitoring stations in various parts of Bernalillo County.

Point sources of emissions in the North Valley are primarily vehicle traffic, wood burning and 178 permitted industries such as gas stations, manufacturing plants, crushers, emergency generators and concrete manufacturers, as well as schools and health care facilities. In the South Valley, the 66 permitted facilities include gas dispensers (17), Schools (10) gravel/concrete operations (6), soil vapor extraction systems (6) and various other industrial operations. Diesel emissions in areas along I-25 are a pollution source of local concern.

Table V- 1 Summary of Air Quality Monitoring and Emitters in Bernalillo County

Area (year of data)	No. of Permitted emitters (year)	No. of Monitoring Stations	Pollutants that have exceeded Standards)
North Valley (2006)	178	4	NA
South Valley (2003)	66	1	O3, PM10
East Mountains (2005)	14	1 (2002-2004)	NA

Ozone (O3) levels have been low in Bernalillo County, (the American Lung Association 2008 State-of-the Air Report gave Bernalillo County a grade of "A" for the 3 year period 2004-2006). A new ozone air quality standard will take effect in about one year, however, projections by the USEPA indicate that Bernalillo County will continue to comply with regulations for ozone. (USEPA, 2008). http://www.epa.gov/groundlevelozone/pdfs/2008_03_counties_projected_violate_2020.pdf .

The American Lung Association 2008 State-of- the Air Report) gave Bernalillo County a grade of "C" for particulates for the 3 year period 2004-2006. Important sources for particulate pollution include wind-blown particles during the Spring windy season, smoke from fires and industrial pollution. The pollen from several species of trees (Mulberry, Juniper, Elm, Cottonwood and Ash) in many areas of Bernalillo County causes allergic reactions in some residents, especially during the months of March through September. About 95% of PM10 emissions in Bernalillo County are attributed to wind blown dust (Dubois et al. 2007). Dust from construction activities is the second largest source. Table 2 lists the major sources of PM10 in 2004. Figure 1 shows the major point-source for PM10 emissions in 2004 and Figure 2 describes ambient PM10 concentrations for the Albuquerque Metro area. Children are at increased risk

to health effects from inhalation of particles in the PM10 category. Figure 3 shows the annual asthma hospitalizations for the period 1996 – 2000.

High PM10 levels correlate with point source emissions in areas of the North and South Valleys (see Figures 1 and 2), however, the incidence of asthma appears to be substantially higher in the South Valley than in the North Valley. This disparity may be related to differences in dust from soil erosion between the two areas but also to differences in social and economic factors. In 2008, the Environmental Justice Task Force completed a review of air quality in Bernalillo County and concluded that Environmental Justice (EJ) issues need to be considered in granting permits for new facilities that would emit air pollution. (Environmental Justice Task Force, 2008). These include population density, existence of sensitive populations (school age children, elderly compromised immune systems or other poor health related to socioeconomic status) and cumulative health impacts related to other pollution emitting facilities. The Task Force suggested that existing regulations may not be sufficiently protective of the health of residents in the South Valley and that industries had no incentive to reduce pollution below the levels required by Federal and State standards. They recommended 1) increased community participation and inclusion of EJ considerations in the permitting process, 2) that air quality monitoring programs be expanded to target areas most affected by current and proposed pollution emitting facilities, and 3) that research be conducted to evaluate the cumulative health effects of multiple sources and types of air emissions.

Air quality in the East Mountains is generally of higher quality than other parts of Bernalillo County. The largest single source of pollution is the Rio Grande Portland cement plant (owned by the Groupo Cementos de Chihuahua). An air quality monitoring station was established in nearby Roosevelt Middle School from 2002-2004 to measure levels of PM10 and PM2.5, CO, metals and toxics and found relatively low concentrations of priority and non-priority pollutants. The major source of air pollution at the site was automotive traffic. Daily averages of PM10 and PM2.5 were less than 20% of the NAAQS. The US EPA Facility Release Report for the cement plant lists combined releases of chromium, lead, mercury, nickel and manganese of 2309 lbs in 2002. (Bernalillo County Office of Environmental Health, 2003.)

Figure V-1 PM10 Point Source Emissions 2004 in Tons per Year. Source: DuBois et al 2007

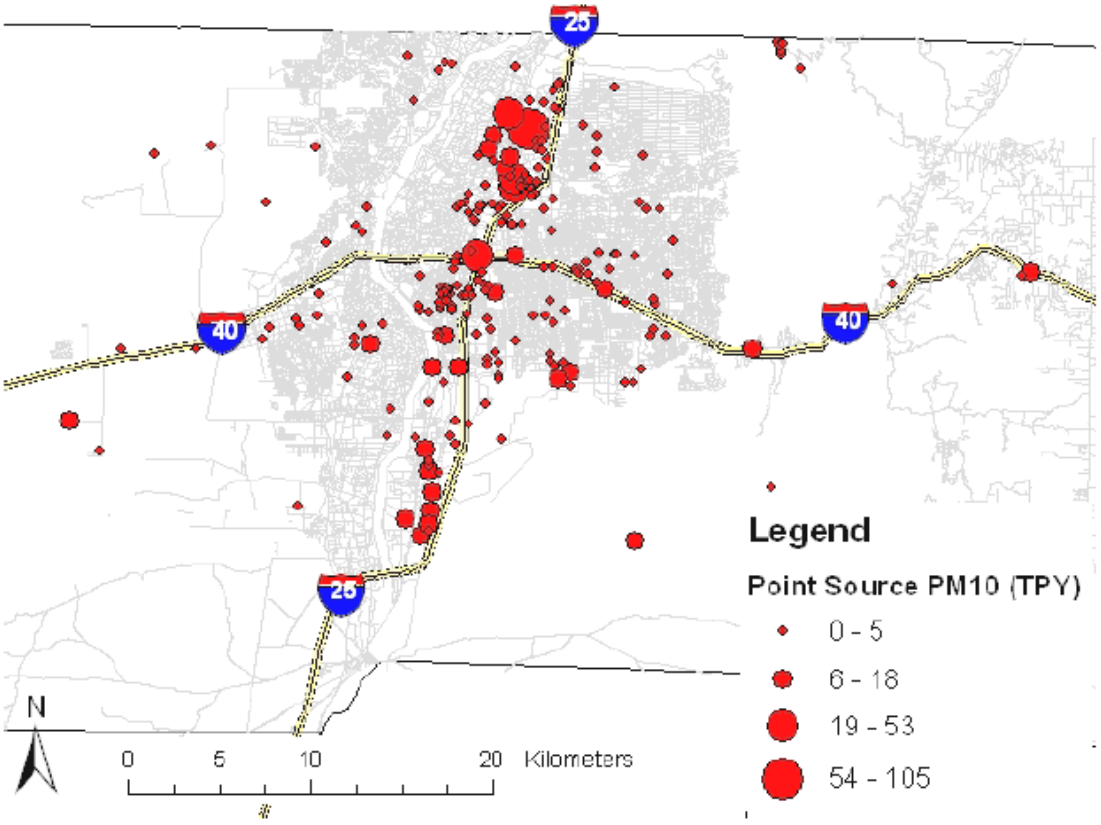
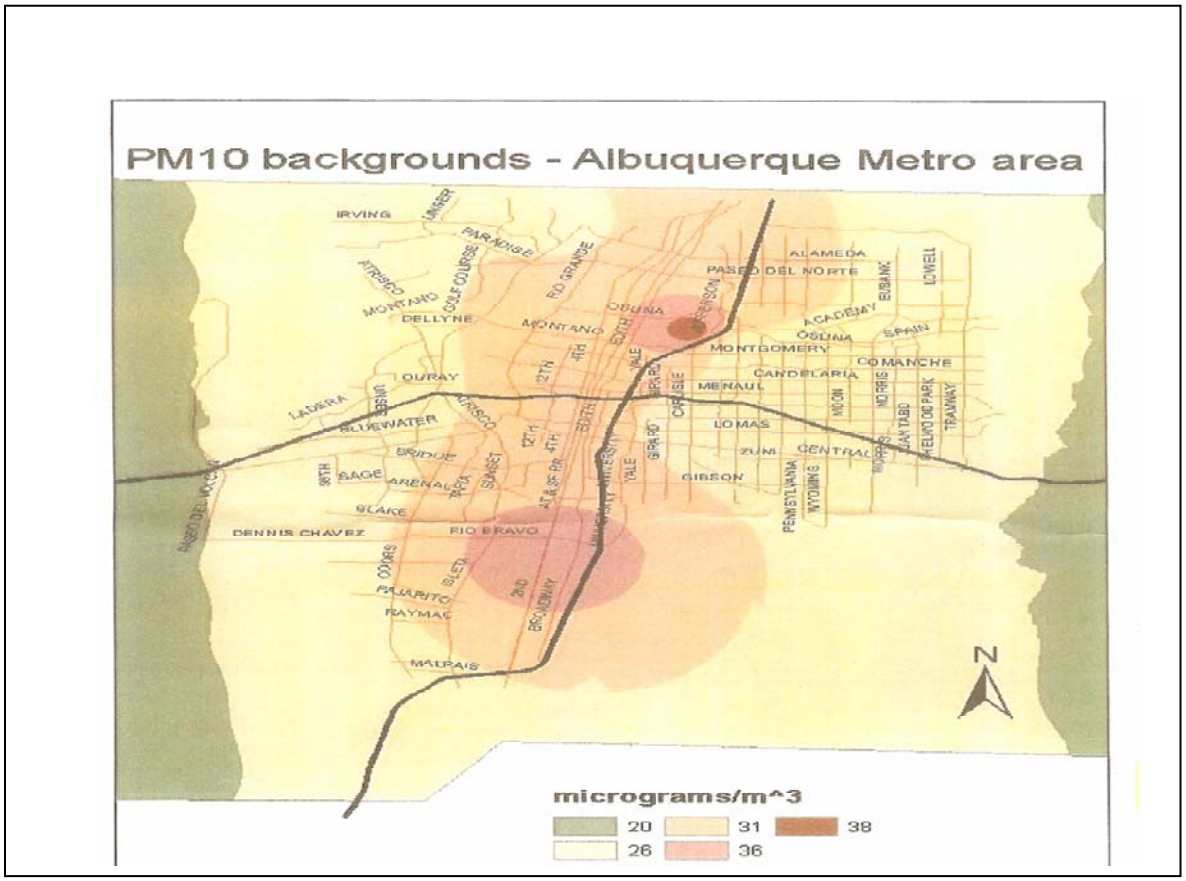


Table V- 2 Summary of PM10 emission sources 2004. Source: DuBois et al. 2007

Source	PM_{10} emissions (in tons/year)
Mobile sources, on-road	367
Mobile sources, non-road	359
Point sources	593
Wildfires	4
Prescribed burning	9
Residential wood burning	3,907
Structural/vehicle fires	2
Open burn/detonations	73
Charbroiling	478
Agricultural tilling and harvesting	5
Agricultural unpaved roads	24
Construction	6,851
Paved road dust	2,274
Unpaved road dust	1,292
Wind erosion	280,402
Total	296,640

Figure V- 1 Albuquerque Metro Area PM10 background levels. : NM Health Policy Commission 2009



Radon

Radon is a radioactive gas that is produced by step-wise radioactive decay of uranium first to radium and then to radon. Radon in indoor air is estimated to cause about 21,000 lung cancer deaths each year in the United States. (USEPA, 2008a) The carcinogenic agent is not radon itself but its radioactive daughters (polonium), which adsorb onto particulates in the air and are inhaled. Once inhaled, the particulates become lodged in lung tissue and emit high-energy alpha particles, which can cause damage to cellular DNA. Lung cancer is the only health effect, which has been definitively linked with radon exposure and typically occurs 5-25 years after exposure. Smokers are at a much higher risk of developing Radon-induced lung cancer (see Table V - 3.). The concentration of radon in air in an area is related to the local nature of bedrock and soils. Geologic materials with high concentrations of uranium such as granitic rocks and derived soils may have high associated radon production rates. Outdoor exposure to radon is not dangerous except in areas of very high radiation levels. The risk is primarily due to radon buildup within homes built above geologic materials high in uranium or radium. In Bernalillo County, levels of radon are relatively high compared to most other parts of the state and the US EPA estimates that the average potential exposure to indoor radon is greater than 4 pCi/L, the highest category level in their nationwide study (USEPA, 2008b). The USEPA standard for radon indoor air is 4 pCi/L, however, there is increased risk for lung cancer even at lower levels. Figure 4 shows the results of a survey carried out in 1997 to evaluate radon levels in the Albuquerque Metro area. Levels are highest in the areas of the Northeast Heights and may exceed 20 pCi/L. The lung cancer risk in the general population is about 20 times greater in areas of highest radon concentration levels compared to the lowest levels indicated on the map. Indoor radon levels in existing buildings can be reduced and can be avoided in new structures by a variety of methods suggested by the USEPA, NMED and County Environmental Health Department. (see for example: http://www.cabq.gov/airquality/radon.html).

Table V- 3 2003 USEPA Health Risk Estimates for Radon Exposure

Radon Level [a]	Lifetime Risk of Lung Cancer Death (per person) from Radon Exposure in Homes [b]		
pCi/L	Never Smokers	Current Smokers [c]	General Population
20	36 out of 1,000	26 out of 100	11 out of 100
10	18 out of 1,000	15 out of 100	56 out of 1,000
8	15 out of 1,000	12 out of 100	45 out of 1,000
4	73 out of 10,000	62 out of 1,000	23 out of 1,000
2	37 out of 10,000	32 out of 1,000	12 out of 1,000
1.25	23 out of 10,000	20 out of 1,000	73 out of 10,000
0.4	73 out of 100,000	64 out of 10,000	23 out of 10,000

a Assumes constant lifetime exposure in homes at these levels. .
b Estimates are subject to uncertainties as discussed in Chapter VIII of the risk assessment.
c Note: BEIR VI did not specify excess relative risks for current smokers.

Source USEPA, 2003, Assessment of Risks from Radon in Homes; http://www.epa.gov/radon/risk_assessment.html; accessed March 29, 2009.

Figure V- 2 Map of Radon Levels

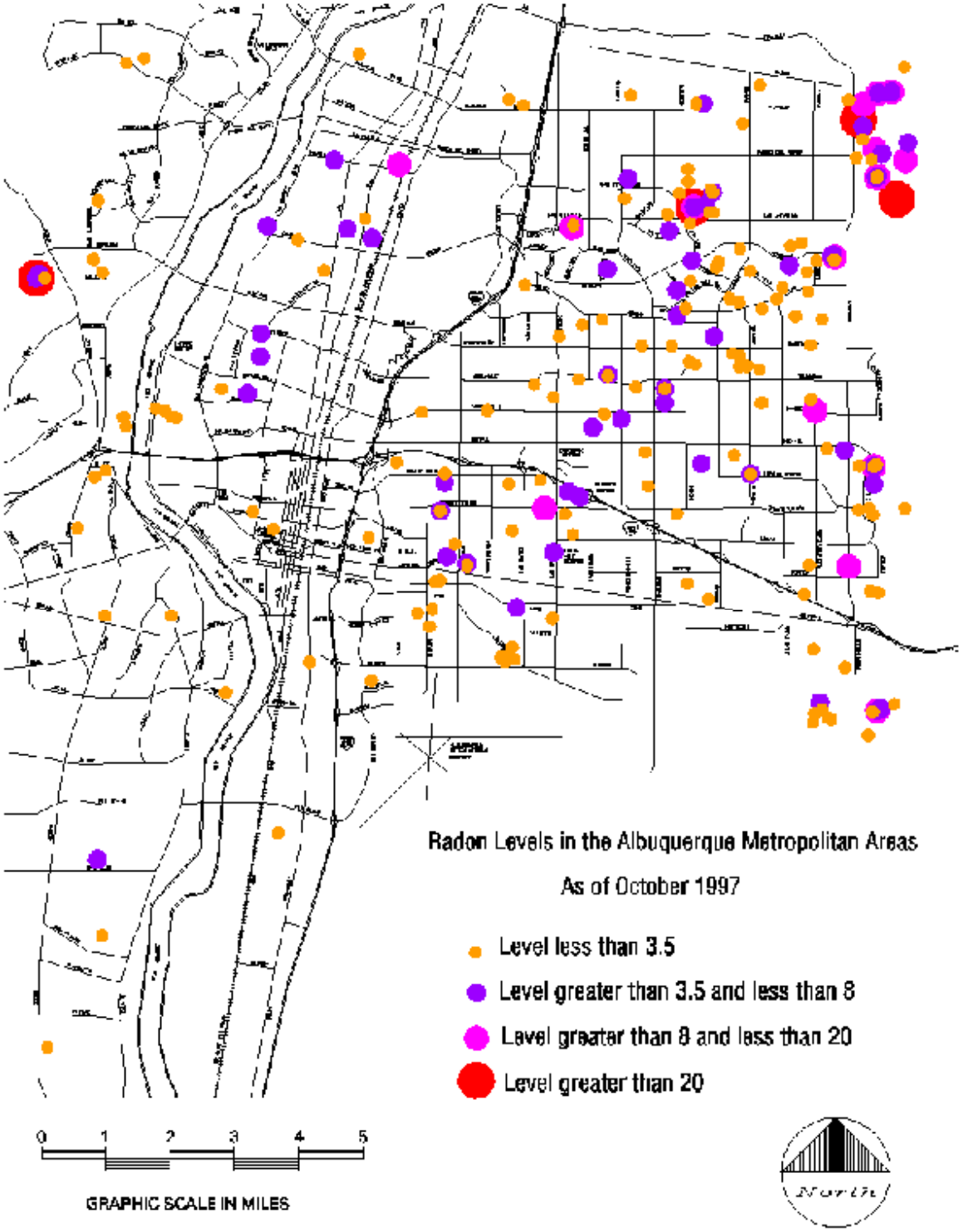


Figure V - 1. Indoor Radon levels (pCi/L) in Albuquerque Metro Area in 1997 pilot study. Source: http://www.cabq.gov/airquality/radon.html).

WATER

Water Quantity

Water quality and water quantity are strongly connected. In areas where groundwater pollution impacts drinking water sources, the quantity of potable water is diminished. Where water quantity is low, withdrawal of water for domestic or industrial use may cause mixing of potable water sources with lower quality waters. Water resource management varies considerably in different parts of Bernalillo County. East of the Sandia Mountains, the combination of near-total reliance on groundwater, a low population density, fractured aquifers and a semi rural environment create a set of environmental concerns that are very different from the areas west of the Sandias. In the Rio Grande Valley, increasing use of surface water is seen as a solution to overuse of the groundwater aquifer dominated by a large public water system.

Central Portion of Bernalillo County

The Albuquerque Bernalillo County Water Utility Authority (ABCWUA) supplies water to the central portion of Bernalillo County including the city of Albuquerque. In 2007, 90 wells pumped 32.5 billion gallons of water from the Santa Fe Group Aquifer, the sole groundwater source for Albuquerque. Recharge of the aquifer through precipitation and infiltration along the river replaces only about half of the withdrawal. Over the last decade, groundwater levels have been declining in the Rio Grande Valley; little decline is observed near the river, whereas declines of 80 – 100 were documented by the USGS in a recent study (Bexfield, 2002). Withdrawal of groundwater has lead to alterations of the historical north-to-southwest regional flow to one dominated by flow toward local pumping centers.

Estimates of the volume of water in the Rio Grande Valley were reduced dramatically from the 1980's when it was thought that a "Lake Superior-size aquifer existed. Current estimates range from ¼ to ½ of that amount based on more accurate geological data. The reduction in the amount of water for current use and future growth led to 1) adoption of water saving measures (new building codes and programs promoting water conservation) and 2) completion of the San Juan Chama project to channel water from the Chama River to the Albuquerque area via the Rio Grande. Whereas, residents of Albuquerque previously received most of their water from groundwater sources, nearly 70% of water will come from the Rio Grande in the future. A new water treatment plant located in Renaissance Center will treat about 90 million gallons/day of river water when at full capacity. From the treatment plant, water will be distributed to reservoirs around the city and mixed with groundwater before supplied to customers.

Recently, a large body of brackish water has been found under the West Mesa. This 'brine aquifer' is considered a potential major water resource for future development of Bernalillo County. Much of the water lies below 4000 feet, far below the depth (<550 ft) typical for fresh water resources and much of it is too salty (> 10,000 ppm) to be economically treated by current technology. Nevertheless, a number of development firms have filed notices of intent to appropriate the water and the NM State Engineer is attempting to gain authority to regulate use of the water. The companies have filed notices to appropriate over 1 million-acre feet of deep water in the State (about 10x the annual water use of Albuquerque.)

East Mountains

East of the Sandia Mountains, the combination of near total reliance on groundwater and fractured aquifers can lead to significant variation of water levels over short periods of time. A study of water resources in the East Mountains between 1997-2004 involved monitoring wells at 4 locations. Average annual water level declines ranged from zero to 5.4 feet/yr. The declines are attributed to increased water usage and lower winter precipitation leading to decreased aquifer recharge. (Bernalillo County Office of Environmental Health, 2006).

Ground Water Quality

The majority of County residents obtain their drinking water from the public water system. In unincorporated areas of Bernalillo County, primary drinking water sources are small community water system, shared wells and private wells. Major areas of concern are general water quality (major naturally occurring solutes); arsenic, contamination from industrial operations and nitrates from septic systems. The recent update to the Wastewater Ordinance mandates installation of effluent filters on all onsite wastewater systems by 2015. The City of Albuquerque has about 1700 miles of sanitary sewer lines that convey wastewater to the City's only treatment facility, the Southside Water Reclamation Plant (SWRP) which treated about 76 million gallons/day of wastewater in 2000 and discharged the finished effluent into the Rio Grande. Table 3 describes water quality monitoring and pollution sources in various parts of Bernalillo County.

Albuquerque Metropolitan Area

The primary source of drinking water in metropolitan Albuquerque traditionally has been groundwater. Studies by the US Geological Survey in the 1990's indicated that in general, the water quality of shallow groundwater is excellent. Concentrations of nutrients, volatile organic compounds, and pesticides were all below the USEPA standards. In 2004, 90 wells supplied approximately 32.6 billion gallons of water for city residents. For the 29 year long period ending in 2004, the city's Water Utility Division met all federal water quality standards. Constituents tested include: lead, copper, mercury, nitrate/nitrite, coliform bacteria and arsenic. Water Quality Reports can be found at http://www.cabq.gov/waterquality/results/. As discussed above, starting in 2008, a major fraction of the water is being supplied from surface water from the Rio Grand associated with the San Juan-Chama project. Up to 70% of City water will come from this source. Lack of familiarity with water treatment processes and questions about wastewater discharges into the Rio Grande upstream of Albuquerque have led to some public concerns with the project. Specific concerns have included the presence of pharmaceuticals in the river, storm runoff that picks up bacteria before entering the river and radioactive contaminants from Los Alamos. Routine testing of the Rio Grande for these potential contaminants by the utility and regulation of wastewater discharges to the river by the USEPA shows that concentrations of these substances are very low. A bacteria source identification and tracking study was initiated in 2003 to identify sources of fecal bacteria entering arroyos, diversion channels and ultimately the Rio Grande. In response to these concerns, the ABCWUA has released public education materials and distributed free sample bottles of treated water to area residents. Public concern, however was increased when trace amounts of a black substance was found in some of the distributed bottles. Later investigation suggested that the source of the substance was the bottling plant and not the river water.

North Valley

Sources of drinking water for North Valley residents include municipal water in the City of Albuquerque and the Village of Los Ranchos (about 67% of land) , and private wells in the unincorporated areas (about 33% of the land). Wastewater management in the North Valley is in transition. City residents have been connected to city sewer lines for several years, however, until recently most residents of Los Ranchos and the unincorporated areas had private septic systems. The total number of septic systems is hard to estimate because of the existence of a large number of unpermitted systems. For the past several years, an increasing number of residents have been connecting to new sewer lines. Since 2006, all new structures that produce waters water have been required to connect to the new sewer lines. The large number of unmaintained systems as well as historical animal feed lots has led to contamination of the shallow ground water with nitrate, a contaminant linked to risk of methemoglobinemia or "blue baby syndrome". Abandoned waste sites can pose a threat to groundwater and are cleaned up or monitored by the USEPA under CERCLA, also known as Superfund. There are two Superfund Sites in the North Valley (Rinchem Inc and the USGS well); neither one is listed in the EPA National Priorities List (NPL).

South Valley

Residents of South Valley use municipal, small community water systems, private wells and hauled water (Pajarito Mesa) for drinking water. South Valley aquifers are composed of sand gravel and silt layers several thousand of feet thick. Depth to the water tables ranges from 3 to 20 feet below the ground surface. The water in the shallow section of the aquifer (< 50 ft depth) is unfit for human consumption due to contamination from surface water pollution. Water at lower depths intervals (samples at 175-275, 800- 950, and 1300 – 1450 ft depths) is of higher quality and fit for drinking and household purposes.

Contaminants of concern include synthetic chemicals, fecal coliform bacteria, nitrates and arsenic. Arsenic is a natural contaminant related to the volcanic source of many solutes in the area. Sources of anthropogenic contamination include septic systems, pits and lagoons used as holding areas for liquid wastes, animal feeding operations, leaking underground storage tanks (LUST) for gasoline and hazardous chemicals, improper hazardous waste disposals and runoff or infiltration from solid waste disposal sites. In 2003 there were 33 active LUST sites in the South Valley; about half of those were in the cleanup stage. (Bernalillo County Office of Environmental Health 2003). There is one Superfund site on the National Priorities List in the South Valley. The San Jose site (also known as the South Valley PCB Tank site) contains soils and groundwater contaminated by halocarbons, (1,1-dichloroethene, trichloroethylene and 1,1- dichloromethane.

East Mountains

East Mountain residents use private and shared wells, small community water systems, rain water and hauled waters for their drinking water. In a 2002 study, about 50% of the 457 residents surveyed used private and shared wells and 45% were on community water systems. (Bernalillo County Office of Environmental Health, 2003). Portions of the East Mountain area are characterized by a fractured geologic setting leading to variable water quality. Fast groundwater travel pathways can lead to a high contamination threat especially in areas where septic systems have not been maintained. The Bernalillo County Office of Environmental Health has estimated that there are hundreds of unpermitted septic systems. Periodic sampling at 4 monitoring wells from 1997 to 2003, a survey of 24 wells in 1995, 1997, and 1998 and a survey of 46 wells in 2002 showed impact of septic systems on water quality. Nitrate levels in a few wells exceeded the EPA standard (10 mg/L as nitrogen, N) and the majority of wells in one area (Pinon Ridge) showed levels up to 4.2 mg/L. The water in some monitoring well exceeded secondary standards for total dissolved solids (TDS) and/or iron. In some areas of the East Mountains, high levels of sulfate or sulfide in shallow and deep strata makes the groundwater unsuitable for domestic use and residents must haul water. There have been several Leaking Underground Storage Tanks in the East Mountains; there are no Superfund sites.

Table V- 4 Summary of Water Quality Monitoring and Pollution Sources in Various Parts of Bernalillo County

Area (year of data)	No. of Monitoring Wells (year)	No. of Permitted Septic Systems	No. of Permitted Ground Water Discharge Facilities	Pollutants that have exceeded Standards
North Valley (2006)	NA	NA	13	arsenic
South Valley (2003)	3	2524	36	arsenic
East Mountains (2005)	3 (2004)	4775	16	Nitrate, iron , total dissolved solids
Albuquerque Metro	90 wells	Sewer system	NA	arsenic

Arsenic in Drinking Water

Drinking water is a major source of exposure to arsenic. Naturally occurring arsenic is associated with aquifers that contain rocks from volcanic sources. It is strongly enriched in silicic volcanics, derived volcanoclastic sediments, hydrothermal systems, and rocks affected by potassium metasomatism, a low-temperature alteration process common in closed hydrographic basins in arid climates. On October 31, 2001, the U.S. Environmental Protection Agency (USEPA) finalized a proposed arsenic standard for drinking water that lowered the maximum concentration level (MCL) from 50 parts per billion (ppb) to 10 ppb. The new standard was set to prevent approximately 28 deaths per year from lung cancer and bladder cancer. It was based in part on reviews of the scientific literature carried out by the National Research Council (NRC) of the National Academy of Sciences (NAS) at the request of the USEPA. The NAS concluded that the risks were high enough to justify reduction of the existing arsenic drinking water MCL from 50 ppb to a level of 10 ppb or lower. The NAS report based its findings primarily on studies carried out for populations in Taiwan, Bangladesh, Latin America and Europe that consume water with arsenic concentrations higher than 50 ppb. The NAS cited few studies of populations in the United States (US) exposed to the lower arsenic concentrations that are common in many drinking water systems that would be treated under the new standard.

In the last few years, several new studies have been carried out to examine the relationships between low-level chronic arsenic exposures and disease. This research has addressed limitations in earlier research; compared to previous work it has been characterized by better understanding of the mechanisms by which arsenic induces cancer, improved estimates of arsenic exposure by use of biomarkers and more sophisticated design of epidemiological studies. The results do not suggest that chronic exposures at low levels (50 – 100 μg/L) to arsenic lead to increased risk for bladder or lung cancer for the majority of populations studied. Some of the studies suggest that an interaction between smoking and exposure to arsenic may lead to increased risk for bladder and lung cancers; therefore, smokers may experience a higher risk at levels below 100 μg/L. (Siegel, 2004).

Bernalillo County contains one of the largest metropolitan regions in the US that has natural levels of arsenic above the new MCL in its groundwater resources. Figure 5 shows the concentrations of arsenic in community water systems in Bernalillo County. The NMED granted an exemption to the Albuquerque Bernalillo County Water Utility to the new standard that set the MCL at 50 ppb through December 2008. This allowed completion of the Arsenic Compliance Strategy comprised of the following elements:

- Blending of groundwater in the system to keep quarterly arsenic compliance concentrations at all monitoring points below 50 ppb (an excess of 35 ppb above the EPA standard of 10 ppb.)

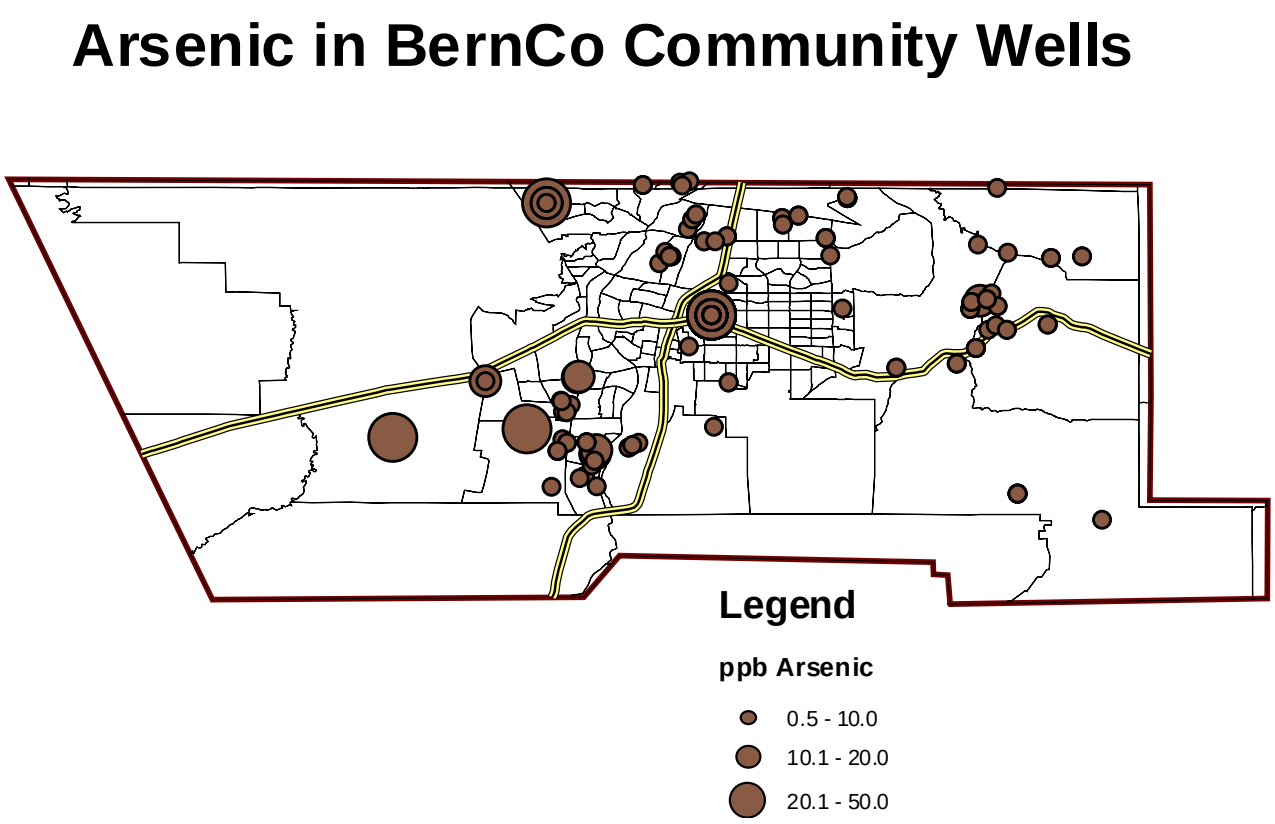
- Construction of an Arsenic Removal Demonstration Plant on the West Side in July 2007. It is the largest facility of its kind in the world.

- Completion of the Drinking Water Treatment Plant for surface water from the Rio Chama Diversion Project described above.

The system-wide blending resulted in a drop in arsenic levels throughout the system between 2003 and 2007 (see Figure 6).. Further decreases are expected as the Arsenic Removal Demonstration Plant and the Drinking Water Treatment Plant become fully operational.

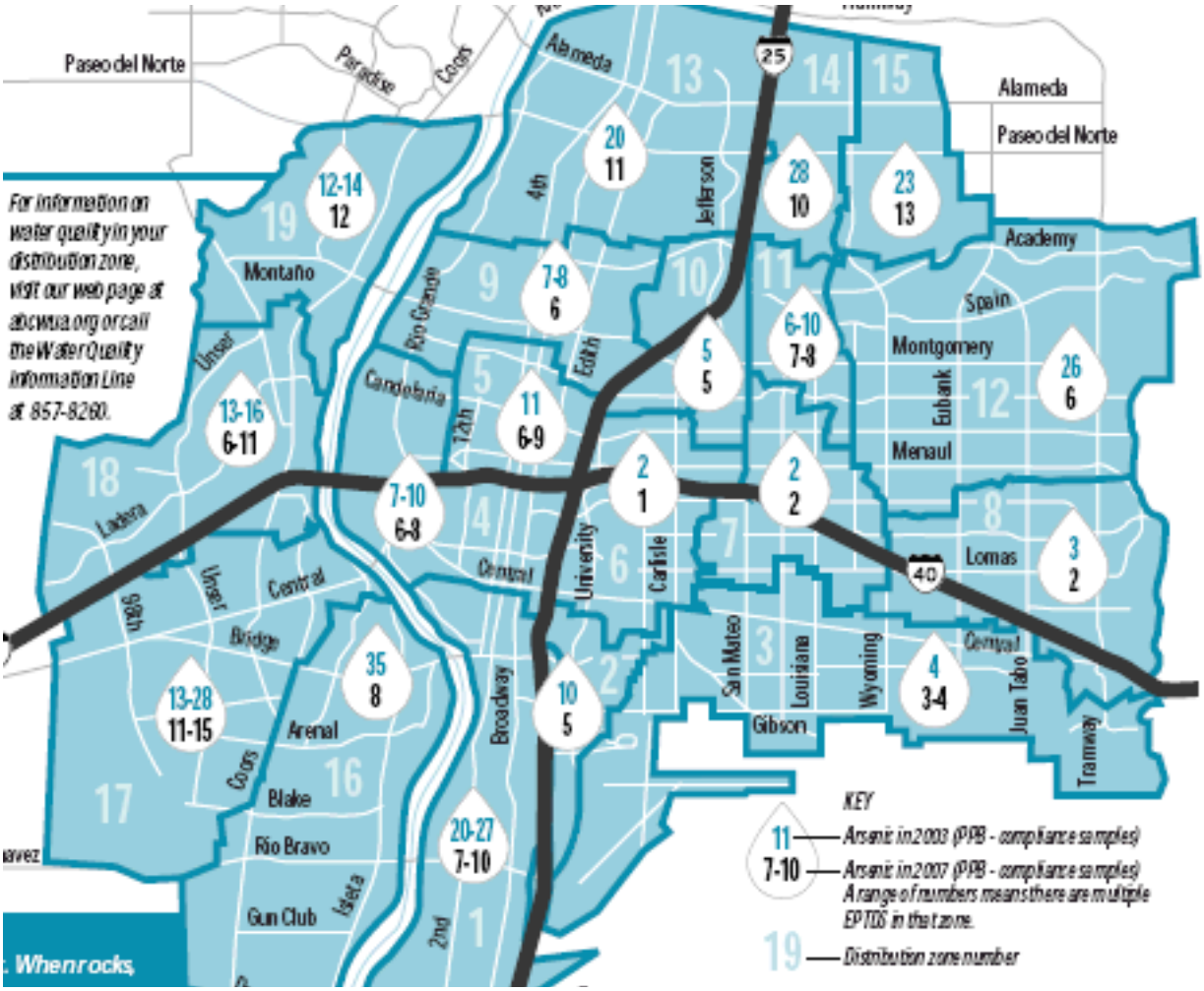
For many rural communities not served by ABCWUA and which currently have no or very limited water treatment facilities, the cost of additional treatment will be very burdensome. Figure 7 summarizes the arsenic concentrations in community and other water systems described in the SWDS that are not served by the ABCWUA in Bernalillo County. Whether a given community or facility will be economically able to comply with a new MCL depends on a number of issues such as size, socioeconomic status, existing water treatment system, and the availability of funds from outside sources. The drinking water standard implementation plan for New Mexico allows communities to apply for exemptions and variances. Exemptions allow the community additional time to find the appropriate treatment technology for their specific needs; variances allow the use of an alternative MCL if it can be demonstrated that no adverse effect on community public health would result. The NMED should be encouraged to grant exemptions and variances liberally, given the small public health benefit attributable to the 10 ppb standard, the impact of the high treatment cost on rural communities and the potential cost savings that may result from use of innovative technologies being developed by the private sector and research agencies such as Sandia National Laboratories.

Figure V-2 Arsenic in Bernalillo County Community Wells



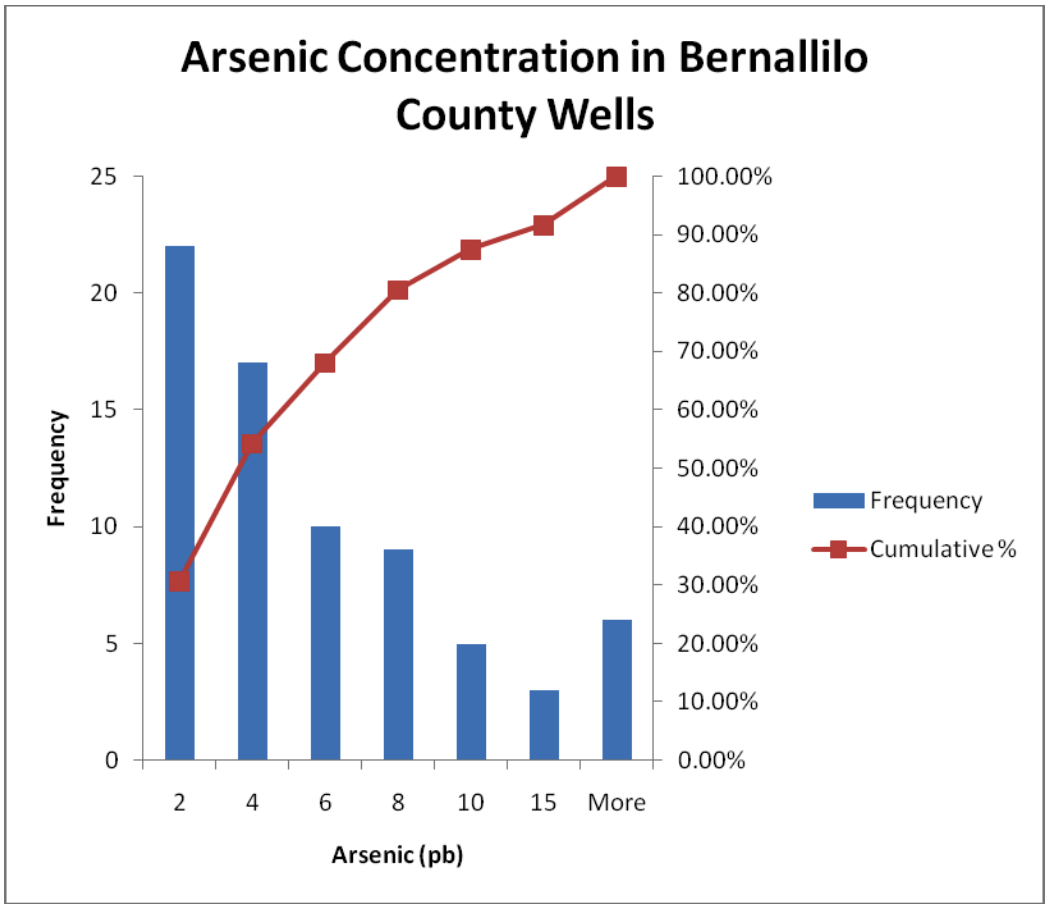
Arsenic concentrations in Bernalillo County wells (note: wells serviced by ABCWUA are shown as single symbol with concentric circles near the intersection of I40 and I25).

Figure V-3 Arsenic in Water Distribution Zones in Albuquerque Metro Area



Source: ABCWUA, 2009.

Figure V-4 Arsenic Concentration in County Wells



Arsenic concentrations in wells not serviced by the Albuquerque Bernalillo County Water Utility. Data source: SWDS, 2004.

Surface Water Quality

North Valley

Surface water in the North Valley is found in canals maintained by the Albuquerque Metropolitan Arroyo Flood Control Authority, drains and ditches which comprise about 11% of the land in the valley. A single site sampled in the North Valley as part of a studies of the acequias in 2005 (Cross-Guillen, 2005) showed detectable amounts of some trace metals and SVOCs but no violations of water quality standards. Two facilities discharge effluent into the North Diversion Channel under the National Pollution Discharge Elimination System (NPDES) regulated by the USEPA.

South Valley

The Rio Grande is the major surface water body in the South Valley. The river is impacted by storm water runoff, surface water discharges and illegal dumping. Five facilities in Bernalillo County are permitted under the NPDES to discharge into water bodies that impact the Rio Grande. The Southside Water Reclamation Plant discharges directly into the Rio Grande; two facilities discharge into the South Diversion Channel.

Community residents in the South Valley have raised concerns about potential pollution of acequias by pesticides and illegal dumping. The designation of that reach of the Rio Grande had recently been changed from secondary to primary use because of dangers to swimmers and other exposed people. Water samples were taken from 7 sites during 3 seasons and analyzed for *E. Coli*, trace metals, nutrients, major ions, and semi-volatile organics (SVOC) during 2005 (Cross-Guillen, 2005). *E. Coli* levels exceeded water quality standards at three sites during the fall and at 1 during the spring. Of 16 trace metals analyzed, only mercury in 1 sample (San Jose Drain site) exceeded the standards. Five of the metals, however, have no surface water quality standards. Of the 97 SVOCs analyzed, none had concentrations above regulatory limits, however, 50 currently do not have any standards. Soil samples were taken at 3 sites and tested for SVOCs. None of the samples contained concentrations above NMED health-based screening levels, however at 1 site (San Jose Drain site), levels of 3 SVOCs (Bis(2-Ethylhexyl)phthalate, Fluoranthene, and Pyrene) exceeded the reference dose (RfD) set by the EPA Integrated Risk Information System. Concentrations of nutrients and major ions were all below regulatory standards in all samples.

East Mountains

Surface water in the East Mountains is found in ephemeral streams, ponds and springs that are dependent on precipitation for recharge. Over the period (1933-2003) annual average precipitation ranged from about 23 inches at Sandia Crest (10680 ft) to about 15 inches at the Sandia Ranger station (6300 ft).

WATER BORNE, FOOD BORNE, AND VECTOR BORNE DISEASES

Waterborn Diseases

The New Mexico Environment Department and the New Mexico Department of Health collaborate on waterborne disease surveillance (WBDS) in New Mexico. WBDS focuses on parasites (*Cryptosporidiosium* and *Giardia*), bacterial agents (*Campylobacter*, *Escherichia coli*, *Salmonella* and *Shigella*), and Hepatitis A, a viral agent. It is estimated that the great majority (80-90%) of cases of *Cryptosporidiosium, Giardia, Shigella,* Hepatitis A. are spread by waterborne or person-to-person transmission, whereas only 5-20% of *Salmonella, Escherichia coli, and Campylobacter* are spread by that route. During 2006 and 2007, there were no confirmed cases of water borne disease in New Mexico. (A confirmed case in one in which laboratory confirmation of the agent has been made). However, there were 27 cases of waterborne diseases that could be matched spatially and temporally with drinking water advisories for *E. coli.* During 2006-2007, within the Bernalillo Region, rates of potential waterborne disease were greatest for *Campylobacter* and *Salmonella* (10 – 15 cases/ 100,000 people) and less for the other agents (1 – 7 case/100,000). Compared to the NW, SW and SE parts of the state, rates in the region were lower for *Campylobacter* and *Salmonella* and comparable for the other agents. Rates in the NE part of the state were similar to those in Bernalillo for all agents. Within New Mexico, rates of cryptosporidiosis have increased steadily from 17 to 192 probable or confirmed cases from 2005 to 2008. In 2008, the first large outbreak of cryptosporidiosis associated with recreational water was identified in Bernalillo County or the state. In September, 29 confirmed and 60 probable cases were associated with an outbreak that started at an aquatic center in Albuquerque. (NM State Epidemiologist Reports..)

Illnesses Associated with Food

Many of the pathogens associated with waterborne disease above are of concern in food handling. *Campylobacter* can be associated with raw chicken and raw milk; *Escherichia coli* (E. coli 0157:H7) can be associated with raw beef, milk and produce and unpasteurized apple cider. *Salmonella* and *Shigella* may contaminate raw poultry products, fruits, vegetables, peanuts and dairy products. Other pathogens of concern include *Bacillus cereus, Clostridium botulinum and perfringens, Listeria monocytogenes,* Norwalk virus and *Staphylococcus aureus*. Symptoms of exposure to food pathogens include cramping, watery and/or bloody diarrhea, vomiting, nausea, fever and in the case of botulism, death in 65% of cases. Onset of symptoms occurs from 3-6 hours to 10 days after exposure, depending on the pathogen.

Food safety is regulated by the Bernalillo County, Office of Environmental Health in the East Mountains (61 establishments in 2005), South Valley (170 establishments in 2003) and portions of the North Valley. The city and state regulate other North Valley establishments that fall with their borders. Food service establishments have priority codes: low, medium or high depending on the potential vulnerability and volume of people served. Those with a "high" rating are inspected 3 time/year; those with medium and low ratings are inspected twice or once a year, respectively. Upon inspection a green "A" sticker or a red "C" sticker is issued and must be displayed indicating compliance or lack of compliance with the Food Safety ordinance. The establishments include restaurants, groceries and other facilities that serve food such as day care centers. A step-by step procedure, the Hazard Analysis Control Point (HACCP) technique is used to monitor and ensure food safety. Results of inspections within the last 90 days within the city limits can be found at http://cogpubbkp.cabq.gov/envhealth/search.asp. On March 29, for example, 314 establishments were in compliance for the previous month, and 14 had either failed an inspection or had corrected past deficiencies within the last 90 days.

Vector Borne Diseases

Vector borne diseases are transmitted to humans via contact with insects and animals. In Bernalillo County, the most important of these diseases include plague, Hantavirus, encephalitis (West Nile Virus, St. Louis and Western Equine) and Tularemia. The City County Vector Control Program, which is co-managed by Bernalillo County, Office of Environmental Health and the City of Albuquerque

Environmental Health Department actively monitors for plague, and conducts surveillance for St. Louis and Western Equine encephalitis. Cases of these diseases have been reported in the East Mountains, the eastern foothills of the Sandias and the North Valley, but not in the South Valley from 1998 2003.

Bacterial infections

Plague is caused by the bacterium *Yersinia pestis* and is transmitted through the bite of a plague-infected flea, inhaling droplets from pneumonic patients, or by handling plague-infected tissue of infected or sick animals. Symptoms include fever, chills, weakness, and headache; treatment includes a 7-day course of antibiotics such as tetracycline and doxycycline. Only 4 cases of plague were reported in Bernalillo County from 1990 to 2004 and occurred in eastern part of the county and the western foothills of the Sandias. During the same period, 14 cases occurred in Santa Fe County.

Tularemia, known also as rabbit fever, is caused by the bacterium *Francisella tularensis* and is found in rabbits and rodents. It is transmitted to humans via the bite of infected deer flies or ticks, or by handling blood or tissue of infected animals. Symptoms of infection include fever, chills, weakness, and, swollen and tender lymph nodes and headache. Treatment includes a 14-day course of antibiotics such as streptomycin and tetracycline. Tularemia has been found in the East Mountains, North Albuquerque, and Sandia Heights.

Viral Infections

Hantavirus causes the serious, often fatal disease of the lungs, Hantavirus Pulmonary Syndrome (HPS). Deer mice are the most common carriers of the virus and exposure can be via ingestion of food contaminated by infected rodents. In addition, the disease is contracted after handling the urine, feces or saliva of infected rodents by inhalation, ocular exposure (rubbing the eyes) or dermal exposure via cuts in the skin or rodent bites. Symptoms of the disease include sudden fever, headache, nausea, difficulty in breathing, coughing, vomiting, and muscle aches. There is no treatment for HPS; patient isolation is recommended. From 1993 to January 2005, 63 cases with 27 deaths were reported in New Mexico with a single case in Bernalillo County. This contrasts with the 31 and 8 cases reported in McKinley and San Juan counties, respectively.

Encephalitis is a viral infection spread via the bite of an infected mosquito. In New Mexico, the most common types are West Nile Virus (WNV), St. Louis encephalitis and Western Equine encephalitis. Symptoms of the disease range from mild to severe. Mild manifestations include fever, headache, nausea, body aches, vomiting, skin rash and swollen lymph nodes. Severe symptoms include high fever, stupor and disorientation, tremors and convulsions, vision loss and paralysis. Treatment includes supportive therapy; there is cure. There were 17 positive cases of WNV in 2004 in Bernalillo County compared to 88 state-wide; that represented a decrease from 2003 when 35 cases were reported in the county. Only San Juan County had more cases (34) in 2004

Vector Control is particularly important for mosquito-borne diseases such as encephalitis. Most cases occur from July to September. Vector control includes removing standing water, which can serve as breeding grounds for mosquitoes, installing adequate screening and using insect repellent that contains DEET. In 2004, 38 mosquito samples tested positive for WNV from a total 14,883 samples compared to 46 out of 9908 in 2003. Prevalence of equine encephalitis in horses also declined from 2003 (36 cases) to 2004 (3 cases).

SOLID WASTE

Municipal waste consists of materials that can be disposed in sanitary landfill such as food scraps, newspapers, packaging, and construction or demolition waste. There are three municipal sanitary landfills in Bernalillo County: the Cerro Colorado landfill (household waste), the Southwest landfill (construction debris only), and the Torrance/Bernalillo County landfill (waste from East Mountain

residents). The landfills are regulated by the New Mexico Environment Department. There are closed landfills throughout the county that pose potential environmental and health hazards because they are not lined. Leachates from the waste can contaminate groundwater or fugitive dust may lead to air pollution. Three of the closed landfills in the North Valley (Los Angeles, Colorado, and Nazareth) are currently monitored for methane gas releases. In addition, leachates from the waste are collected, treated and reinjected into the landfill to protect the local groundwater.

Hazardous waste includes materials that are toxic, flammable, reactive and/or corrosive and cannot be disposed of safely in a sanitary landfill. It includes paints, motor oils, strong cleaners and batteries. They pose a threat to the environment, sanitation workers and general pubic health if disposed of improperly. Periodically, the County holds hazardous household waste collections events. From 2000 to 2006, 73,801 pounds of such waste was collected in the North Valley; between 1995 and 2004, 149,862 pounds were collected in the East Mountains and 1,200,000 pounds were collected in the South Valley on a single day in 2003.

Disposal of waste in un-permitted areas can be categorized as trash complaints, illegal dumping or illegally dumped hazardous waste. From the period 2000 – 2004, the number of reported incidents of all kinds dropped from 313 to 219, with about 20-30% being illegal dumping. .

COMMUNITY ENVIRONMENTAL HEALTH CONCERNS

Surveys of community concerns dealing with environmental issues were carried in 2003 and 2004. In a 2003 survey of 7 neighborhoods in the South Valley, residents were asked to rank environmental concerns from a list of up to 14 items. Water quality was ranked as the top concern in 4 of the neighborhoods, water quality, air quality and crime were ranked as the top 3 concern in all neighborhoods. Other less common concerns included land developments/use, animal control, rodents, noise, medical problems and food safety. A 2004 survey of East Mountain residents indicated that water and air quality were the top environmental concerns. Environmental hazards associated with water quality included pollution from septic tanks, pesticide/fertilizer pollution and " natural" pollution. Air quality issues included dust, auto emissions and pollen. Other concerns included public safety (e.g. crime and animal control), natural hazards (e.g. rodents, fire) and visual concerns such as illegal dumping.

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VI. MORTALITY

Examining mortality rates for various causes of death tells a great deal about how we live. On the one hand, if most people live well into their 90s, it is likely that they ate well, exercised, had strong family or community support, did not engage in too many risky behaviors, had access to health care when needed, and were genetically predisposed to live long lives. On the other hand, high death rates from motor vehicle crashes can point to needs in the design of roads, the health care system, and tendencies toward high-risk behaviors.

However, mortality statistics do not tell the whole story. A decline in traffic deaths related to improved medical care is worthy of celebration, but this improvement may also mean an increase in the number of people living with serious disabilities. The number of people living with traffic-related disabilities is much harder to identify, resulting in more people falling through the cracks in the health care system. Mortality figures are extremely useful, but it important to interpret with caution.

In this section, an overview of death rates and their causes will be presented. All death rates in this section are given in age-adjusted rates per 100,000 people. The latest rates available for New Mexico are from 2006. The most current rates for the United States are from 2005.

GENDER

In 2006, the overall age-adjusted death rate in Bernalillo County was elevated above the state rate and lower than the 2005 national rate (Table VI-1). There are noteworthy differences between men and women in patterns of death. Bernalillo County and New Mexico men are more likely to die young than other men in the U.S. but women are less likely to die young. The County's death rate for males was much higher than the national rate and higher than the state rate for all ages between 5 and 54 years (55 and older were not included in the tables). For females, the County's death rate was comparable to the national rate. The death rates for females in Bernalillo County were elevated only for those between the ages of 25 and 34 years (88.3 per 100,000 for Bernalillo, 64.1 per 100,000 for the U.S.). [17]

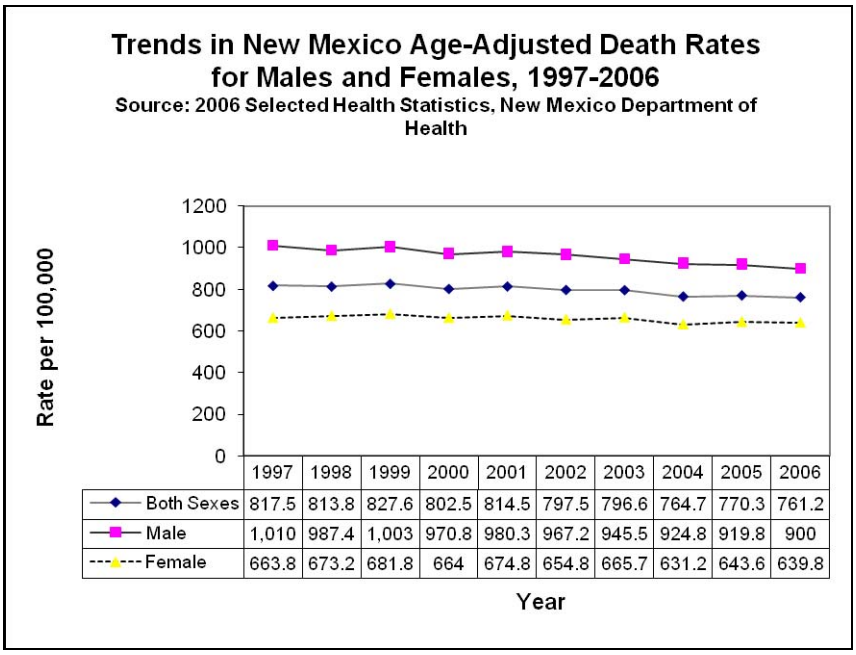
Table VI-1 Comparison of Death Rates

Comparison of age-adjusted Death Rates for Males and Females in Bernalillo, New Mexico and U.S. Source: New Mexico Selected Health Statistics, 2006, NM DOH, October, 2008			
	Males	Females	Both
Bernalillo	934.2	657.9	783.6
New Mexico	900.0	639.8	761.2
U.S.	827.2	824.6	798.8

In 2006, 68.3% of New Mexico deaths were to individuals 65 or older; 61.2% of male deaths and 76.0% of female deaths were in this category. Furthermore, 33.9% of women died over the age of 85 years, while only 18.1% of males died at 85 years or older.

[17] New Mexico Selected Health Statistics, 2006, New Mexico Department of Health, the State Center for Health Statistics Bureau of Vital Records and Health Statistics, October, 2008.

Figure VI-1 Trends in New Mexico Age-Adjusted Death Rates by gender



	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Both Sexes	817.5	813.8	827.6	802.5	814.5	797.5	796.6	764.7	770.3	761.2
Male	1,010	987.4	1,003	970.8	980.3	967.2	945.5	924.8	919.8	900
Female	663.8	673.2	681.8	664	674.8	654.8	665.7	631.2	643.6	639.8

LEADING CAUSES OF DEATH[18]

Diseases of the heart and malignant neoplasms (cancer) result in more deaths in than any other causes. Accidents are the third leading cause of death in New Mexico and Bernalillo County but the fifth leading cause for the U.S. Influenza and pneumonia are the seventh leading cause of death in Bernalillo County and the eighth in New Mexico and the U.S. Intentional self-harm (suicide) and chronic liver disease/cirrhosis are the ninth and tenth leading cause of death in Bernalillo County and New Mexico. In the U.S., nephritis, nephritic syndrome and nephrosis are the ninth leading cause, and septicemia is the tenth.

[18] Unless otherwise noted, information in this section is summarized from the following: New Mexico Selected Health Statistics, 2006, New Mexico Department of Health, the State Center for Health Statistics Bureau of Vital Records and Health Statistics, October, 2008.

Table VI-2). Figure IV- 1 presents the ten leading causes of death in Bernalillo County by age group. Matrices of the leading causes of death in Bernalillo County by age, sex, race and ethnicity between 1990 and 2005 are posted on the Bernalillo County Community Health Council web site.

Figure IV- 1 10 Leading Causes of Death by Age Group

10 Leading Causes of Death by Age Group

All Races and Ethnic Groups - Bernalillo County, NM - 1990-2005

	Age Groups									
RANK	<5	5-9	10-14	15-24	25-34	35-44	45-54	55-64	65+	ALL AGES
1	Perinatal Period 421	Unintentional Injury 36	Unintentional Injury 49	Unintentional Injury 492	Unintentional Injury 695	Unintentional Injury 823	Malignant Neoplasms 1152	Malignant Neoplasms 2293	Heart Disease 12,082	**Heart Disease 15,026**
2	Congenital Anomalies 274	Malignant Neoplasms 17	Malignant Neoplasms 20	Homicide 282	Suicide 292	Heart Disease 495	Heart Disease 791	Heart Disease 1428	Malignant Neoplasms 9766	**Malignant Neoplasms 13,855**
3	Unintentional Injury 73	Congenital Anomalies 9	Suicide 17	Suicide 265	Homicide 238	Malignant Neoplasms 417	Unintentional Injury 625	COPD 313	Cerebro-vascular 3333	**Unintentional Injury 4206**
4	Homicide 35	Leukemia 8	Homicide 10	Malignant Neoplasms 55	Heart Disease 185	Suicide 345	Liver Disease 325	Liver Disease 280	COPD 3136	**Cerebro-vascular 3758**
5	Malignant Neoplasms 24	Homicide 7	Leukemia 8	Heart Disease 30	Malignant Neoplasms 111	Liver Disease 195	Suicide 276	Unintentional Injury 269	Pneumonia & Influenza 1670	**COPD 3588**
6	Pneumonia & Influenza 13	Perinatal Period 2	Congenital Anomalies 4	Leukemia 16	Liver Disease 45	Homicide 169	Cerebro-vascular 140	Diabetes Mellitus 250	Diabetes Mellitus 1429	**Pneumonia & Influenza 1888**
7	Heart Disease 12	Heart Disease 2	Perinatal Period 1	Congenital Anomalies 15	HIV/AIDS 22	Diabetes Mellitus 61	Diabetes Mellitus 120	Cerebro-vascular 212	Alzheimer's 1174	**Diabetes Mellitus 1882**
8	Infectious / Parasitic 9	COPD 2	Heart Disease 1	COPD 7	Diabetes Mellitus 19	Cerebro-vascular 57	Homicide 92	Suicide 143	Unintentional Injury 1144	**Suicide 1586**
9	Leukemia 5	Infectious / Parasitic 1	COPD 1	Pneumonia & Influenza 7	Pneumonia & Influenza 18	HIV/AIDS 43	Infectious / Parasitic 88	Pneumonia & Influenza 76	Nephritis 625	**Liver Disease 1204**
10	COPD 4	Nephritis 1	Infectious / Parasitic 1	Pregnancy, Childbirth 7	Leukemia 16	Pneumonia & Influenza 40	COPD 81	Leukemia 60	Atherosclerosis 462	**Alzheimer's 1182**
	All Causes 1124	**All Causes 98**	**All Causes 126**	**All Causes 1306**	**All Causes 1918**	**All Causes 3286**	**All Causes 4617**	**All Causes 6398**	**All Causes 44,029**	**All Causes 62,902**

Data Source: NMDOH, BVRHS. Analysis: T. Scharmen *Bernalillo County Place Matters, Health Equity Assessment Tool*

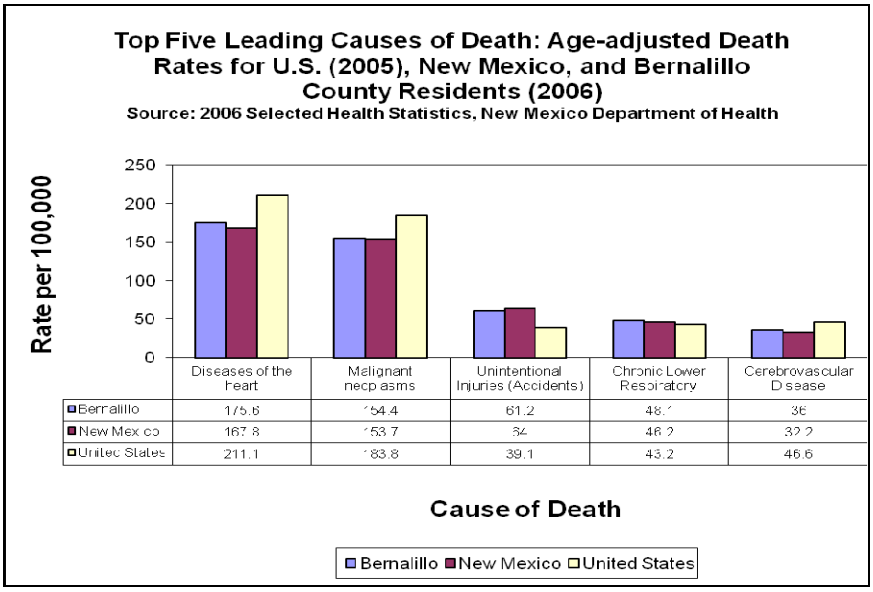
Infectious / Parasitic refers to all infectious diseases not otherwise categorized.

Table VI-2 Leading Causes of Death for Bernalillo County, NM and the US

BERNALILLO COUNTY, 2006	NEW MEXICO, 2006	UNITED STATES, 2005
1) Heart Disease	1) Heart Disease	1) Heart Disease
2) Malignant Neoplasm's (Cancer)	2) Malignant Neoplasms (Cancer)	2) Malignant Neoplasms (Cancer)
3) Accidents (Unintentional Injuries)	3) Accidents (Unintentional Injuries)	3) Cerebrovascular Diseases (Stroke)
4) Chronic Lower Respiratory Diseases	4) Chronic Lower Respiratory Diseases	4) Chronic Lower Respiratory Diseases
5) Cerebrovascular Diseases (Stroke)	5) Cerebrovascular Diseases (Stroke)	5) Accidents (Unintentional Injuries)
6) Diabetes Mellitus	6) Diabetes Mellitus	6) Diabetes Mellitus
7) Influenza and Pneumonia	7) Alzheimer's Disease	7) Alzheimer's Disease
8) Alzheimer's Disease	8) Influenza and Pneumonia	8) Influenza and Pneumonia
9) Intentional Self-harm (Suicide)	9) Intentional Self-harm (Suicide)	9) Nephritis, Nephrotic Syndrome and Nephrosis
10) Chronic Liver Disease and Cirrhosis	10) Chronic Liver Disease and Cirrhosis	10) Septicemia

Death rates for the top five leading causes of death in Bernalillo County and New Mexico do not follow the same pattern as national death rates. In New Mexico and Bernalillo County, the age-adjusted rates for Diseases of the heart and cancer are lower than the national rates. However, the age-adjusted rate for unintentional injuries (accidents) is approximately 67% higher than the national rates, and chronic lower respiratory is approximately 7% higher. Diseases of the heart, cancer, and stroke are lower than the rest of the nation. (Figure VI-2).

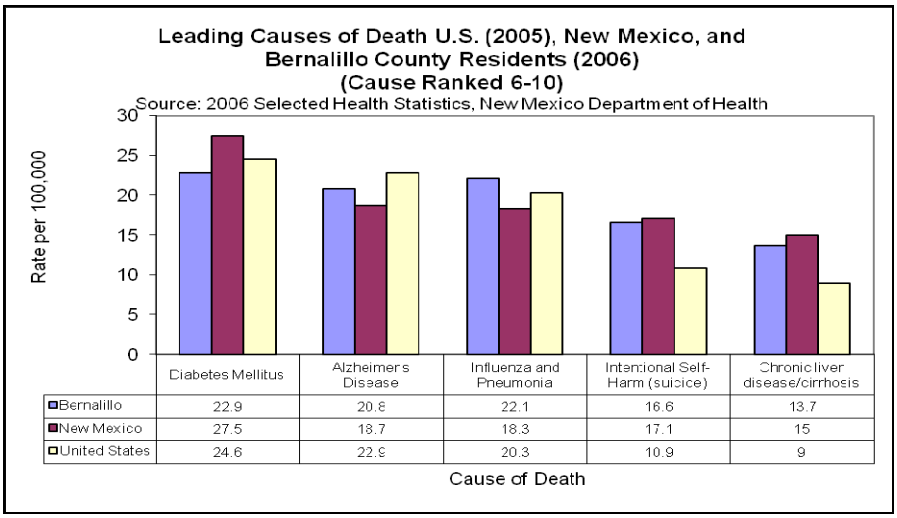
Figure VI-2 Top Five Leading Causes of Death



The next five leading causes of death (6-10) result in many fewer deaths than the top five causes. However, they point to some significant areas of concern for New Mexico and Bernalillo County.

The suicide and chronic liver/cirrhosis rates for Bernalillo County, though lower than the state's rates, are much higher than the national rate. (Figure VI-3)

Figure VI-3 Leading Causes of Death (Cause Ranked 6-10)



PREMATURE DEATH AND POVERTY

Deaths are considered to be premature when the cause of death is preventable. This can include conditions that can be avoided with immunizations or other preventative measures, or conditions in which death could be avoided if appropriate treatment is provided.

Poverty is a clear factor in premature deaths. In a study of mortality in Bernalillo County in the years1996-2005, key findings were:

- Substantial area socioeconomic disparities in overall and cause-specific mortality were found in the Bernalillo county population. In general, death rates were highest in the high poverty group and lowest within the low poverty group.

- Socioeconomic health disparities in Bernalillo county varied markedly by age for each mortality outcome examined, and were generally confined to the population of persons under 75 years of age. The socioeconomic disparity in death rates from all causes of mortality combined was greatest in the age range 25 to 59 years, where death rates in the high poverty group were 2- to 3- fold higher than those in the low poverty group. Three-fold or higher age-specific death rates in high compared to low poverty group were found for all types of cause-specific mortality, except cancer, and suicide for people over the age of 50[19] (Table VI-3).

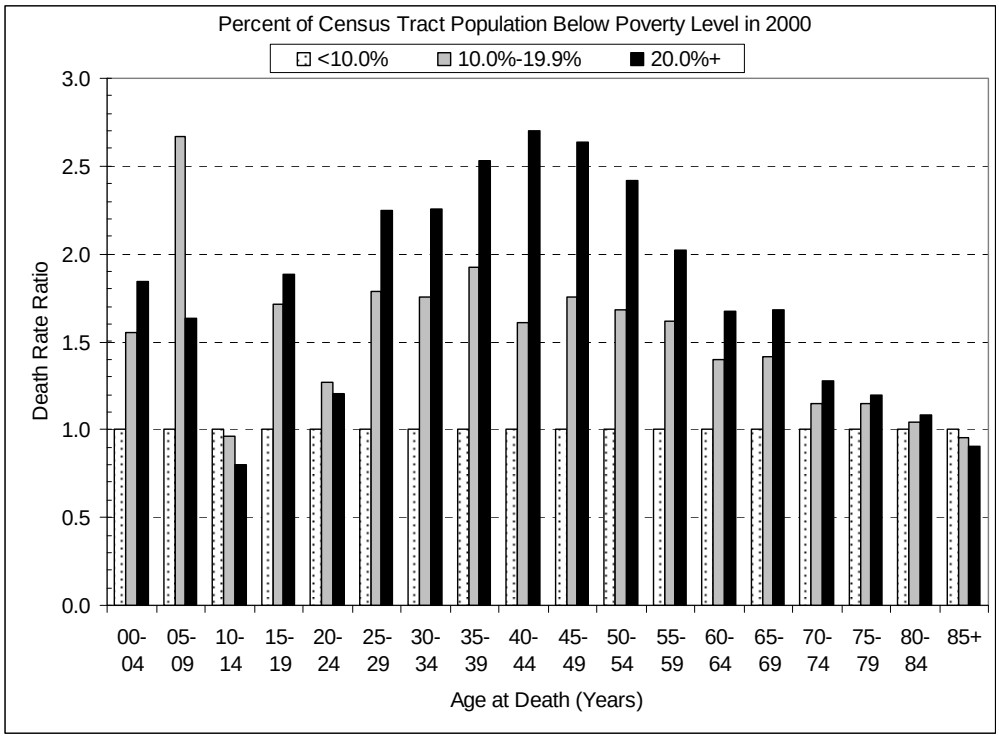
Table VI-3 Effect of Poverty on Premature Death

Highlights of Links between Premature Deaths and Poverty by Cause of Death		
Cause of Death	Age range	Approximate elevation in High Poverty area versus low poverty Areas
Heart Disease	35-69	2-fold higher in high poverty areas
Stroke	40-49 50-59	3-4 fold 2-fold
Chronic obstructive pulmonary Disease	45-49	4-5-fold
Influenza	45-54 55-74	5-6-fold 2-3 fold
Accidents	40-54	2.5 to 4.5 fold
Suicide	35-39 75 and older	3-fold higher in high- and medium-poverty areas 2-fold higher in low-poverty areas
Homicide	15-49	6 fold
Diabetes	35-69	2-5 fold (difference not noted among American Indians of different income levels)
Source: Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, Athas, WF. March, 2009		

[19] Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, March 2009.

During the period 1996-2005, the death rates were highest in high poverty areas in Bernalillo County for nearly all age categories between 15 and 84. (Figure VI-4)

Figure VI-4 Age-specific Death Rates

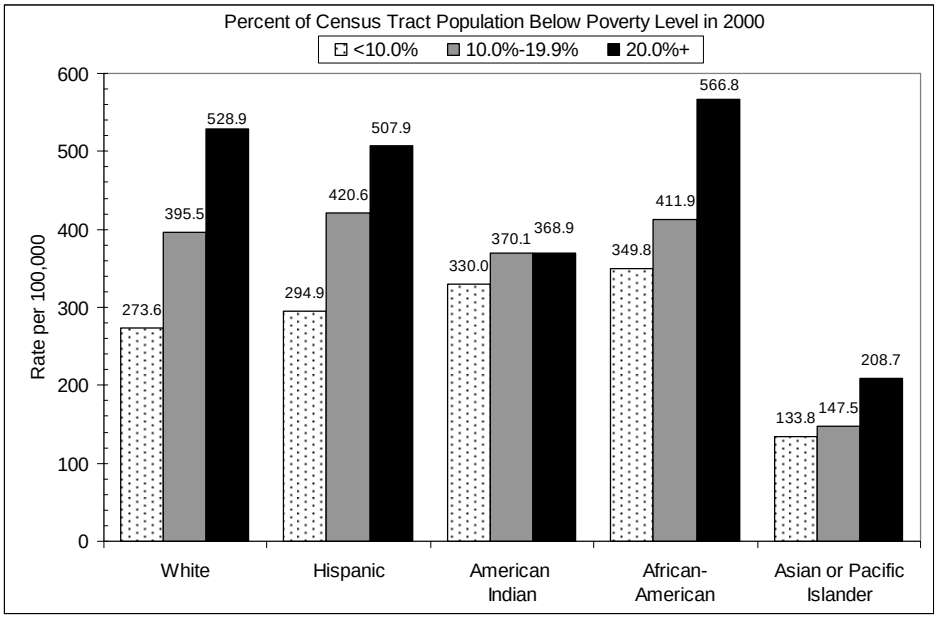


Source: Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, March, 2009.[20]

There are differences in age-adjusted death rates between people of different races. However, people living in high poverty areas have higher death rates than those living in low poverty areas, even when they are of the same race. This difference is pronounced for all races, but somewhat less so for American Indians. (Figure VI-5)

[20] Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, March 2009.

Figure VI-5 Death rates by Poverty and Ethnicity



Source: Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, March 2009.[21]

[21] Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, March, 2009

VII. MATERNAL AND INFANT HEALTH

OVERVIEW OF PERINATAL DATA (NEW MEXICO PREGNANCY RISK ASSESSMENT MONITORING SYSTEM DATA – PRAMS)

PRAMS is a public health surveillance system that addresses maternal attitudes, behaviors and experiences occurring before, during and after pregnancy. A comparison of selected perinatal statistics for Bernalillo County and New Mexico is presented in Table VII-1.

Table VII-1 Summary of PRAMS Natality Data

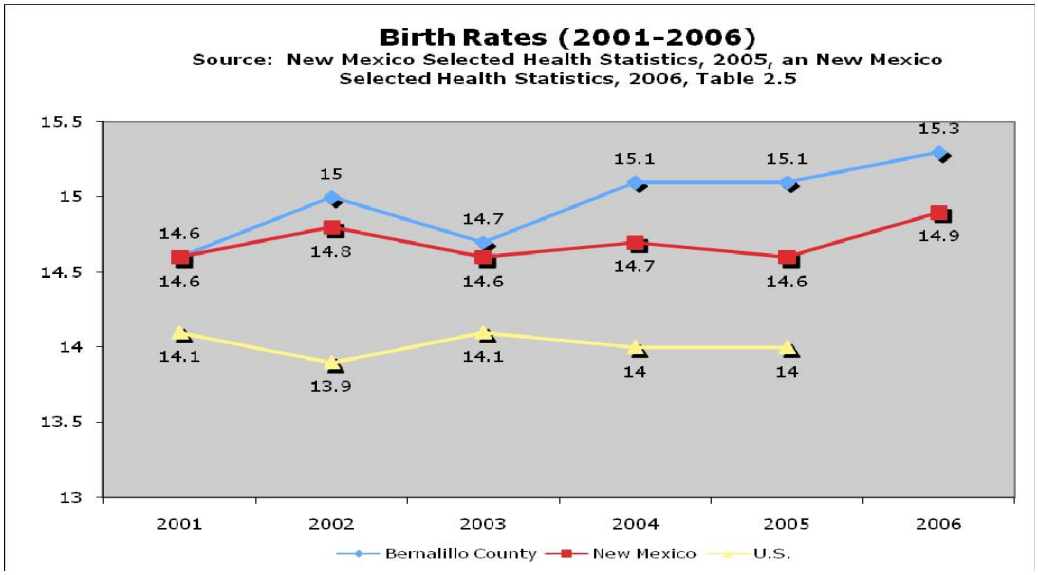
HEALTH INDICATOR	2004-2006	
	Bernalillo County	New Mexico
Unintended Pregnancy (wanted later or never)	37%	43%
Of those not trying to get pregnant, percent using some form of contraception at conception.	48%	48%
Binge drinking 3 months before pregnancy.	19%	18%
Used alcohol in last 3 months of pregnancy.	6%	
Smoked during the last 3 months of pregnancy	10%	9%
Said their infant is exposed to tobacco smoke	3%	6%
Were physically abused by their partner during pregnancy	4%	6%
Had a weight problem before pregnancy (based on BMI)	39%	41%
Had gestational diabetes	7%	8%
Had adequate prenatal care	14%	20%
Had a dental problem during pregnancy	18%	20%
Had a dental problem AND went to the dentist	NA	24%
Baby had low birth weight	10%	8%
Infant was in intensive care	13%	10%
Baby was pre-term	10%	8%
Had postpartum depressive symptoms	19%	20%
Infant had one well-child visit two months after birth	96%	97%
Had WIC services during pregnancy	48%	57%
Initiated breastfeeding	87%	84%
Were homeless in 12 months before baby was born.	3%	4%
Family had enough to eat in year before the survey.	86%	85%

Source: New Mexico PRAMS Surveillance Reports , NM DOH, Public Health Division, Family Health Bureau.
Note: The report includes detailed information regarding questions and methodology.

BIRTHS IN BERNALILLO COUNTY

Birth Rates. The U.S birthrate has remained close to 14 per 1,000 population (number of births divided by the total population – male and female)in recent years. New Mexico's birthrate has been consistently higher and was 14.9 per 1,000 in 2006. Birthrates in Bernalillo County are higher than the State's and appears to be climbing. (Figure VII-1)

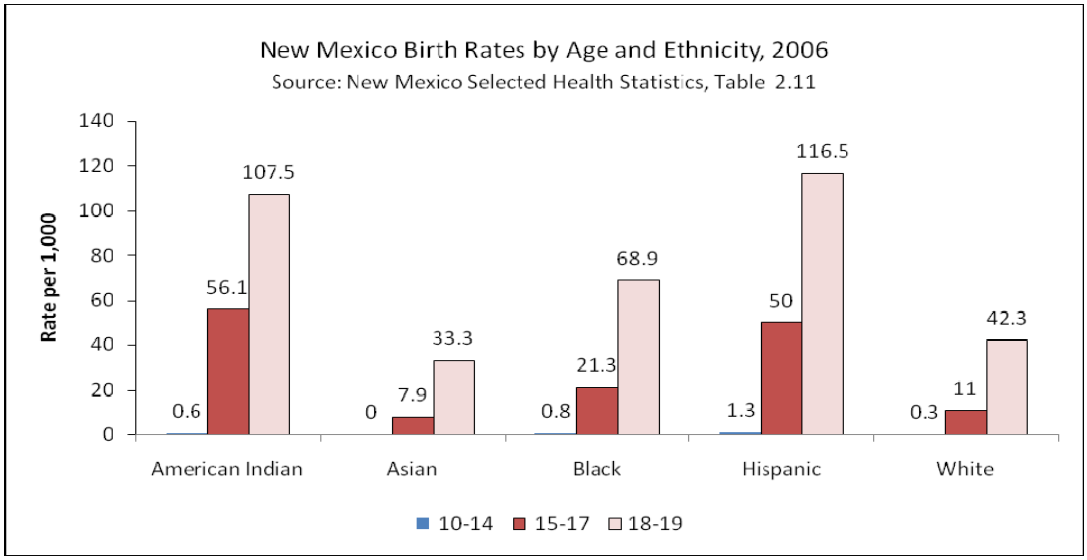
Figure VII-1 Birth Rate Trends



Births by Ethnicity. In New Mexico, birth rates vary substantially by race and ethnicity. In 2006 rates ranged from 9.9 births per 1,000 White, Non-Hispanic females to 19.5 for Hispanic Whites. The rate for American Indians was 17.7, 16.1 for Asian or Pacific Islanders, and 11.2 for Black/African American mothers.[22] Birth rates among teens are highest among Hispanics and American Indians and lowest among Asians and Whites. (Figure VII-2)

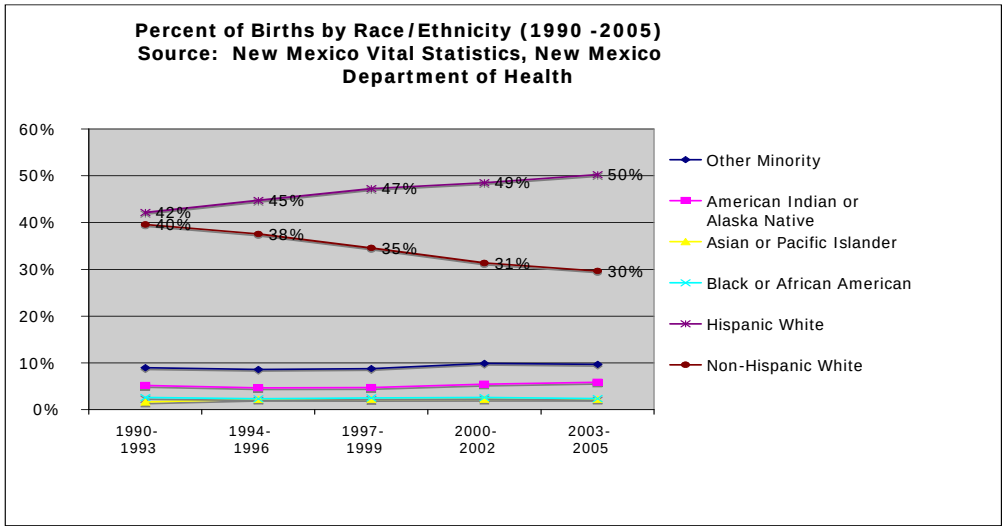
[22] New Mexico Health Statistics Annual Report, The State Center for Health Statistics, New Mexico Department of Health, Bureau of Vital Records and Health Statistics, September 2008.

Figure VII-2: Teen Births by Ethnicity



The percent of births in Bernalillo County by Hispanic mothers steadily increased between 1990 to 2005 (from 42% to 50%), while the percent of births by non-Hispanic by Hispanics white mothers has been steadily decreasing (from 40% to 30%). The percent of births by other minorities has been consistent over those fifteen years.

Figure VII-3 Births by Race/Ethnicity



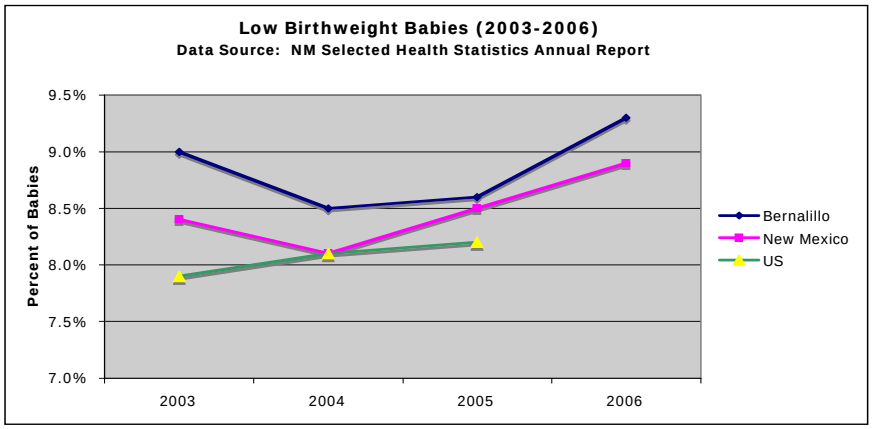
There are large differences in birth rates by race/ethnicity in New Mexico. In 2006, Hispanics had the highest birth rates for all age groups 19 years and younger.

LOW BIRTH WEIGHT

Low birth weight is defined as an infant weight of less than 2,500 grams (5.5 pounds) at the time of delivery. Infants born with low birth weight have increased infant mortality, morbidity, incidence of learning disabilities and medical costs. Risk factors for low-birth weigh include maternal age of less than seventeen and greater than 34, poverty, single marital status, lower levels of maternal education, smoking, inadequate weight gain, low pre-pregnancy weight and a variety of medical risk factors.

A higher percentage of babies were born with low birth weights in Bernalillo County than in New Mexico or the nation. The percent of high low birth weight babies decreased between 2003 and 2004 but increased in 2006 to levels above 2003.

Figure VII-4 Low Birth Weight Babies



Low birth weight in New Mexico is most common among Black/African Americans (13.9% in 2006) and least common among American Indians (7.9% in 2006).

Figure VII-5 Low Birth Weight Babies by Ethnicity

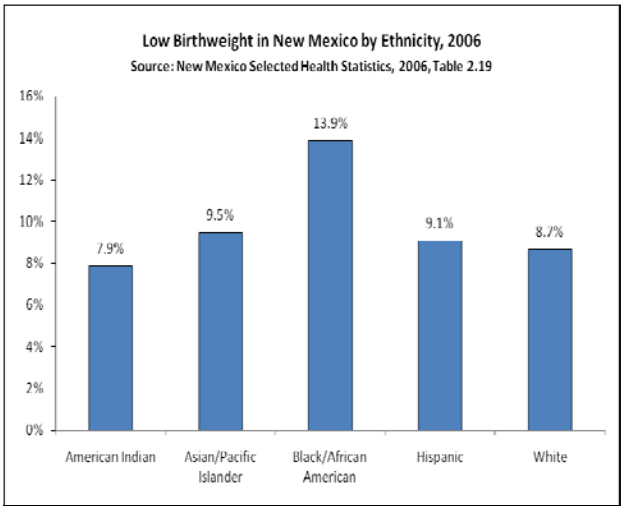
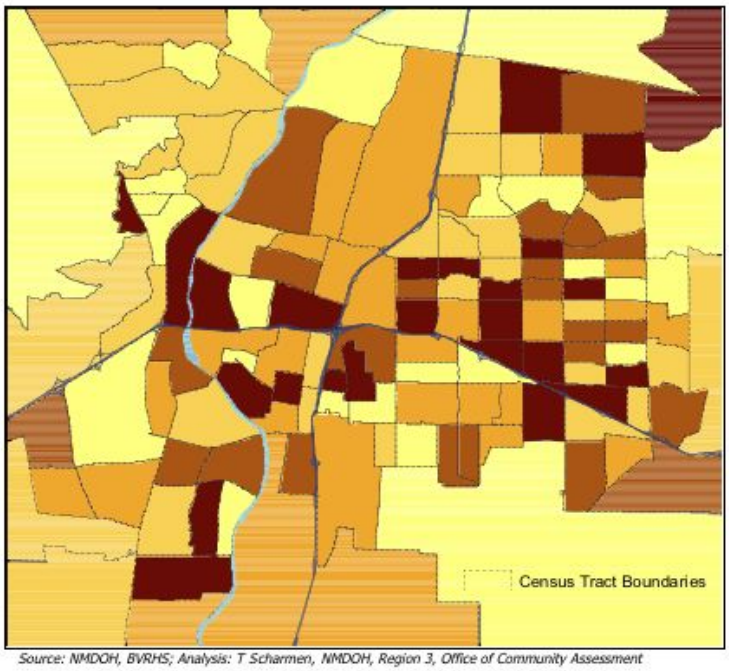


Figure VII-6 Low Birth Weight by Census Tract

Low Birth Weight Births

Albuquerque Census Tracts, 2001 - 2005



Source: NMDOH, BVRHS; Analysis: T Scharmen, NMDOH, Region 3, Office of Community Assessment

Low Birth Weight Births
Mothers of All Ages, 2001 - 2005

- 0.0 - 6.6%
- 6.7 - 8.0%
- 8.1 - 9.3%
- 9.4 - 10.5%
- 10.6 - 17.5%

Percent low birth weight births equals the number of births of infants weighing less than 2500 grams (5.5 lbs) divided by the total number of births among the same population.

Low Birth Weight Births, 2003

U.S.A.	7.8%
N.M.	8.1%
Bernalillo County	8.4%

Source: NMDOH, BVRHS

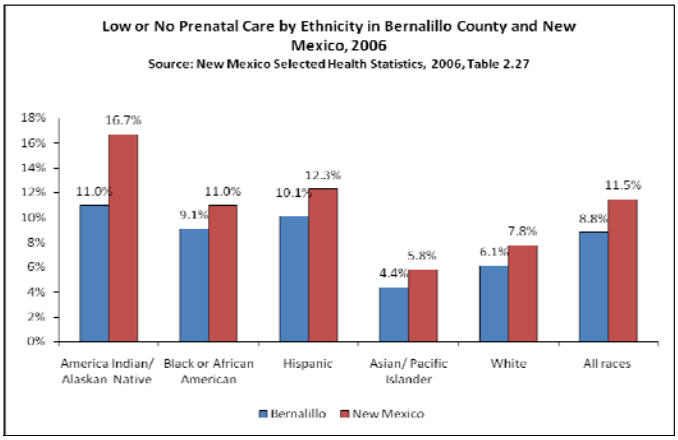
BERNALILLO COUNTY PLACE MATTERS TEAM - - - - - HEALTH EQUITY ASSESSMENT TOOL

PRENATAL CARE

Early prenatal care leads to better health for both mother and child; the earlier care begins, the more effective it can be. New Mexico ranks 41st in the nation in terms of prenatal care. [23]

The New Mexico Bureau of Vital Statistics collects measures of prenatal care. Based on this data the percentage of New Mexico women receiving no or low levels of prenatal care varies by ethnicity and tends to fluctuate from year to year. More Bernalillo County women in all race/ethnic groups receive adequate prenatal care than in other Counties. Nonetheless, there are noteworthy differences between Asian (4.4%) or White women (4.4%, 6.1%) and Native American and Hispanic women (11%, 10%). (Figure VII-7).

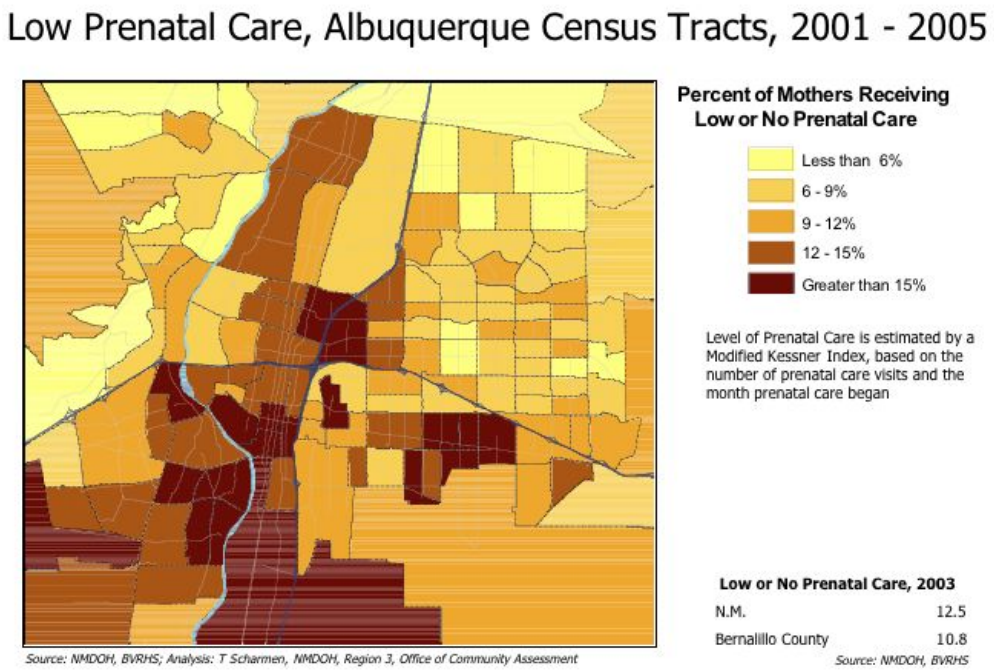
Figure VII-7 Prenatal Care by Ethnicity, County and US 2006



The maps below shows that there are a number of census tracts where over 15% of mothers received low or now prenatal care between 2001 and 2005.

[23] Annie E. Casey Foundation website 7/28/09
http://datacenter.kidscount.org/data/acrossstates/Rankings.aspx?ind=11

Figure VII-8 Low Prenatal Care by Census Tract



BERNALILLO COUNTY PLACE MATTERS TEAM - - - - - HEALTH EQUITY ASSESSMENT TOOL

BIRTHS BY AGE

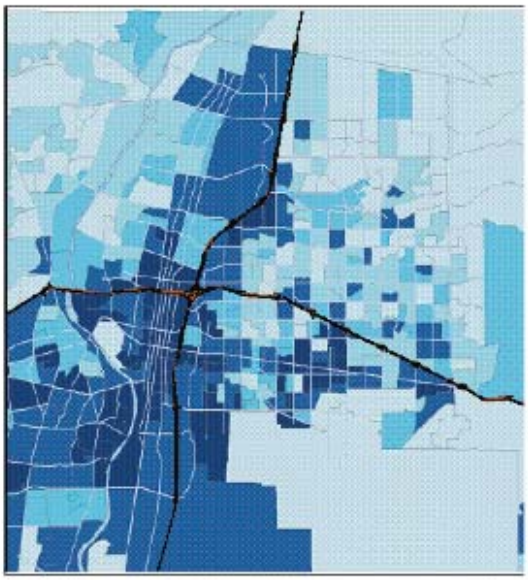
Teen mothers' health and social risks are greater than that of older mothers. Very few teens intend to become pregnant. They are less likely to receive early, or any, prenatal care, and their children are more likely to be born prematurely and to have low birth weights.[24] Fetal mortality rates are higher for young mothers. Teen mothers who have not finished high school are of particular concern; not finishing school limits career prospects and can lead to long-term poverty.

Bernalillo County teen pregnancy rates are slightly below the State average. However, New Mexico teen birth rates far exceed the national rates. In 2006 the teen birth rate in Bernalillo County was 58 per 1000 teens, compared to 62 for the State and 42 for the nation. Teen pregnancy rates within Bernalillo County increase as poverty rates increase. Figure VII – 9 shows that Bernalillo County neighborhoods with less than 5% of the population living below poverty have teen pregnancy rates considerably lower than the County, State, or Nation. High poverty neighborhoods have much higher rates. This suggests that young women with the fewest financial resources are the most likely to face the challenges of parenting at an early age.

[24] New Mexico Pregnancy Risk Assessment Monitoring Program (NM PRAMS), Surveillance Report, New Mexico Department of Health, Maternal Child Health Epidemiology, http://www.health.state.nm.us/phd/prams.

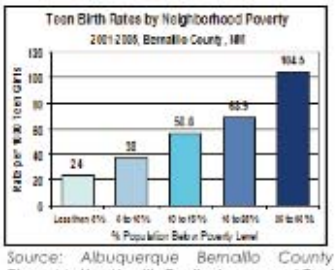
Figure VII-9 Teen Births and Poverty

Teen Births and Poverty



Percent Population Under the Federal Poverty Level (Census Block Groups)

- 5% or Less
- 5 - 10%
- 10 - 15%
- 15 - 25%
- 25% or Greater



Source: Albuquerque Bernalillo County Place MattersHealth Equity Assessment Tool (HEAT)

Match the colors on this graph with the colors on the graph to the right. **Wherever there is a higher percent of the population living in poverty, there is a higher teen birth rate.** We call this a social determinant of health. Note: Each color represents an average of different areas and is not specific to a neighborhood.

Teen Birth Facts:

- The U.S. has the highest rate of teen pregnancy, birth and abortion in the industrialized world.
- New Mexico teen birth rates are much higher than the U.S. rate.
- In 2006 in Bernalillo County for every 1000 teens, 58 gave birth, compared to 62 for New Mexico and 42 for the U.S.
- Neighborhoods with the highest percent of people living in poverty, have the highest teen birth rates.

Why is this important?

Teen pregnancy is linked to many other critical health and social issues like:

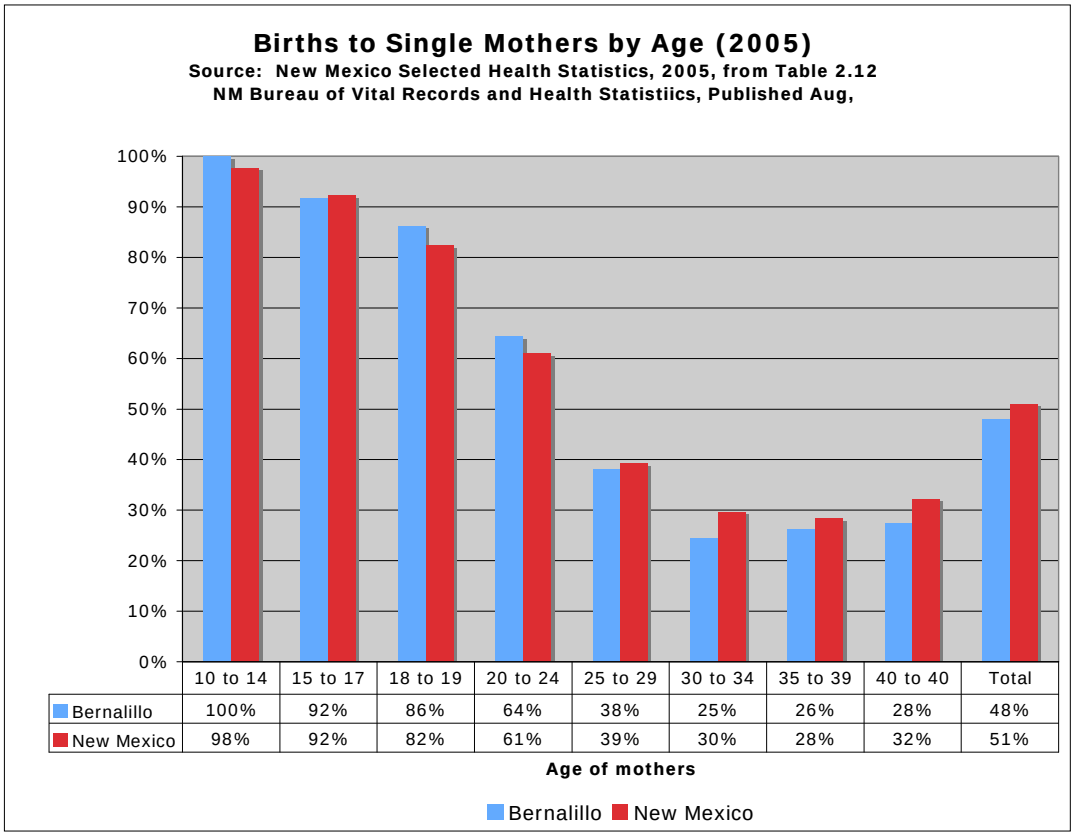
- Overall health and well-being of the baby
- Completing school
- Being prepared for different kinds of jobs and careers
- Responsible fatherhood
- Poverty, especially child poverty

If more children are born to parents who are ready and able to care for them, child and family well being will improve. There will be less poverty and more opportunities for young men and women to complete their education or achieve other life goals.

MARITAL STATUS

Nearly half of all mothers are single. Single parenthood generally means lower income and higher stress. Bernalillo County's mothers under the age of 25 are slightly more likely to be single than that age group in New Mexico. Between the ages of 25 and 49, they are less likely to be single than the State as a whole; over the age of 30, roughly one quarter of mothers are single (Figure VII-10 .

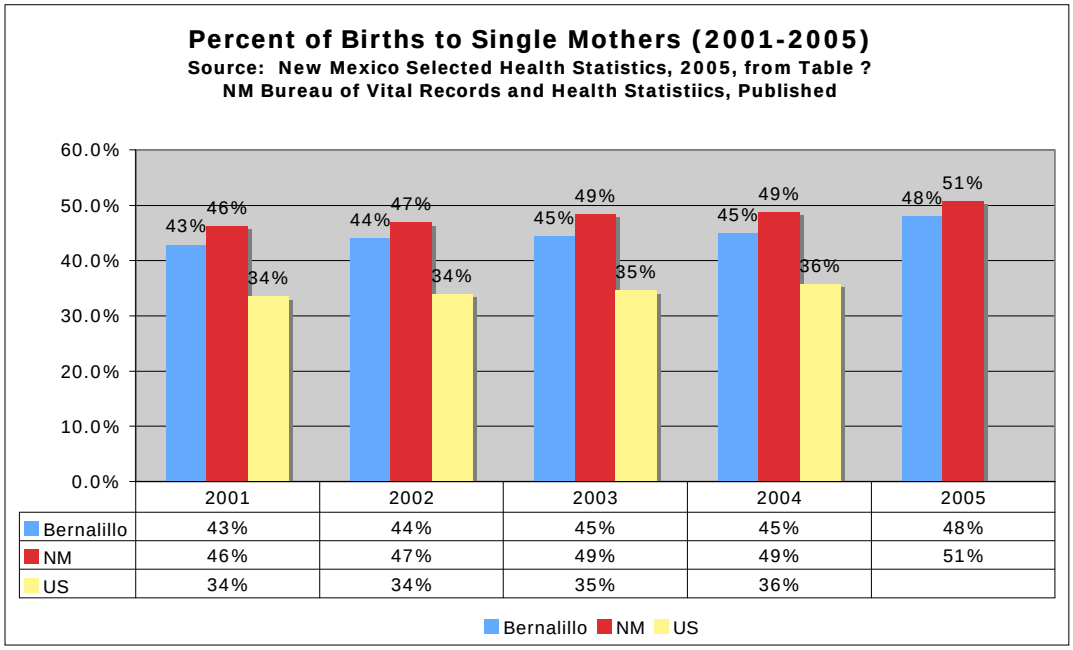
Figure VII-10 Births to Single Mothers by Age



	10 to 14	15 to 17	18 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 to 40	Total
Bernalillo	100%	92%	86%	64%	38%	25%	26%	28%	48%
New Mexico	98%	92%	82%	61%	39%	30%	28%	32%	51%

The percent of single mothers is gradually increasing in New Mexico and Bernalillo County. The U.S. rate has remained fairly stable (Figure VII-11).

Figure VII-11 Births to Single Mothers 2001-2005 (Bernalillo, NM, US)

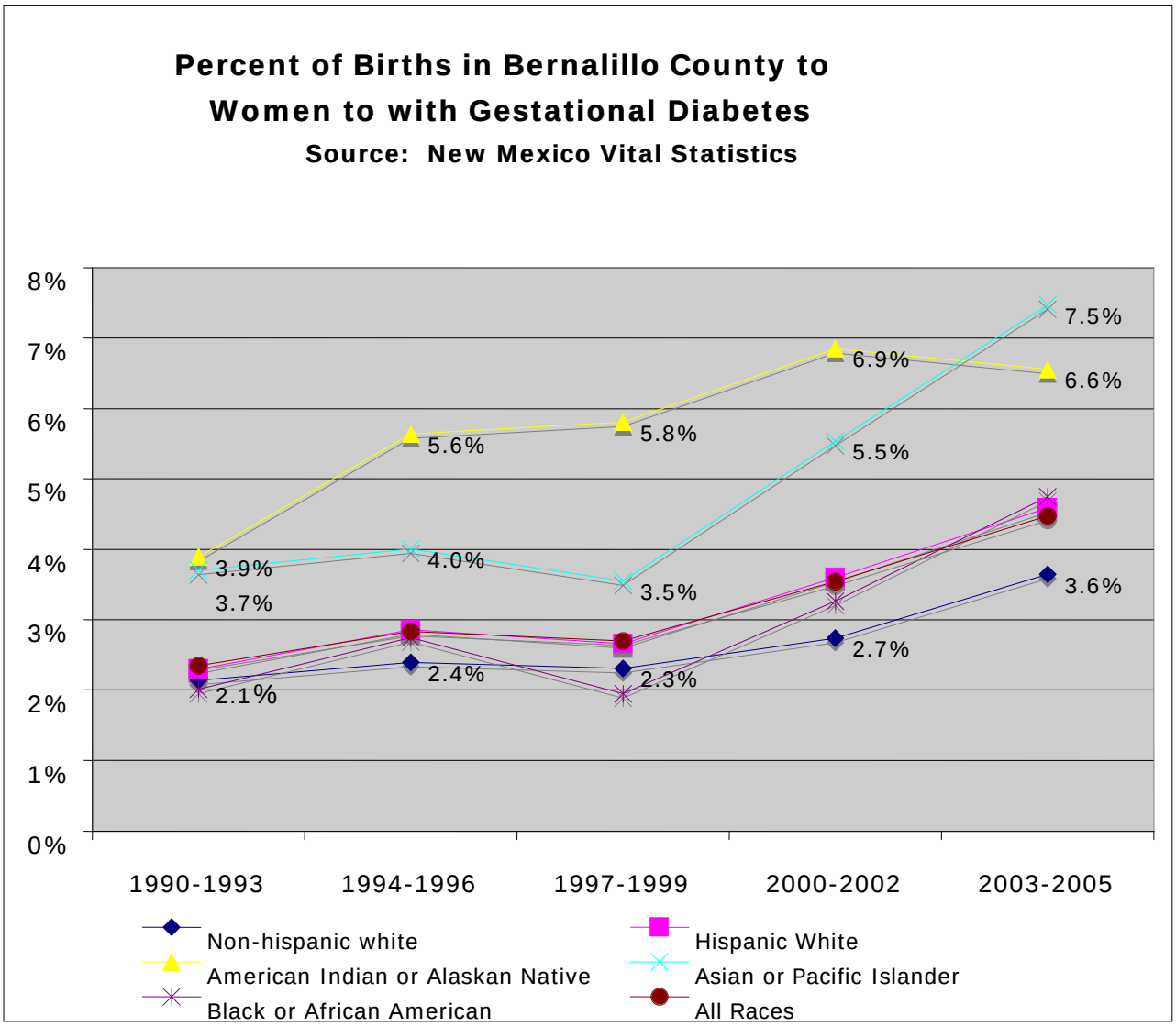


WOMEN WITH GESTATIONAL DIABETES

Gestational diabetes is a kind of diabetes that only occurs during pregnancy. Gestational diabetes risk factors include being overweight prior to becoming pregnant and being Hispanic, black, Native American, or Asian.[25] About half of women with gestational diabetes will develop Type 2 Diabetes later. If not controlled, gestational diabetes can cause the baby to grow extra large and lead to problems with delivery for the mother and the baby. Type 2 diabetes might be controlled with diet and exercise, or it might take diabetes pills or insulin or both as well as diet and exercise to get control.[26] The overweight/obesity epidemic appears to be reflected in a steady increase in the rate of reported gestational diabetes in Bernalillo County for women of all races/ethnicities from 1990 to 2005 (Figure VII-12).

[25] 4/1/09 http://diabetes.webmd.com/guide/gestational_diabetes
[26] CDC website 3/30/09 http://www.cdc.gov/Features/DiabetesPregnancy/

Figure VII-12 Women with Gestational Diabetes



Data Source: Albuquerque/Bernalillo County Health Equity Assessment Tool
Note: Number of births 2003-2005: Hispanic White 15243, Non-Hispanic Whites 8999, American Indian 1769, Asian/Pacific Islander 1769, Black or African American 716.

BERNALILLO COUNTY COMMUNITY HEALTH COUNCIL PREGNANCY TO THREE TASK FORCE

The "Pregnancy to Three" (P-3) Task Force of the Bernalillo County Health Council focuses on pregnant women and children from birth to age 3. It includes representatives from the YWCA, the New Mexico Department of Health, the UNM College of Nursing, UNM Hospital and others working on health issues. The P-3 Task Force has held a series of meetings to look at service strengths and gaps for this population. The group noted that the County has very little preventive home visitation in our County. There are only about 150 potential slots for nearly 10,000 babies born annually.

To improve birth outcomes in Bernalillo County the P-3 Task Force has decided to focus on bringing the

Nurse Family Partnership (NFP) to Bernalillo County. NFP is a home visiting-based program intended to promote the well-being of first-time, low-income mothers and their children. Services such as home visiting by trained nurses, referrals to community resources, and the development of within-family resources are provided through the child's second birthday. Experimental evaluations indicate that participation in NFP has positively impacted poor, unmarried mothers' outcomes (e.g., education, employment, reproductive, mental health), and their sons' and daughters' outcomes as children (e.g., social, language, and cognitive development) and years later as teenagers (e.g., criminal/behavior problems and substance use). Participants who were poor and unmarried experienced many positive outcomes (as described below); participants who were not poor and unmarried experienced positives outcomes as well, however, these impacts were not as diverse or extensive. [27]

A proposal from President Obama to create a nurse home-visitation program for first-time mothers has won bipartisan support in Congress, and proponents are optimistic that it could receive funding this year. Under the program, nurses would provide home care to low-income mothers-to-be and to the new mothers and their infants, at a cost of $8.6 billion over 10 years.[28]

[27] file:///Users/leorajaeger/Documents/nurse%20family%20partnership/NURSE%20HOME%20VISITATION%20PROGRAM.html

[28] By Lydia Gensheimer, CQ Staff, Initiative for New Mothers Has a Healthy Outlook on Hill (Need these 2 references)

VIII. CHRONIC DISEASES AND CONDITIONS

There are diseases and conditions that cannot be cured. However, quality of life and survival rates can be improve with sufficient access to appropriate health care. Chronic diseases and conditions include asthma, diabetes, cancer, heart disease, and disabilities.

A recent study of Bernalillo County death statistics shows that death rates from chronic pulmonary diseases, diabetes, cancer and heart disease are 2 to 4 times higher in low income neighborhoods as compared to more affluent neighborhoods.[29] Socioeconomic factors are powerful determinants of health. Marmot has identified the 10 most important social determinants of health: low social status, relentless stress, adversity in early life, social exclusion, stress at work, unemployment, absence of social support, addiction, poor nutrition, and an environment that promotes physical inactivity[30].

ASTHMA

Asthma is a chronic inflammatory disease of the airways characterized by wheezing, coughing, breathlessness and chest tightness. Asthma is a leading cause of missed days from school and can lead to missed days of work, visits to the hospital and emergency room, interrupted sleep, and limited physical activity. While asthma cannot be cured, it can be controlled through adequate disease management.

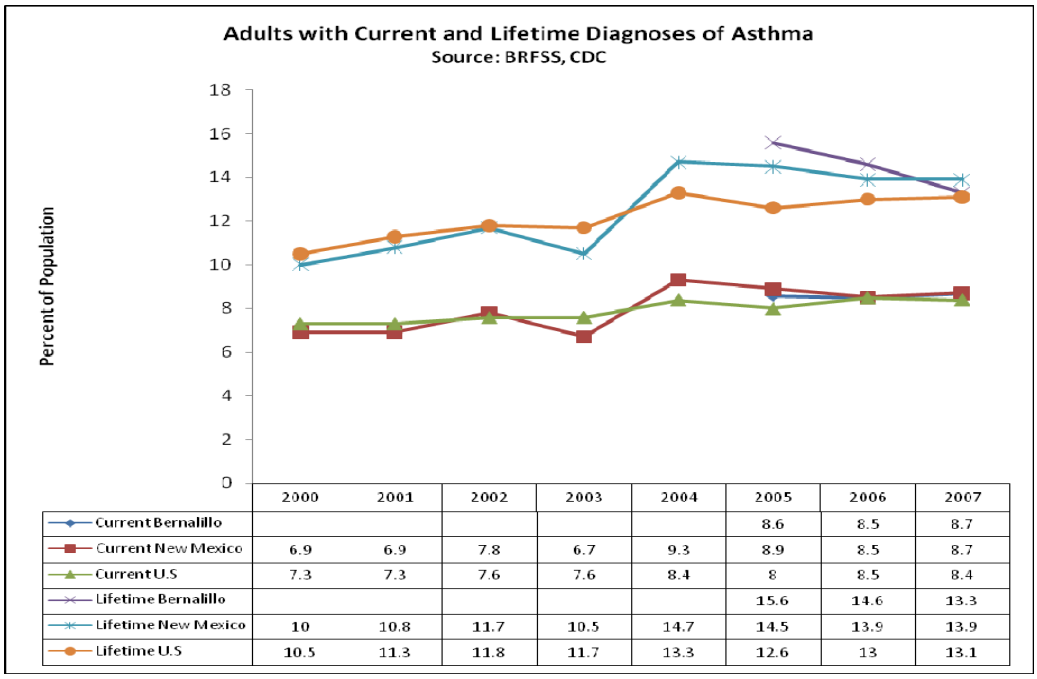
The primary source for identifying trends in asthma is the Behavioral Risk Factor Surveillance System (BRFSS) conducted under the auspices of the Centers for Disease Control and Prevention (CDC). These surveys have shown a trend of increasing lifetime and current diagnosis of asthma in New Mexico and the United States. The Bernalillo County prevalence of asthma prevalence (those that currently have asthma) is approximately 8.7%. Bernalillo County's percentage of adults who have ever been told by a doctor that they have asthma appears to be decreasing, although the differences are not statistically significant. [31]

The prevalence of asthma among children is uncertain. The estimate for the nation is 9% of all children.[32] An estimated 7% of children in the Albuquerque Public Schools (APS) have been diagnosed with asthma. However, a 2001 study by the Albuquerque Environmental Health Department suggested that approximately 15% of APS students have asthma. Other studies by the New Mexico Department of Health have found a prevalence of 6.2% among public elementary school students in urban core areas of New Mexico (population greater than 50,000); and 7.5 % for children statewide.

Data collected during 2006-07 at APS showed that students participating in the asthma program missed an average of 1.3 days of school due to asthma. This was similar to the preceding three years, and lower than national figures (3 to 4 days) [33].

[29] Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, March 2009.
[30] 2. Wilkinson RG, Marmot M. Social Determinants of Health. The Solid Facts. Copenhagen: WHO Regional Office for Europe; 2003. 3. Committee on Assuring the Health of the Public in the 21st Century. The Future of the Public's Health in the 21st Century. Washington, D.C.: The National Academies Press; 2002.
[31] Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data.* Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2007.
[32] Ibid.
[33] APS Asthma Program Evaluation Year 4, 2006-2007, APS Deborah Heath, August, 2007. http://www.rda.aps.edu/RDA/Documents/Publications/06_07/Asthma_Program_Eval.pdf

Figure VIII-1 Trends in Current and Lifetime Asthma



	2000	2001	2002	2003	2004	2005	2006	2007
Current Bernalillo						8.6	8.5	8.7
Current New Mexico	6.9	6.9	7.8	6.7	9.3	8.9	8.5	8.7
Current U.S	7.3	7.3	7.6	7.6	8.4	8	8.5	8.4
Lifetime Bernalillo						15.6	14.6	13.3
Lifetime New Mexico	10	10.8	11.7	10.5	14.7	14.5	13.9	13.9
Lifetime U.S	10.5	11.3	11.8	11.7	13.3	12.6	13	13.1

Asthma Hospitalization/Medical Care

When asthma reaches an acute phase, it can be life-threatening. Sometimes, an asthmatic with a cold or other respiratory infection can reach this phase. However, in many cases, adequate preventative care can reduce the chances of needed hospitalization or other emergency care.

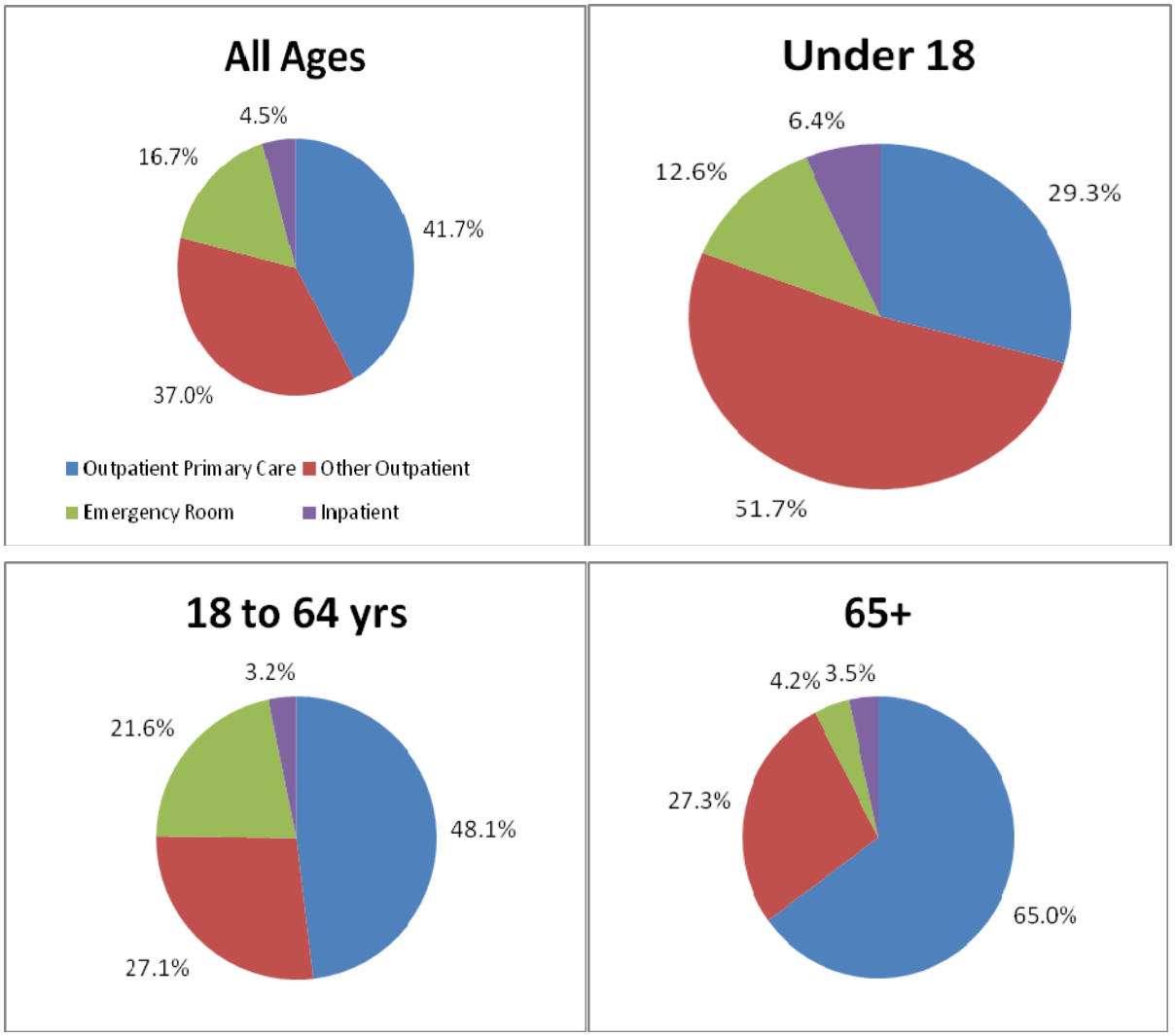
In 2007, there were 9,885 hospitalizations that included a diagnosis of asthma, 3,213 of which were in Bernalillo County. There were 1,753 hospitalizations with the primary diagnosis of asthma. When asthma was the primary diagnosis, the average length of stay was 3.4 days. Most of the asthma hospitalizations were for those under the age of 15 years, with a rate of 18.8 per 10,000 population. Those over 65 years of age had the next highest hospitalization rate, 11.4 per 10,000. Girls and women have an overall higher hospitalization rate than boys and men (9.3 females, 8.1 males) but boys under 15 years of age have a hospitalization rate of 22.9 compared to 14.7 for girls.[34]

University of New Mexico Health Sciences Center (UNM) has provided information about service utilization for asthma. This shows very different patterns of services by age group. Those under 18 years of age are the most likely to receive inpatient services than other age groups. A higher proportion of those 18-64 use Emergency Department Services compared to other age groups. Compared to other age groups, people 65 years and older are more likely to use outpatient primary care services for asthma.

[34] 2007 Hospital Inpatient Discharge Data, New Mexico Health Policy Commission, October, 2008.

Figure VIII-2 Asthma Services at UNMH

Asthma Services at University of New Mexico Health Sciences Center, 2007, by Age Group



Source: UNM Hospital: A Community Perspective on Access and Spending January - December, 2007, Community Advisory Council University of New Mexico Health Sciences Center, Prepared by Thomas N. Scharmen, MPH, MA, Terry Schneider, MPH

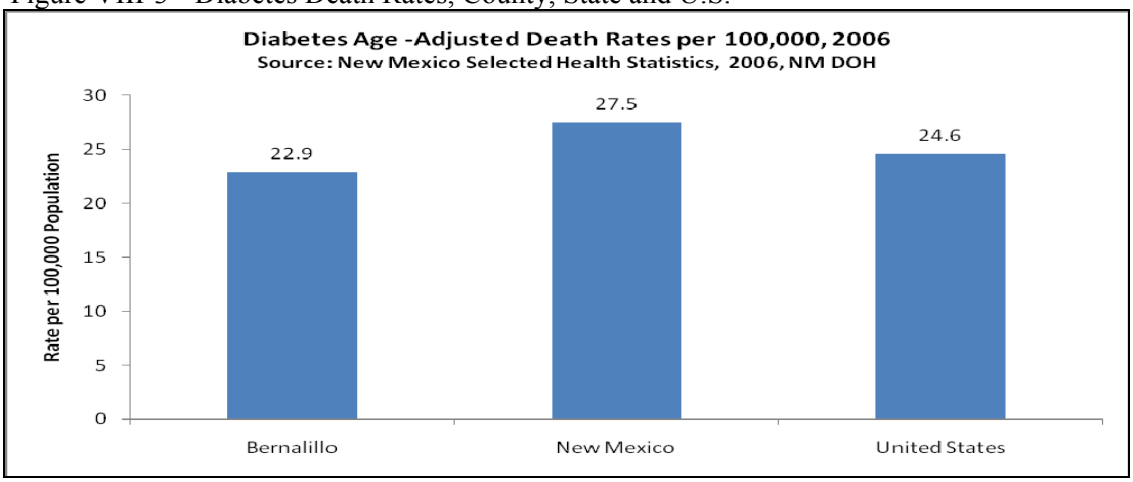
DIABETES

Important facts about the growing diabetes epidemic:

- **If current trends continue, 1 in 3 Americans will develop diabetes sometime in their lifetime, and those with diabetes will lose, on average, 10–15 years of life.** [35]
- Diabetes is the sixth leading cause of death in Bernalillo County, New Mexico, and the Nation.
- The reported diabetes death rate is lower in Bernalillo County than in the State or the Nation.
- From 1996 to 2005 diabetes death rates were 2 to 3 times higher in County neighborhoods with the highest poverty levels.[36]
- African American, Hispanic, American Indian, and Alaska Native adults are twice as likely as white adults to have diabetes.
- Diabetes is a chronic condition that can lead to serious complications, including heart disease, amputations, and blindness, as well as death.
- Diabetes is the leading cause of new cases of blindness among adults (aged 20–74 years), kidney failure, and nontraumatic lower-extremity amputations.
- The risk of cardiovascular disease and stroke is 2-4 times higher in people with diabetes.
- The risk of death among people with diabetes is about twice that of people of similar age without diabetes. [37]
- The percent of pregnant women with gestational diabetes has been increasing since 1990 among all races in Bernalillo County[38]. Women with gestational diabetes are at much higher risk of developing Type II diabetes, and their infants are at higher risk for both diabetes and obesity.[39]

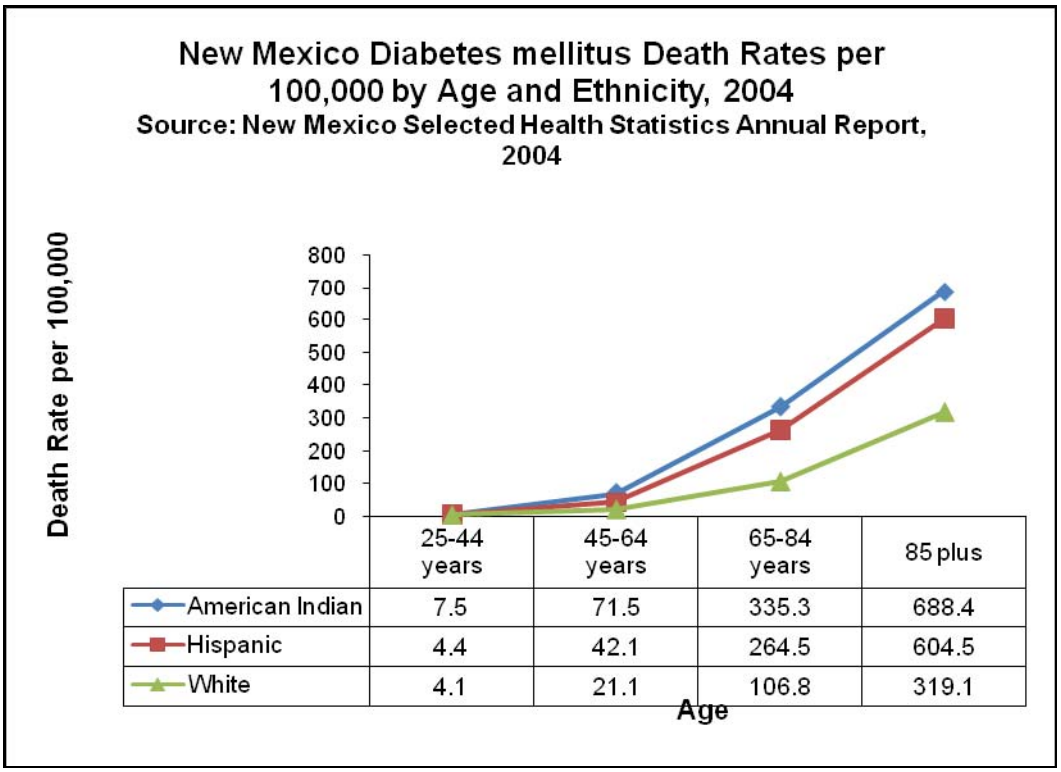
[35] Center for Disease Control website, 7/28/09 http://www.cdc.gov/nccdphp/publications/aag/ddt.htm
[36] Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, A Report to the Bernalillo County Environmental Health Department, March 2009 (ABC HEAT).
[37] Diabetes in New Mexico: The Facts. New Mexico Department of Health, Diabetes Prevention and Control Program, 12/1/05. http://www.health.state.nm.us/epi/documents/DIABETESFACTSDec05_000.pdf
[38] See Chapter VII, Maternal and Infant Health
[39] Diabetes in New Mexico: The Facts. New Mexico Department of Health, Diabetes Prevention and Control Program, 12/1/05. http://www.health.state.nm.us/epi/documents/DIABETESFACTSDec05_000.pdf

Figure VIII-3 Diabetes Death Rates, County, State and U.S.



Death rates from diabetes are significantly different between racial and ethnic groups in all age groups. In New Mexico, American Indians death rates are the highest, followed by Hispanics. (Figure VIII-4)

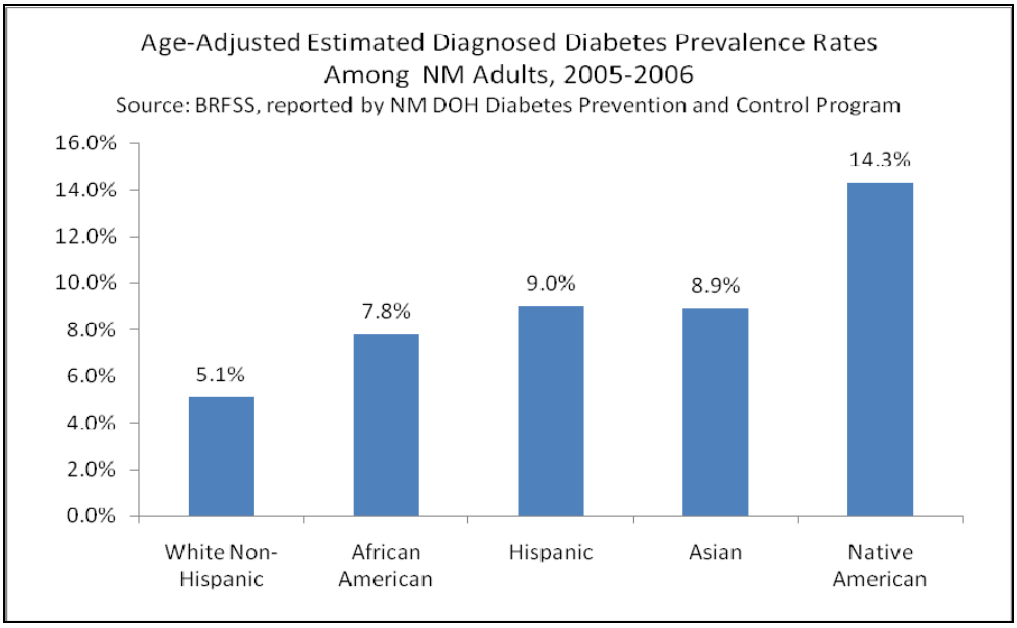
Figure VIII-4 Diabetes Death Rates by Ethnicity



The prevalence of diagnosed diabetes varies significantly between races. (Figure VIII-5) The group with the highest rates is American Indians - more than 14% of this group lives with this condition. The lowest rates are among Whites. The rates may be understated since the BRFSS is based on phone surveys;

younger people and low-income people are less likely to have landline telephones.[40] In addition, most diabetes cases go undetected for many years.

Figure VIII-5 Diabetes Prevalence by Ethnicity



Preventative Care for Diabetes

Routine preventative care can help prevent or delay many diabetes related health impacts. New Mexico compares favorably to the United States for standard preventative care for diabetics. (Table VIII-1)

Table VIII-1 Preventative Care Among Diabetics

Preventative Care Among Diabetics, 2005, Age-adjusted Prevalence
Source: Chronic Disease Indicators, CDC website

Indicator	United States	New Mexico
Dilated eye examination among adults aged Greater Than or Equal to 18 years with diabetes	60.6	69.4
Foot examination among adults aged Greater Than or Equal to 18 years with diabetes	66	72.6
Influenza vaccination among adults aged Greater Than or Equal to 18 years with diabetes	39.4	54
Pneumococcal vaccination among adults aged Greater Than or Equal to 18 years with diabetes	37.4	43.1
Self blood glucose monitoring among adults aged Greater Than or Equal to 18 years with diabetes	61.5	68

[40] BRFSS.

American Indians are more likely to receive the required services than Hispanics and Whites, but death rates from diabetes are higher for American Indians than Whites and Hispanics in all age groups. American Indians are also 3.5 times more likely to have amputations from diabetes than non-Hispanic Whites. There was insufficient data to assess other ethnic groups. More than half of Whites and Hispanics do not receive the recommended services.[41] [42]

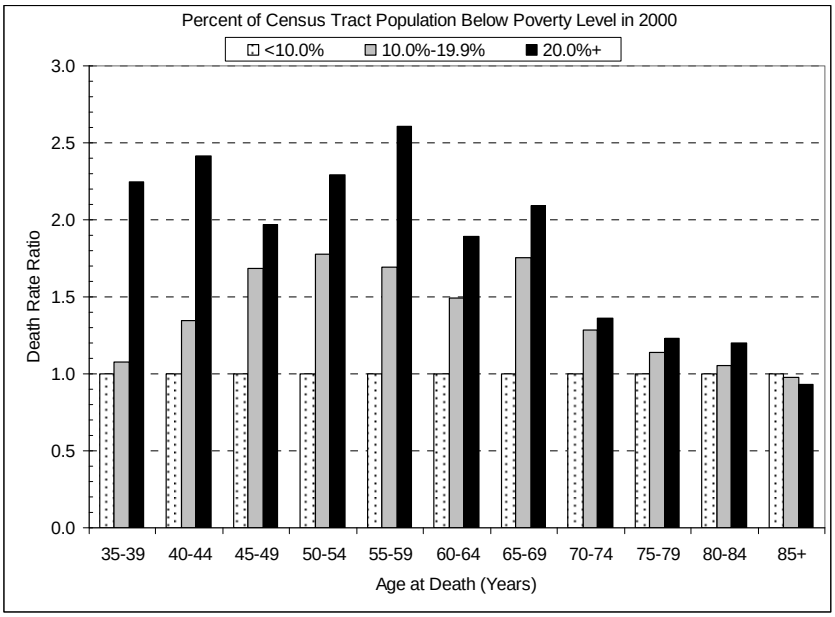
HEART DISEASE

Diseases of the heart are the leading cause of death in the U.S., New Mexico, and Bernalillo County. The American Heart Association recommends following a few basic steps to reduce the risk of heart disease: heart-healthy nutrition, daily physical activity, eliminating tobacco, controlling diabetes and a commitment to following healthcare professional's recommendations (including for cholesterol and high blood pressure).[43]

The death rates from heart disease for Bernalillo County are lower than the U.S., and New Mexico's is lower than Bernalillo County. (2006 Bernalillo County 175.6, 2006 New Mexico 167.8, 2005 U.S. 211.1). Age-adjusted death rate from heart disease are elevated in low-income areas for all age groups under 85. This difference is 2 to 2.5 fold for people between the ages of 35 and 69.

Figure VIII-6 Heart Disease Average Annual Age-Specific Death Rate Ratios by Poverty Level

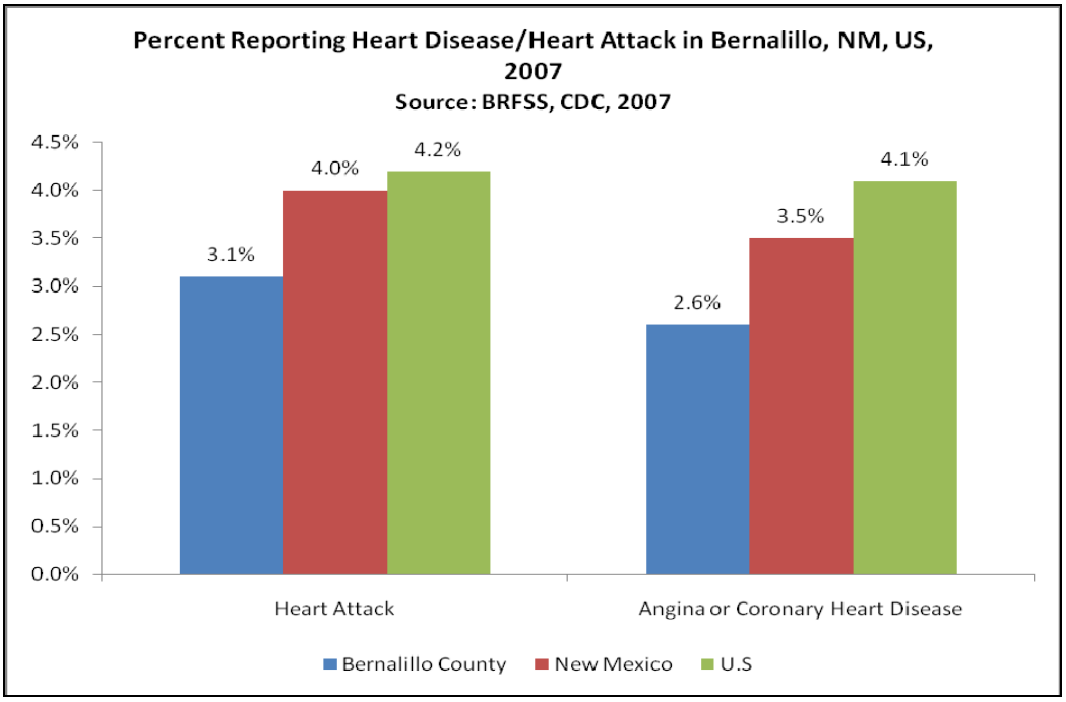
All Race/Ethnicities, Bernalillo County, 1996-2005, (Reference group = <10.0% poverty)



According to the 2007 BRFSS, an estimated 8% of the U.S. population lives with heart disease or has had a heart attack. 3.1% of Bernalillo County residents report surviving a heart attack, and 2.6% lives with heart disease. (Figure VIII-7).

[41] Racial and Ethnic Health Disparities Report Cards, New Mexico Department of Health, August, 2008.
[42] Diabetes in New Mexico: The Facts. New Mexico Department of Health, Diabetes Prevention and Control Program, 12/1/05. http://www.health.state.nm.us/epi/documents/DIABETESFACTSDec05_000.pdf
[43] American Heart Association Website: http://www.americanheart.org.

Figure VIII-7 Prevalence of Heart Disease/Heart Attack



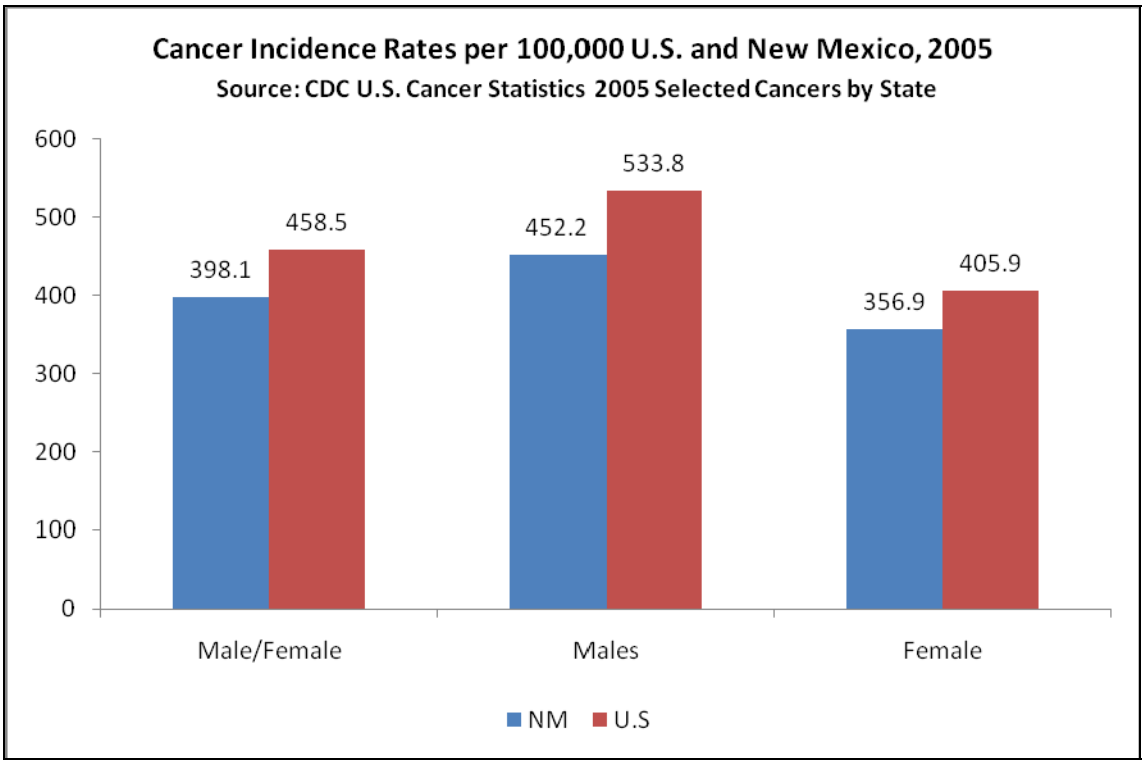
CANCER

Cancer is the second leading cause of death in the United States, New Mexico, and Bernalillo County. The incidence of all cancers has declined in New Mexico. Nationally, more people are surviving each year. The overall 5 year survival rate for adults diagnosed with cancer in 1996-2003 is 65%.However, disparities in health care impact survival. Low-income men and women who have inadequate or no health insurance coverage are more likely to be diagnosed with cancer at later stages, when survival times are shorter.[44]

New Mexico has the second lowest rate of cancer incidence in the United States. [45] (Figure VIII-8)

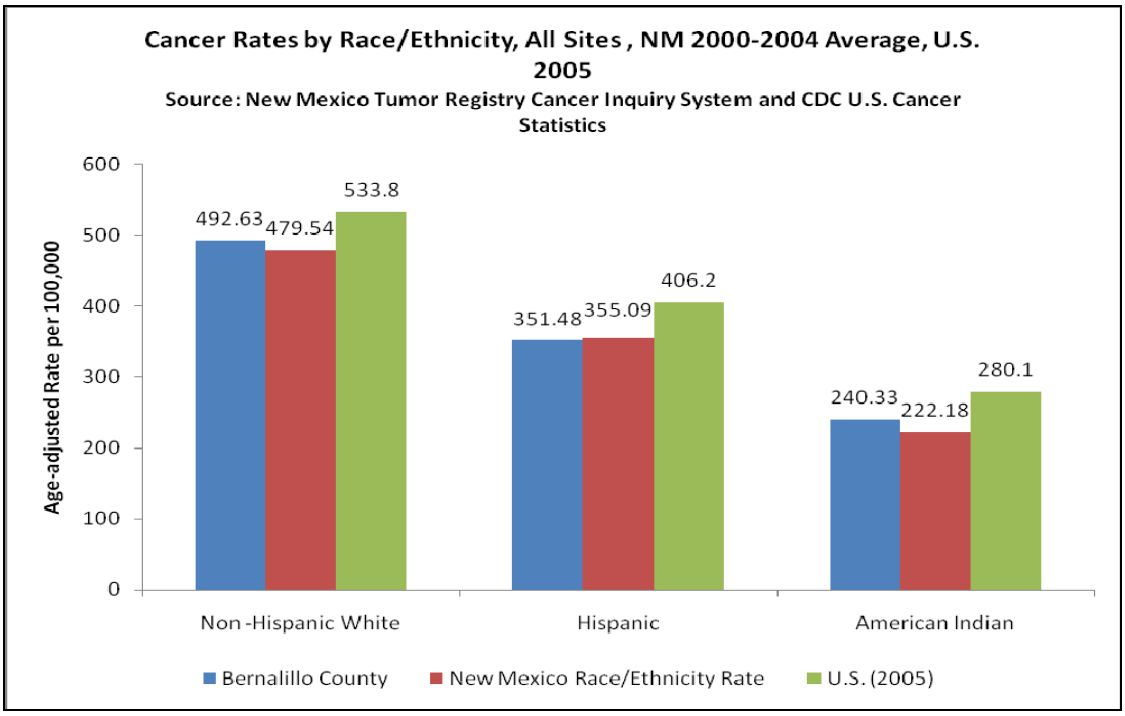
[44] CDC Cancer Survivorship Website: http://www.cdc.gov/cancer/survivorship/
[45] Invasive Cancer Incidents and Confidence Intervals by State, CDC,

Figure VIII-8 NM Cancer Incidence



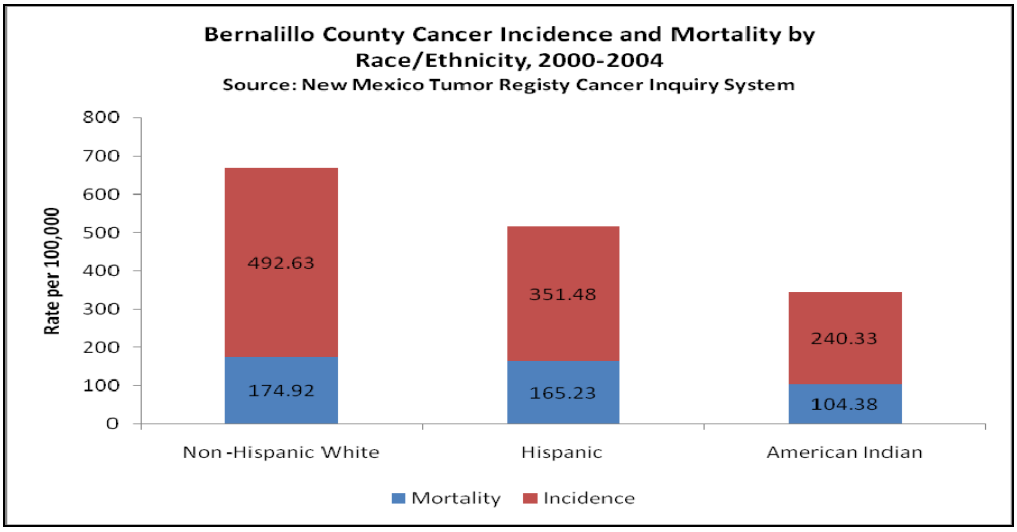
Cancer rates vary significantly by race. The overall cancer incidence rate was highest for Blacks in the U.S. (590.6); data for Black New Mexicans is not readily available. In Bernalillo County, New Mexico and the U.S. the cancer rates were highest for non-Hispanic White residents. The rates were significantly lower for Hispanics, and even lower for American Indians. Bernalillo County incidence rates were slightly elevated compared to New Mexico Rates for Whites and American Indians. (Figure VIII-9)

Figure VIII-9 Cancer Rates by Race/Ethnicity



Mortality rates for Hispanics and American Indians are lower than Whites. It is interesting to note that while mortality is highest for Whites, the ratio of mortality to incidence is much higher for Hispanics and American Indians.

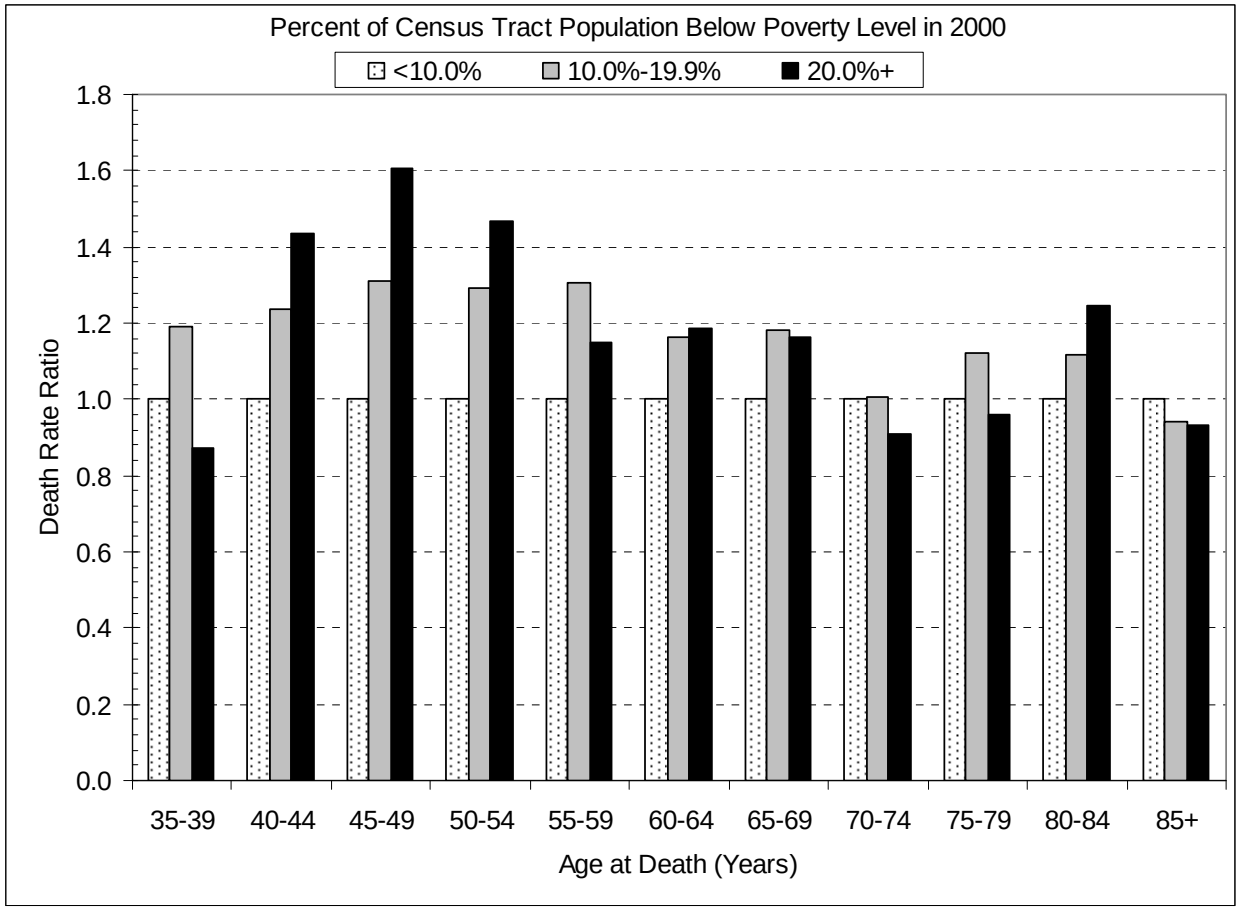
Figure VIII-10 Cancer Incidents/Mortality by Race/Ethnicity



Cancer mortality is elevated in high poverty areas of Bernalillo County for people between the ages of 40 and 69 (VIII-II).

Figure VIII-11 Cancer Death Rate Ratios by Poverty Level

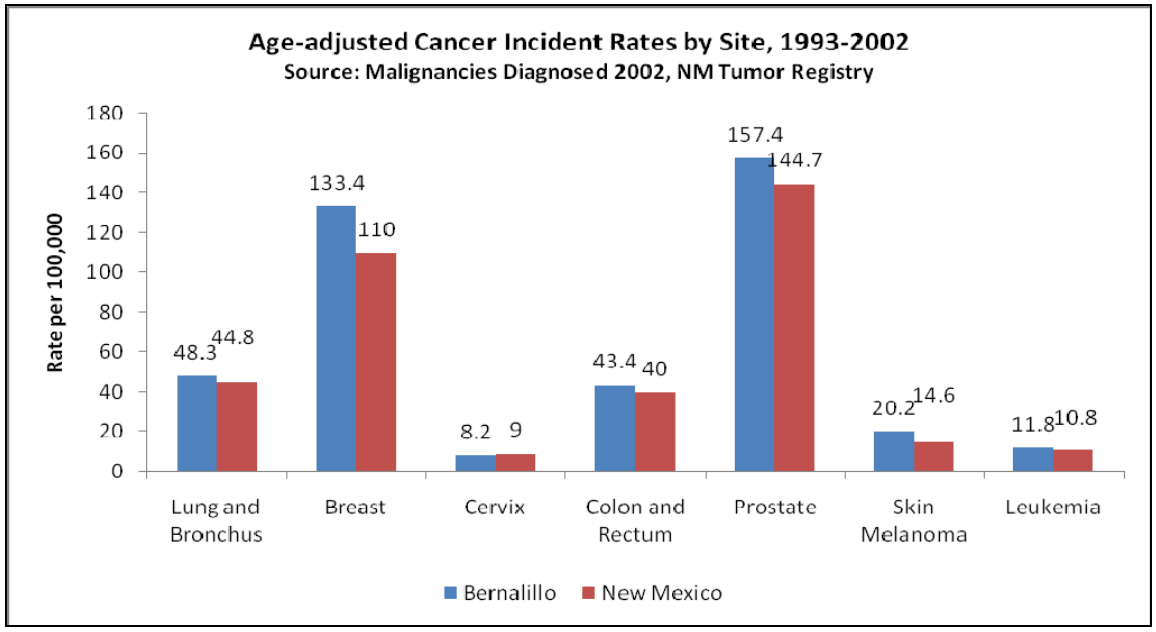
Average Age specific Death Rate Ratios by Poverty Level
Bernalillo County, 1996-2005



Source: Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, A Report to the Bernalillo County Environmental Health Department, March 2009.

From 1993 – 2002 Bernalillo County had elevated rates of prostate, breast, lung, and skin cancer, compared to New Mexico. (Figure VIII-12).

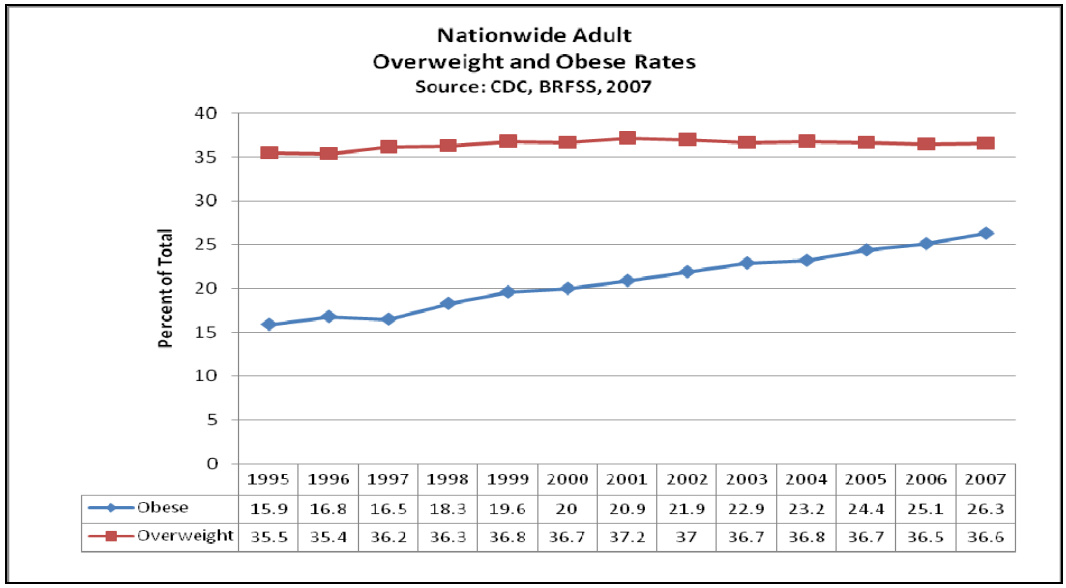
Figure VIII-12 Cancer Incidence by Site



OBESITY

Excessive weight carries many health risks related to chronic diseases, including heart disease, diabetes, and numerous other health conditions. Far too many U.S. residents are overweight (BMI 25-29.9), but the percentage of overweight adults has remained fairly constant. Obesity, defined as BMI greater than 30.0, among adults has risen steadily since 1995. (Figure VIII-13)

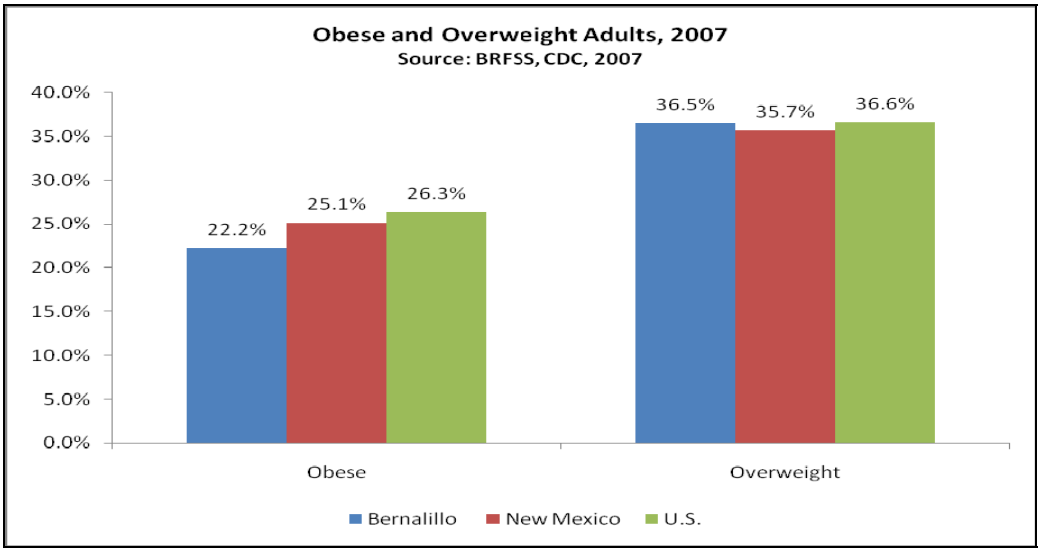
Figure VIII-13 U.S. Trends in Obesity and Overweight



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Obese	15.9	16.8	16.5	18.3	19.6	20	20.9	21.9	22.9	23.2	24.4	25.1	26.3
Overweight	35.5	35.4	36.2	36.3	36.8	36.7	37.2	37	36.7	36.8	36.7	36.5	36.6

Based on BRFFS data, Bernalillo County's overweight population is similar to the State and the U.S. The percentage obese is lower than the rest the State and the U.S. (Figure VIII-14)

Figure VIII-14 Obese and Overweight Adults



Self-reported obesity and overweight rates information is collected in the YRRS. According to the 2007 YRRS, 10.8% of Bernalillo County youth are overweight and 8.5% are obese.[46] APS is currently collecting actual height and weight information, which should give more reliable estimates of the extent of the problem.

DISABILITIES

A significant number of Americans live with disabilities that interfere with activities of daily living. The U.S. Census Bureau defines disability as "long-lasting sensory, physical, mental, or emotional condition or conditions that make it difficult for a person to do functional or participatory activities such as seeing, hearing, walking, climbing stairs, learning, remembering, concentrating, dressing, bathing, going outside the home, or working at a job".

The 2005-7 Census estimates that there are 84,739 people in Bernalillo County meet this definition of disabled. This is 15% of the County population. The percentage living with disabilities increases with age.

Table VIII-2 People with Disabilities

Bernalillo County Residents with Disabilities Source: 2005-7 Census, U.S Census Bureau		
Age Group	Number	Percent of Age Group
5 to 15	5,264	5.8%
16 to 64	50,574	12.5%
65 +	28,901	40.3%

However, the Census definition of disabilities does not include a large number of people with physical and emotional issues that create limitations. It would not include people with learning disabilities other than those related to remembering or concentrating. People with long-term mental illnesses, or some forms of brain injury, would probably not be included in this estimate.

[46] 2007 YRRS Bernalillo County

The U.S. Census Bureau estimates the percentage of people living with disabilities. The Census questions focus on difficulties in sight, hearing, movement, and activities of daily living – dressing, bathing, shopping. In Bernalillo County, among people at least five years old from 2005-2007, 15 percent reported a disability according to these criteria. The likelihood of having a disability varied by age - from 6 percent of people 5 to 15 years old, to 13 percent of people 16 to 64 years old, and to 40 percent of those 65 and older.[47]

Developmental disabilities are a diverse group of severe chronic conditions that are due to mental and/or physical impairments. They can include Cerebral Palsy, Autism Spectrum Disorders, hearing or vision loss, mental retardation, and many other conditions. People with developmental disabilities have problems with major life activities such as language, mobility, learning, self-help, and independent living. Developmental disabilities begin anytime during development up to 22 years of age and usually last throughout a person's lifetime. [48] Early intervention, as early as possible before children begin school, can have a significant impact on education outcomes. For future profiles, it would be useful to include data regarding the number of children in APS that received early intervention services for developmental disabilities before kindergarten (e.g. Child Find or other early intervention services) compared to the number of children who were identified after enrolling in APS). This data is not readily available in APS or New Mexico.

Arthritis

There are over 120 different types of arthritis and rheumatic disease. Some forms can result in kidney disease, blindness and premature death. It is the leading cause of disability among adults in the U.S. It primarily affects women – 2/3 of those with arthritis are women. Physical inactivity can cause arthritis, but arthritis can also cause painful conditions that limit physical activities. Dealing with the pain and disability increases the likelihood of feeling of helplessness, depression, anxiety, and anger.[49] In the U.S., 25.7% adults have been told they have arthritis. In New Mexico, 27.2% of the population has been diagnosed with arthritis, and 25.5% in Bernalillo County.[50]

Anemia/Iron Deficiency

Iron deficiency is the most prevalent hematologic disorder in childhood and is highest among low socio-economic groups. In a recent review of the prevalence of iron deficiency in the United States, 9% of toddlers were iron-deficient. The association of iron deficiency anemia with lower mental and motor developmental test scores in early childhood is well described.[51] "The current 'screen and treat" recommendations of the American Academy of Pediatrics for iron deficiency anemia in toddlers have

[47] U.S. Census Bureau. Disability Status, 2000, U.S. Census Brief, March, 2003 and American Fact finder Community Report. http://www.census.gov

[48] Developmental Disabilities: Topic Home, Centers for Disease Control and Prevention, http://www.cdc.gov/ncbddd/dd/default.htm

[49] New Mexico Arthritis Report, The Burden of Arthritis, Strategies for Action, 2003. The Chronic Disease Prevention and Control Bureau, New Mexico Department of Health, http://www.health.state.nm.us,

[50] Centers for Disease Control and Prevention (CDC). *Behavioral Risk Factor Surveillance System Survey Data.* Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2007.

[51] Iron Deficiency and Cognitive Achievement Among School-Aged Children and Adolescents in the United States, Halterman, Jill S, et. Al, Pediatrics Vol. 108, June 2001

been largely unsuccessful.[52] The possibility of long-lasting mental and psychomotor impairment associated with iron deficiency in this vulnerable age group makes prevention an extremely important public health problem. The New Mexico WIC programs screen all toddlers for anemia, and records their screening outcomes in the WIC electronic patient record system. Virtually all children diagnosed with anemia can be successfully treated with iron supplements. There are insufficient resources to assess why many children do not have "normal" hemoglobin readings in WIC follow-up visits. The New Mexico WIC program collects data on anemia; this is valuable information, which would be useful to include in subsequent profile updates.

[52] www.edpeiatricnews.com, September 2004, Iron Deficiency Still Goes unnoticed in Toddlers

IX. INFECTIOUS DISEASES

Despite substantial improvements in the prevention of HIV, viral hepatitis, sexually transmitted diseases (STDs), and tuberculosis in the United States, some populations continue to be disproportionately affected by these diseases. These infectious diseases were selected for inclusion in this chapter[53]. Infectious and parasitic diseases that are water born or food born are discussed in the Environmental Health Chapter.

In 2007, 2.4% of hospitalizations by Bernalillo County residents were for infectious and parasitic diseases, compared to 3.0% of New Mexico hospitalizations. There were 1,305 hospital admissions due to infectious and parasitic diseases in Bernalillo County (Central Region). The Bernalillo rate was 20.8 per 10,000; compared to New Mexico's rate of 25.1 and the U.S. rate of 36.5.[54]

HIV/AIDS

HIV is the pathogen responsible for AIDS. HIV attacks the immune system and undermines its function. HIV infection is spread by sexual intercourse, intravenous drug use, perinatal transmission, transfusion of blood and blood products, organ transplants, and occupation exposure to HIV-contaminated blood or body fluids.

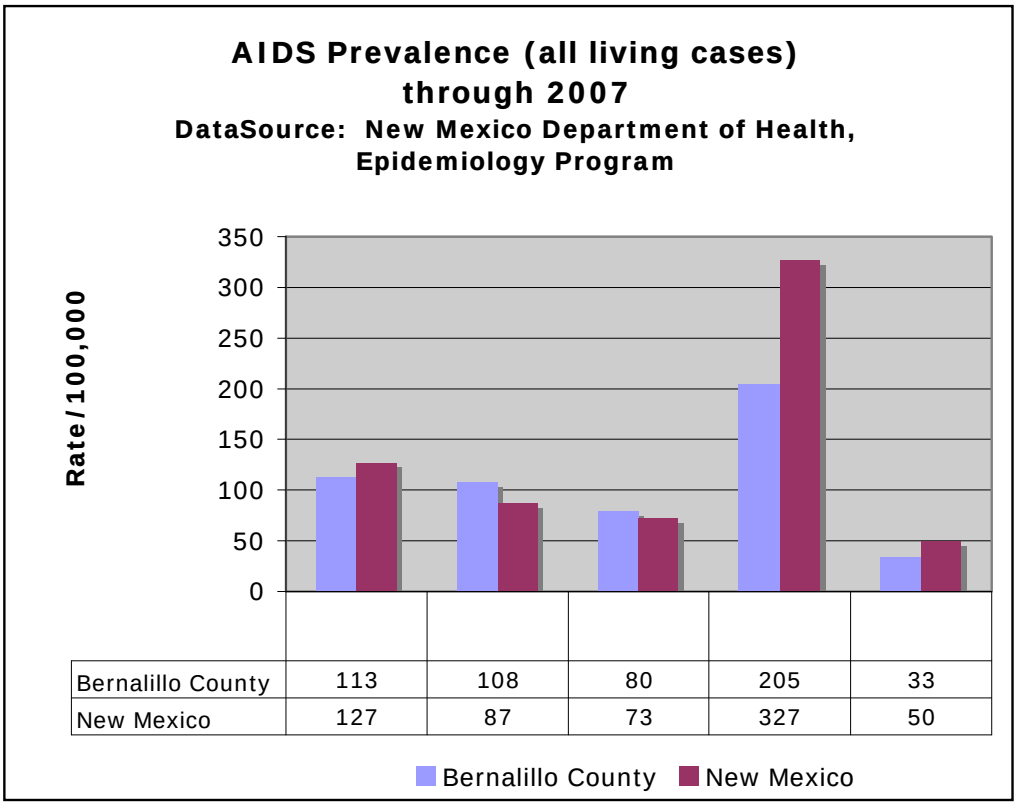
Data highlights:

- In Bernalillo County there is a wide disparity in HIV prevalence rates by race/ethnicity – ranging from 33 per 100,000 for Asian residents to 205 for African Americans.
- The prevalence rates for White, non-Hispanics, Hispanic Whites, and Native Americans are higher than the State rate.
- The prevalence rates for African Americans and Asians are lower than the State rates.
- In Bernalillo County the incidence of AIDS fell from 2002 to 2006 and increased from 2006 to 2007 to approximately the 2003 level.
- Based on 1981-2002 HIV/AIDS cases there is a relatively high concentration of cases in three contiguous zip codes (87102, 87106, 87108)

[53] C. Brooke Steele, Lehida Meléndez-Morales, Richard Campoluci, Nickolas DeLuca, and Hazel D. Dean. Health Disparities in HIV/AIDS, Viral Hepatitis, Sexually Transmitted Diseases, and Tuberculosis: Issues, Burden, and Response, A Retrospective Review, 2000–2004. Atlanta, GA: Department of Health and Human Services, Centers for Disease Control and Prevention, November 2007. Available at: http://www.cdc.gov/nchhstp/healthdisparities

[54] 2007 Hospital Inpatient Discharge Data, New Mexico Health Policy Commission, October, 2008.

Figure IX-1 AIDS Prevalence by Ethnicity

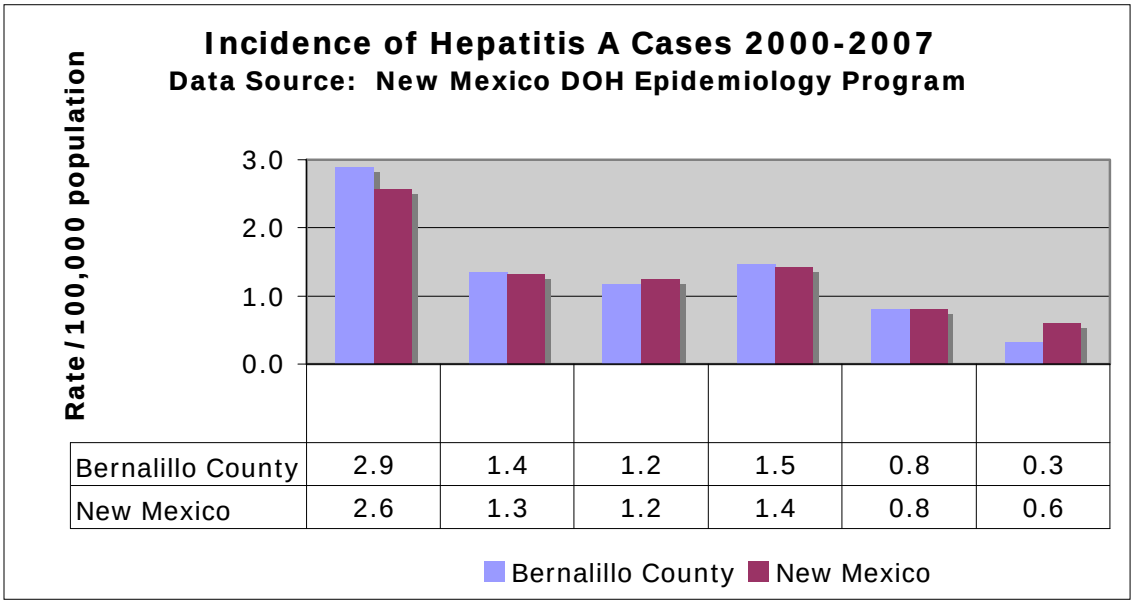


HEPATITIS A

Hepatitis A is a liver disease, which can occur in isolated cases or in widespread epidemics. With the 1995 introduction of vaccines to prevent hepatitis virus infection, there has been a substantial reduction in disease incident. Nationally rates are higher among Hispanics than among non-Hispanics[55].

55

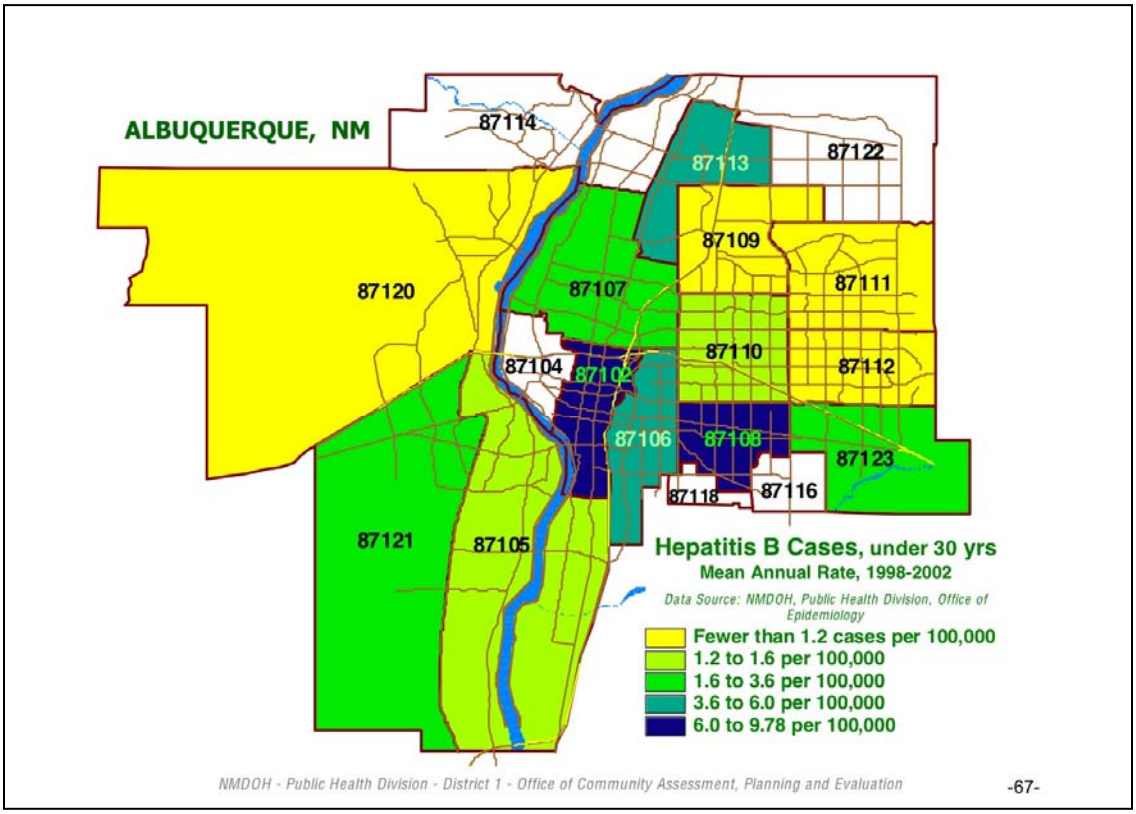
Figure IX-2 Incidence of Hepatitis A



HEPATITIS B

Hepatitis B is a serious disease caused by a virus that attacks the liver, and can cause lifelong infection, Hepatitis B is a serious disease caused by a virus that attacks the liver, and can cause lifelong infection, cirrhosis of the liver, liver cancer, liver failure, and death. Nationally rates of hepatitis B are highest among non-Hispanic blacks and lowest among Hispanics. Based on reported Hepatitis B cases from 1998-2002 there is a relatively high concentration of Hepatitis B cases in 3 contiguous zipcodes in Bernalillo County, 87102, 87106, and 87108 (Figure Figure IX-3).

Figure IX-3 Hepatitis B Cases 1998-2002 Bernalillo County



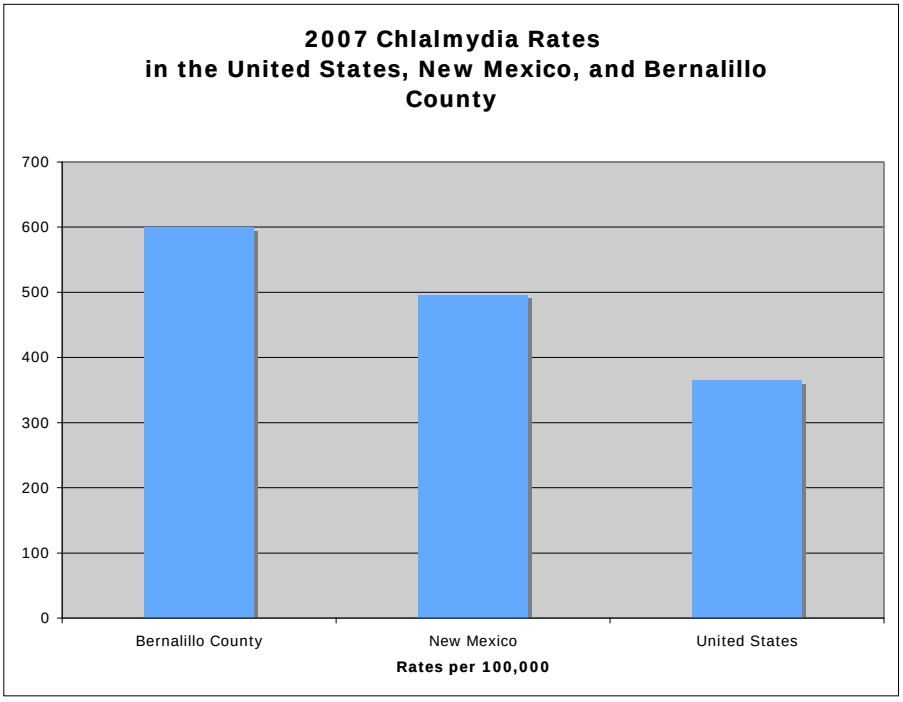
SEXUALLY TRANSMITTED DISEASES

Chlamydia is the most commonly reported notifiable disease in the United States. The number of reported cases in the country exceeded one million for the first time in 2006. In 2006, the United States case rate (i.e., cases per 100,000 population) for all ages and both sexes was 347.8 and in New Mexico it was 509.7. For the past six years, New Mexico has ranked among the top seven states nationally for incidence of chlamydia.

The increases in reported cases of chlamydia are only partly the result of increased disease incidence. Much of the increase can be attributed to new laboratory tests that are much more sensitive in identifying chlamydia infections. In addition, increased screening has been targeted at the groups at highest risk and most vulnerable for developing complications from chlamydia infection.

New Mexico's chlamydia rate was 509.7 cases per 100,000 population compared to a national rate in 2006 of 347.8 cases per 100,000. New Mexico's syphilis rate was 4.1 cases compared to a national rate of 3.3 per 100,000.

Figure IX-4 Chlamydia Rates, County, State, U.S.



Source: Epidemiology and Response Division, New Mexico Department of Health web site

X. INJURY

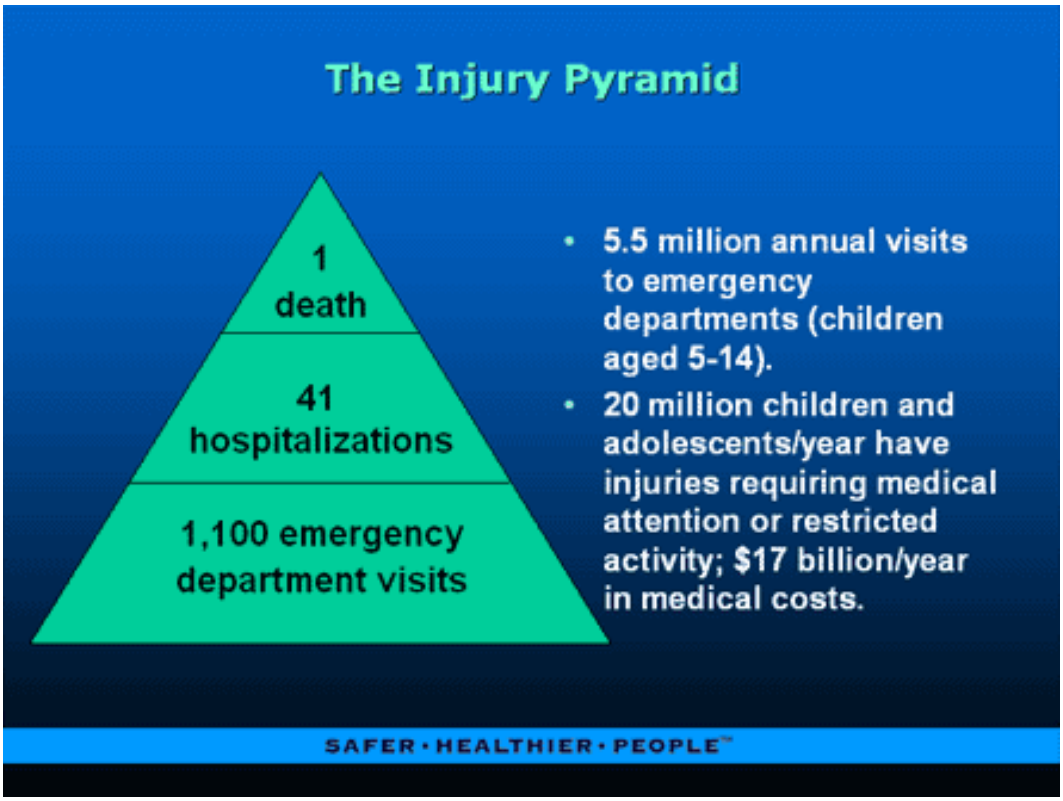
New Mexico consistently has been one of the worst states for injury death. Injury is generally grouped into two major categories: unintentional and intentional. Unintentional injuries include motor vehicle crashes, most falls, poisoning, drowning, and fires. Intentional injures are homicides and suicides. (Homicides will be discussed in Chapter XI, Crime and Violence; Information about suicide will be in Chapter XII, Mental Health, Substance Abuse and Suicide). In 2004, the latest year for which data is available, the State led the nation in unintentional injury deaths and tied for second with Nevada for intentional injury deaths.[56] Injury is the leading cause of death for children and young adults.

Motor vehicle crashes, suicide, and homicide are the leading causes of injury death. There are approximately 40,000 motor vehicle deaths, 30,000 suicides, and 18,000 homicides annually in the United States. [57]

Other major causes of injuries are falls, poisoning (mostly from drug overdoses), drowning, and fires. In Bernalillo County in 2007, there were 422 unintentional injury deaths, 60 homicides, 120 suicides, and 18 undetermined.[58] In 2005, New Mexico had the second highest drug induced death rate in the nation for combined intentional and unintentional injury death: 20.9 deaths per 100,000 persons compared to the U.S. rate of 11.2 per 100,000.[59]

Death rates are only the tip of the iceberg, as shown in the "injury pyramid":

Figure X-1 The Injury Pyramid



[56] Injury Hurts New Mexico, New Mexico Department of Health, July, 2007.
[57] National Violent Injury Statistics System, ***http://www.hsph.harvard.edu/hicrc/nviss/***).
[58] OMI 2007 Annual Report, New Mexico Office of the Medical Investigator, University of New Mexico, 2007
[59] "Changing Trends in Drug Overdose Deaths, New Mexico, 2006-7". New Mexico Epidemiology, Volume 2008, Number 7. Epidemiology and Response Division, New Mexico Department of Health. September 26, 2008.

Source: Injury and Violence Slide Presentation, CDC, http://www.cdc.gov/HealthyYouth/injury/slides/slides/01.htm

Each year, an estimated one in four New Mexico residents requires medical attention due to injury, and the total cost of injury in 2004 in this state is estimated to be $3 billion[60]. The average number of non-fatal injury related a hospitalization was 30,598 in the years1998-2000, and 27,737 in the years 2001-2003. The age-adjusted rates were 58.5 per 10,000 and 50.9 per 10,000 respectively.[61]

Many factors separate injury death from survival – the speed of the vehicle, the choice of drugs consumed in a suicide attempt, or the weapon used in an assault are defining factors. The speed and quality of first emergency medical response can make a huge difference, as can the quality of care at a hospital. Over the past 50 years, the quality of emergency care has increased, leading to higher survival rates. However, it is difficult to find information about the quality of life for survivors, and about the availability of long term care for those with injury related disabilities.

Traumatic brain injury (TBI) is caused by a blow or jolt to the head or a penetrating head injury that disrupts brain functioning. The leading causes are: falls (28%), car accidents (20%), struck by or against events (19%) and assaults (11%). (Other acquired brain injuries can be caused by aneurisms, alcohol poisoning, hypoxia, infections, or chemotherapy, with similar outcomes.) The CDC estimates that 5.3 million Americans, or 2% of the population, have long-term or lifelong need for assistance with activities of daily living from TBI.[62] The more subtle effects of TBI can include as behavioral changes. It is unknown how many people suffer from difficulties at work or home due to TBI. [63]

UNINTENTIONAL INJURY

New Mexico's unintentional injury death rate was 65 per hundred thousand in 2004, the highest in the nation and 61% higher than the national rate. Motor vehicle crashes are the leading cause of death for all ages under 24 years, and second only to poisoning for those 25-64, and second only to falls for those over 65. [64] Although injury deaths are the leading cause of death for younger people, injury deaths increase with age, and persons 65 and older have the highest unintentional injury death rates, 123 per hundred thousand. Bernalillo County's 422 accidental injury deaths in 2007 was a decrease from 433 deaths in 2006.[65]

Motor Vehicle

Motor vehicle crashes account for the majority of unintentional injury deaths. New Mexico, like the rest of the nation, has experienced noteworthy decreases in motor vehicle deaths; the death rate has dropped 29% since 1981. This is generally attributed to increased seat belt and child safety seat use, as well as improved emergency response and medical care. Nonetheless, motor vehicle crashes continue to be a major issue in the state and in the nation. In Bernalillo County in 2006, there were 21,241 crashes, a crash rate of 355 per motor vehicle mile (MVM), the highest crash rate in the state. 8,983 people were injured,

[60] Injury Hurts New Mexico, New Mexico Department of Health, July, 2007.
[61] Office of Injury Prevention, New Mexico Department of Health, April 19, 2007. (Data source for all years is New Mexico Health Policy Commission.) Note: hospitalization numbers may be underrepresented due to missing data for about 25% of the "cause of injury" field in the data files.
[62] Centers for Disease Control and Prevention, http://www.cdc.gov/ncipc/tbi/Overview.htm
[63] Interview with Glen Ford, advocate for people living with brain injuries, and the Brain Injury Association of New Mexico website, http://www.braininjurynm.org.
[64] Injury Hurts NM 2007
[65] OMI 2007

and 74 people lost their lives. The death rate was 1.24 per 100,000, lower than the state rate of 1.86.[66] Death rates from motor vehicle crashes are generally higher in rural areas than in urban areas due to higher travel speeds and longer times for emergency medical responses.

The Albuquerque intersections with the greatest number of crashes in 2006 are presented in the table below:

Table X- 1 Intersections in Albuquerque with the Most Crashes[67]

The Seven Intersections in Albuquerque with the Most Crashes, 2006

Intersection	Crashes			People	
	Total	Fatal	Injury	Killed	Injured
Central Ave W @ Coors Blvd NW	102	0	30	0	44
Coors Blvd Nw @ Irving Blvd NW	107	0	36	0	63
Coors Blvd Nw @ Paseo Del Norte Blvd NW	164	1	42	1	64
Jefferson St Ne @ Paseo Del Norte Blvd NE	140	0	43	0	63
Montgomery Blvd Ne @ San Mateo Blvd NE	109	0	32	0	44
Montgomery Blvd Ne @ Wyoming Blvd NE	92	0	26	0	37
Pan American East Hwy N @ Paseo Del Norte Blvd NE	93	0	29	0	38

Most of the crashes (20,906) and most of the fatalities (67) occurred in Albuquerque. Of those crashes, 197 involved pedestrians, accounting for 1% of crashes; however, 18 of the pedestrians died, accounting for 29% of fatalities. Motorcycles also accounted for a disproportionate number of deaths: 1% of crashes and 8% of fatalities. Alcohol was involved in 979 of Albuquerque's crashes, which was 5% of the total. However, alcohol-involved crashes accounted for 34 deaths, which was 54% of the fatalities. [68] Maps of alcohol-involved crashes in Bernalillo County are included in Appendix A.

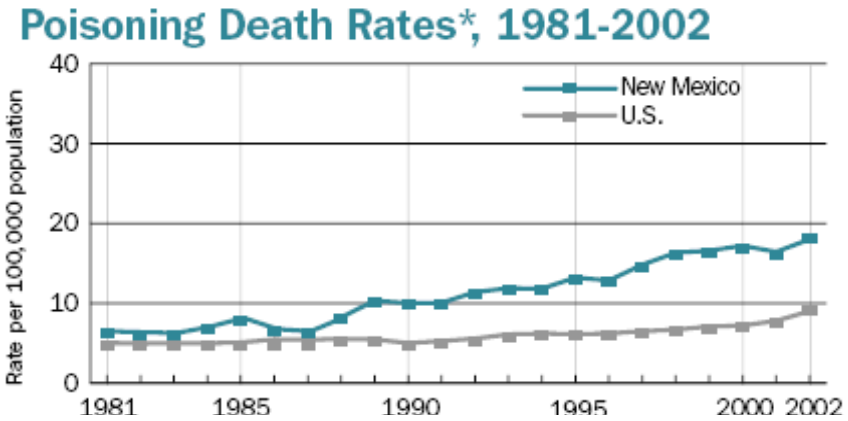
One of the key means of reducing motor vehicle crashes is enforcement of traffic laws. A map showing DUI responses by the Albuquerque Police Department between 1996 and 2000 is included in Appendix A. The responses may indicate areas that were targeted by enforcement officers, but they also show where the problems may be most severe.

Poisoning/Drug Overdose

Between 1987 and 2002, the poisoning death rate has increased 171% in New Mexico and 70% for the United States, primarily due to drug overdoses. [69] The Office of the Medical Investigator reports 194 drug-caused deaths in Bernalillo County in 2007, a number that includes both unintentional and intentional deaths.[70] Poisonings are now the second leading cause of death in New Mexico. It is the number one cause of injury death for people between the ages of 25 and 64 years and a leading cause for all ages except the 5-9 age group.

[66] New Mexico Traffic Crash Information, New Mexico Department of Transportation Programs Division, Traffic Safety Bureau, October, 2007. Available at http://www.unm.edu/~dgrint/tcd.html.
[67] Albuquerque Community Report, 2006. New Mexico Traffic Crash Information, New Mexico Department of Transportation Programs Division, Traffic Safety Bureau, October, 2007. Available at http://www.unm.edu/~dgrint/tcd.html.
[68] Albuquerque Community Report, 2006, New Mexico Department of Transportation Programs Division, Traffic Safety Bureau, 2007.
[69] Annual Report, 2005, Office of the Medical Investigator, http://omi.unm.edu.
[70] Annual Report, 2007, Office of the Medical Investigator, http://omi.unm.edu.

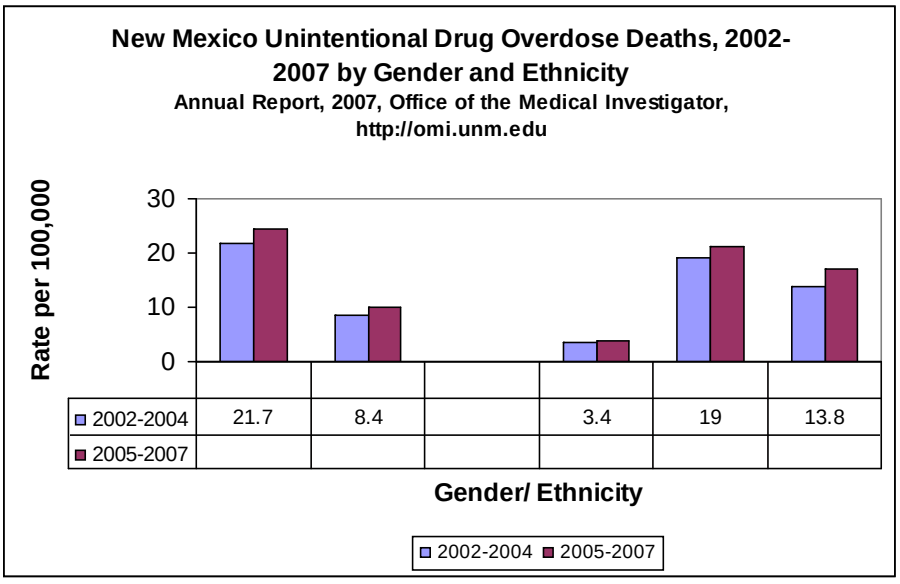
Figure X-2 NM Poisoning Death Rates



Source: Injury Hurts New Mexico, New Mexico Department of Health, February, 2005

The age –adjusted unintentional drug poisoning death rate in New Mexico increased from 17.2 per 100,000 in 2006 to 18.1 per 100,000 in 2007. There was a 28% increase in the death rate from prescription drug poisoning, while illicit drug-induced deaths increased 4% from 10.0 in 2006 to 10.4 in 2007. In situations in which more than one substance was found to have caused poisoning death, the increase was 14%, from 12.2 per 100,000 in 2006 to 14.0 per 100,000 in 2007.

Figure X-3 NM Unintentional Drug Overdose Deaths



During 2005-2007, Bernalillo County had the highest unintentional drug poisoning death rates, 23.2 per 100,000. Along with northeastern New Mexico, the County also had the highest death rates from heroin, cocaine, prescription opioids, tranquilizers,/muscle relaxants, and alcohol/drug combinations.

Figure X-4 Albuquerque Alcohol Involved Crash Locations 2007

Source of Traffic Crash maps: New Mexico Traffic Crash Information, New Mexico Department of Transportation Programs Division, Traffic Safety Bureau, October, 2007. Available at http://www.unm.edu/~dgrint/tcd.htm

XI. INTERPERSONAL CRIME AND VIOLENCE

Interpersonal violence takes many forms. A great deal of violence happens within families – between intimate partners, parents abusing children, and sometimes children abusing parents, particularly elderly parents. Other violence occurs between friends or acquaintances, or between strangers. This Chapter includes information regarding domestic violence, sexual assaults, and homicide.

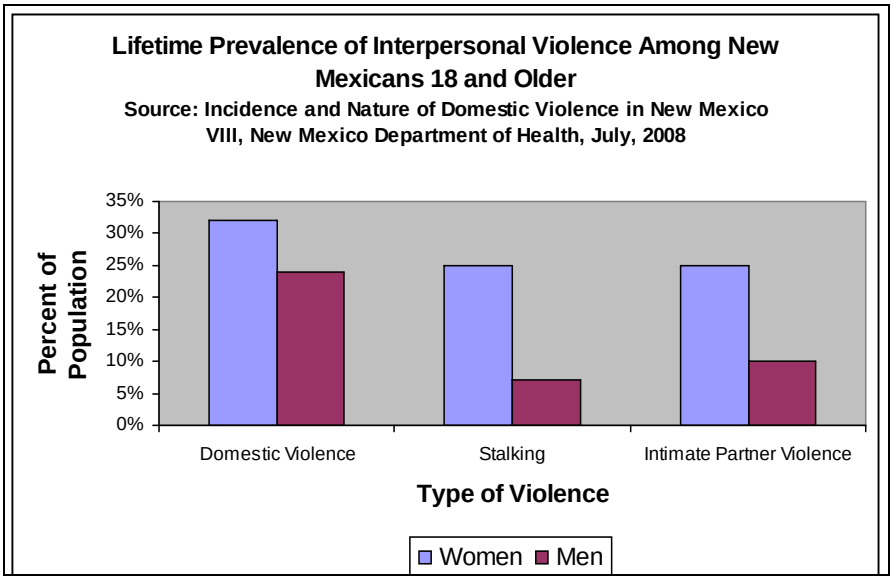
DOMESTIC VIOLENCE

Domestic violence is violence that occurs between anyone living in the same house, but the most common victims are women and children. Intimate partner violence is defined as violence between current or former spouses, boyfriends or girlfriends, including those in same-sex relationships. The CDC estimates that women experience about 4.8 million incidents of intimate partner physical assaults and rapes, and that men are the victims of 2.9 million physical assaults[71]. The U.S. Department of Justice, Bureau of Justice Statistics, reports a steady decline in intimate partner violence in the United States. In 1993, the rate was 5.8 per hundred thousand; in 2004, it was 2.6 per hundred thousand.[72]

The 2005 Survey of Violence Victimization in New Mexico (SVV) found that 1 in 4 New Mexico adults had experienced domestic violence in their lifetime. In 2007, law enforcement responded to 22,286 incidents of domestic violence against 17,484 victims in New Mexico.[73] This is a decrease from 2005, when police responded to 28,256 incidents, a rate of 26 per 1000 persons. 73.5% of victims were women. Injuries were reported in 28% of the police reports that documented injury status. Of 5,686 service provider reports, 1,926 (34%) adult victims reported being physically injured from the domestic assaults. Of those seeking services, 51% claimed that they had reported their domestic violence incident to police.[74] A weapon was used in 38% of incidents reported to police. Drug or alcohol use was documented in 21% of incidents.[75] In 2005, the SVV identified 17,177 stalking victims in New Mexico that experienced 245,631 incidents of stalking. However, in 2007, only 162 stalking victims reported this problem to police.[76]

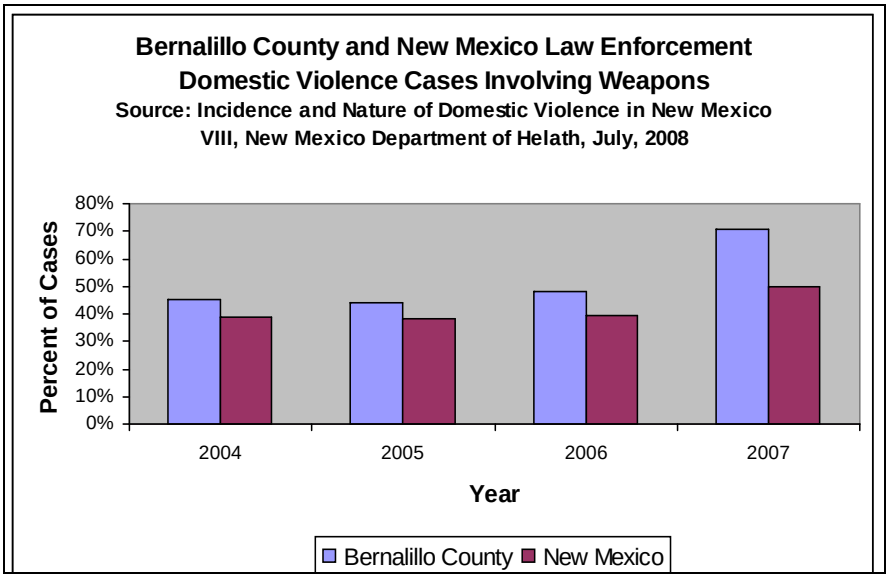
[71] Understanding Intimate Partner Violence, Fact Sheet, 2006. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, www.cdc.gov/injury.
[72] Intimate Partner Violence in the U.S., U.S. Department of Justice, Bureau of Justice Statistics, http://www.ojp.usdoj.gov/bjs
[73] Caponera, Betty. Incidence and Nature of Domestic Violence in New Mexico VIII: An Analysis of 2007 from the New Mexico Interpersonal Violence Data Repository. Office of Injury Prevention, Division of Epidemiology, New Mexico Department of Health, July, 2008.
[74] Domestic Violence Statistics, 2005, New Mexico Coalition Against Domestic Violence, http://www.nmcadv.org.
[75] Injury Hurts New Mexico, New Mexico Department of Health, February, 2005.
[76] Caponera, Betty. Incidence and Nature of Domestic Violence in New Mexico VIII: An Analysis of 2007 from the New Mexico Interpersonal Violence Data Repository. Office of Injury Prevention, Division of Epidemiology, New Mexico Department of Health, July, 2008.

Figure XI-1 Lifetime Prevalence of Interpersonal Violence, 2008 (NMDOH)



When weapons are involved, the potential for injury or death is increased.

Figure XI-2 Domestic Violence Cases Involving Weapons, 2008 (NMDOH)



Approximately 40% of households with intimate partner violence victims have children under the age of 12.

Table XI- 1 Nonfatal Intimate Partner Violence with Children, 1993-2004 (USDOJ)

Average annual number and percentage of U.S. households experiencing nonfatal intimate partner violence where children under age 12 resided, by gender of victims, 1993-2004 Source: US Department of Justice, Bureau of Justice Statistics.		
	Annual Average	
Households with intimate partner violence victims	Number	Percent
All households with -	871,510	100%
Children	349,020	40.0%
No children	389,300	44.7%
Unknown	133,200	15.3%
Female victim households with -	746,580	100%
Children	318,290	42.6%
No children	307,080	41.1%
Unknown	121,220	16.2%
Male victim households with -	124,930	100%
Children	30,730	24.6%
No children	82,220	65.8%
Unknown	11,990	9.6%

The New Mexico Coalition against Domestic Violence estimates that there were 4,600 children present at the scene of domestic violence in this state in 2005. Service providers reported that 55%of children who witnessed domestic violence were under the age of 12. 26% of these children experienced physical abuse and 5% experienced sexual abuse.[77] The number of child victims/witnesses receiving services in Bernalillo County increased from 2500 in 2003 to 3697 in 2007.[78]

[77] New Mexico Coalition against Domestic Violence.
[78] Caponera, Betty. Incidence and Nature of Domestic Violence in New Mexico VIII: An Analysis of 2007 from the New Mexico Interpersonal Violence Data Repository. Office of Injury Prevention, Division of Epidemiology, New Mexico Department of Health, July, 2008.

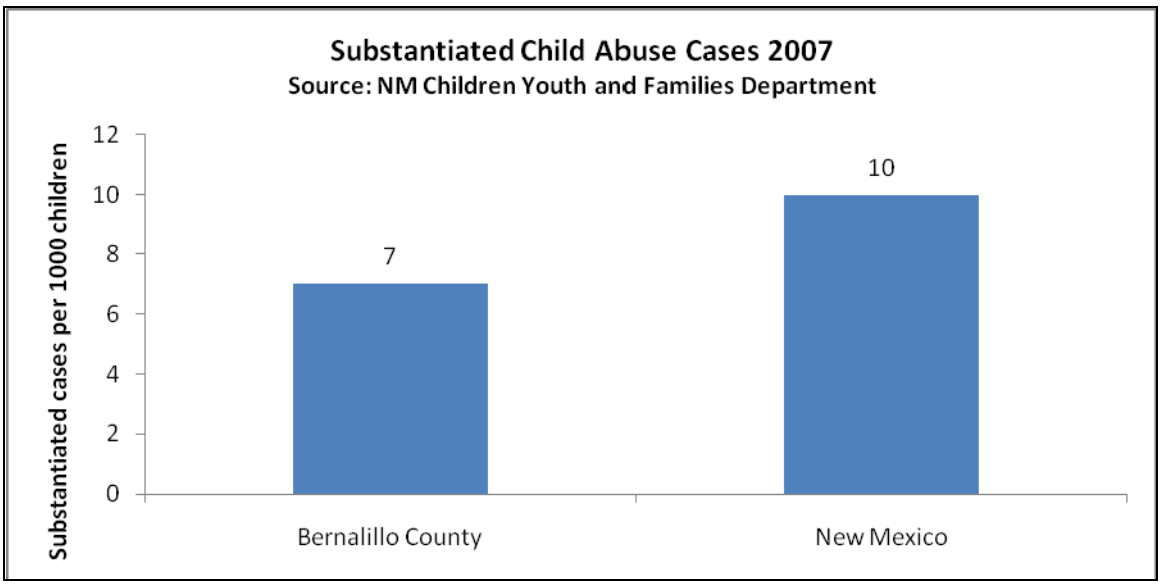
Table XI- 2 Children Victim/Witnesses Receiving Services, 2003-07 (NMDOH)

Children Victim/Witnesses Receiving Services in Bernalillo County, 2003-2007 Source: Incidence and Nature of Domestic Violence in New Mexico VIII, NMDOH, 2008							
Year	Number of Children Victim/Witnesses	Counseling	Emergency Shelter	Day Care	Case Management	Other Services	
2003	2512	262	487	6	121	679	
2004	3302	686	463	0	40	2097	
2005	3061	416	435	59	34	300	
2006	3827	362	479	0	65	3282	
2007	3697	249	443	0	73	2975	

CHILD ABUSE

Child abuse is violence against children by family members or other care takers. In 2007, New Mexico Children, Youth and Family Department, Child Protective Services Division investigated 14,973 cases of potential child abuse; 4,546 of these cases were substantiated for a rate of 10.3 cases of abuse per 1,000 children. In Bernalillo County, there were 4,546 investigations; 804 were substantiated. The 804 cases involved 1,045 children, a victim rate of 7.3 per 1,000 children.[79] It is important to note that an unsubstantiated case is one in which the investigator was unable to determine that the allegations were true, but it does not prove that the allegations were false.

Figure XI-3 Substantiated Child Abuse



Among the known victims, 428 were subject to physical abuse, 1,269 to physical neglect, and 68 to sexual abuse, for a total of 1,765. (Note: the number is greater than the total number of children since each child may have been subject to more than one form of abuse.) [80]

Children who witness domestic violence are 1500% more likely to be abused or neglected.[81] The number of children who witness abuse is not known, but if they are present in a household in which abuse is occurring, it is likely that they have witnessed some abuse.

[79] New Mexico Children, Youth and Families Department Reports, Bernalillo County, as of June 30, 2008, http://www.cyfd.org.
[80] Ibid.

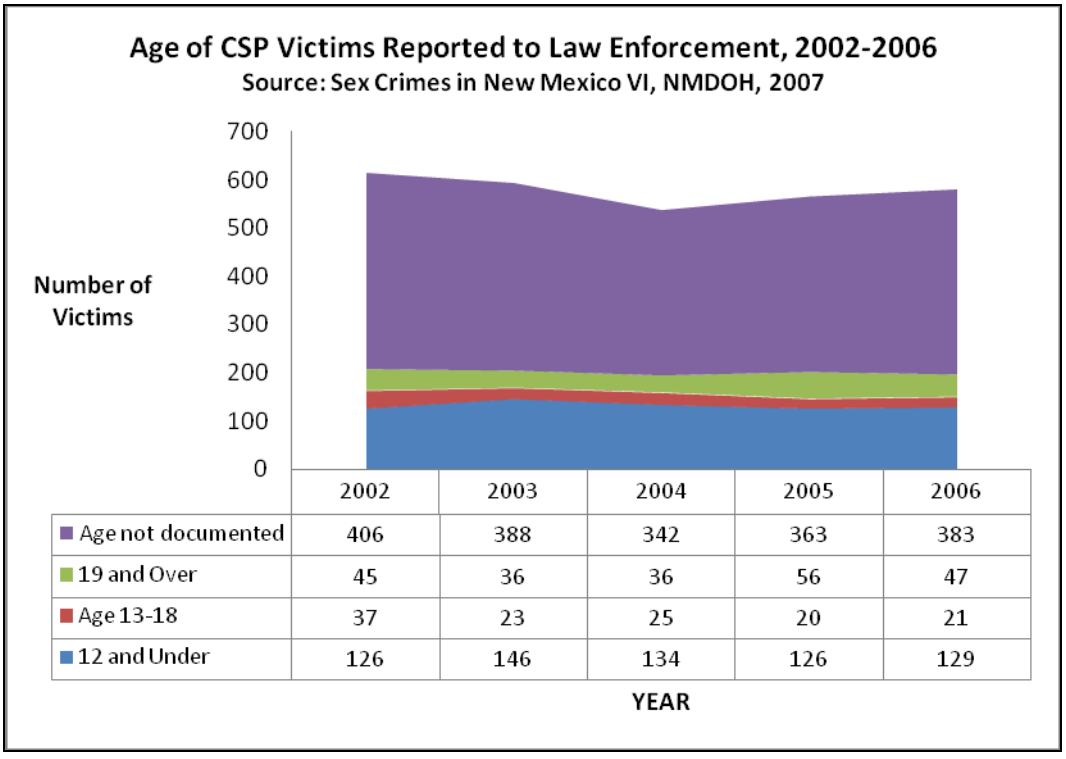
Sexual Assault[82]

Rape is a violent crime with long-lasting psychological and sometimes physical effects for the victim, but it is also a crime that is seriously underreported. Surveys indicate that nationally, only 16% of rape victims reported their victimization to law enforcement. In New Mexico, 17% of rape victims reported their victimization to statewide law enforcement agencies. In the 2005 New Mexico *Survey of Violence Victimization* (SVV), 1 in 4 New Mexico women and 1 in 20 men report a lifetime prevalence of rape or attempted rape.

In 2006, there were 1,163 sex crimes reported to law enforcement in Bernalillo County; 517 of which involved criminal sexual penetration (CSP). Of the CSP cases, 442 were reported to APD, 57 to Bernalillo County Sherriff's Department, none to Isleta Tribal Police, and 18 to the Albuquerque office of the State Police.

Of the 517 CSP cases, age was documented in 197 cases; 129 of the victims were children 12 years old or younger. 21 involved teens 13-18 years, and 47 of the victims were 18 years or older. It is likely that age is more frequently documented by law enforcement when the victim is young. 86% of the victims were female, 14% male. 90% of offenders were male; 10% female. (Figure XI-4)

Figure XI-4 Criminal Sexual Penetration Victim Age

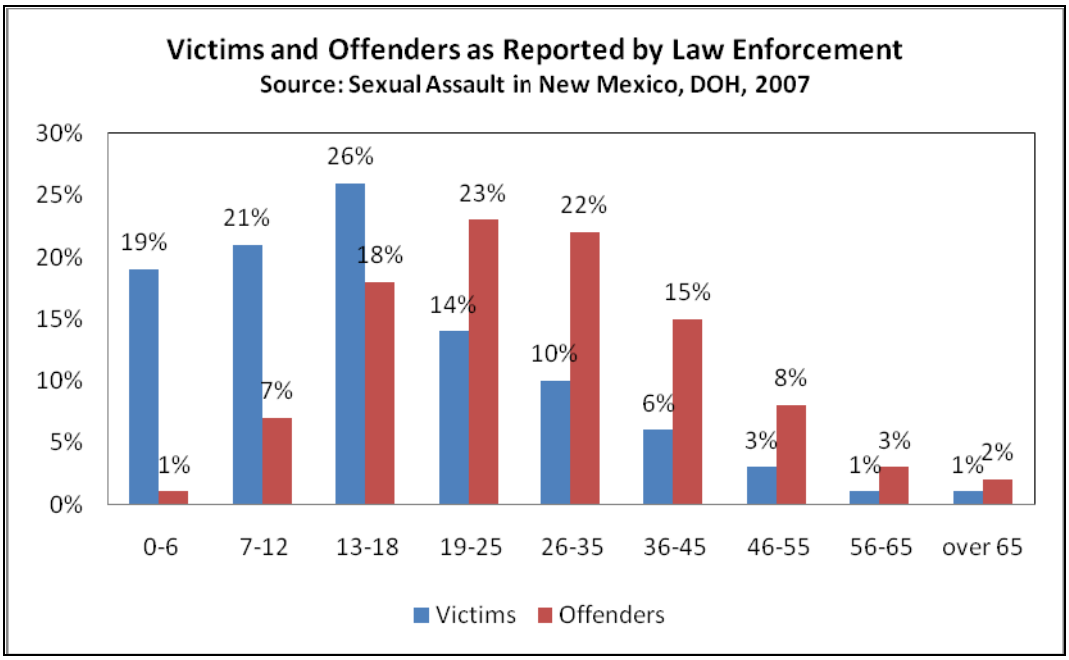


[81] New Mexico Coalition Against Domestic Violence Fact Sheet, 2000.

[82] Unless otherwise noted, the source for this section is: Sex Crimes in New Mexico VI. Betty Caponera, for the New Mexico Sexual Assault Programs, Inc., Funded by the New Mexico Department of Health, Injury Prevention Program. October, 2007.

Age of victims and offenders were documented in 846 CSP cases in New Mexico in 2006. When age was documented, the greatest proportion of victims were in the 13-18 age group, followed by the 7-12 age group. The greatest proportion of offenders, 50%, were between the ages of 19-35. Again, it is important to note that this might not reflect the overall ages of vicitims and offenders; these are only the cases in which age was documented.

Figure XI-5 New Mexico Victims and Offenders, 2007



Sexual Assault of Children

As noted above, sexual assault against children account for a large proportion of incidents reported to law enforcement. The SVV suggests that only 9% of those raped as children reported their rape to law enforcement.

Service provider and survey results both indicate that strangers are involved in a relatively small percentage of child rapes, approximately 3%. Relatives are twice as likely to rape a child as other acquaintances. In 22% of the cases, the father of the child is the offender; in 12% of cases, the offender is an uncle.

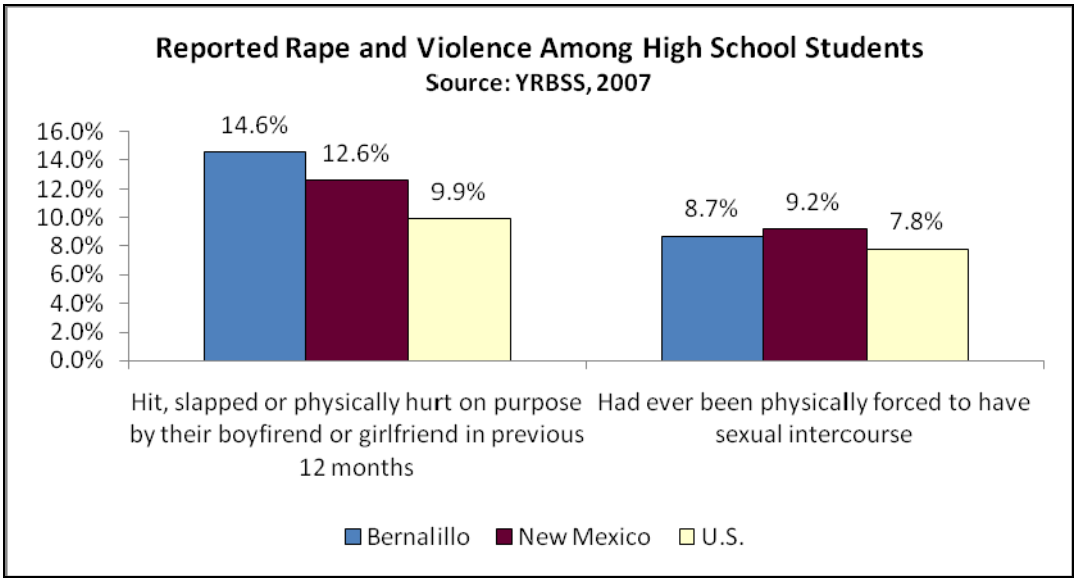
Key findings regarding the rape of children:

- Over one-third (39.5%) of child rape victims were threatened by the offender that they or someone close to them would be harmed or killed; and nearly half (48%) of the child rape victims believed their offender would carry out their threat.
- Most often female children were victimized in their *own homes* (56%), while male children were victimized in the *offenders' homes* (42%).
- More male children (15%), than female children (3%) were victimized in *multiple locations*.
- 17% of the children chosen by their offenders to be victimized were children with a mental, emotional or physical disability.

Sexual Assault of Adolescents

One-quarter (27%, respectively) of law enforcement reported and service provider reported sexual assaults of all types were perpetrated upon adolescents (ages 13-17). As noted above, there were 21 rapes of adolescents reported to law enforcement in Bernalillo County in 2006. This is clearly an understatement of the occurrence of rape among adolescents. According to the Youth Risk Behavior Surveillance Survey, 8.7% of Bernalillo County high school students report having been forced to have sex.[83]

Figure XI-6 Reported Rape and Violence Among High School Students



Key findings regarding trends in sexual abuse among adolescents:

- 32% of female adolescents compared to 1% of male adolescents were victims of on-going abuse.
- 10% of adolescent rape victimizations were perpetrated by strangers.
- Of the 90% of victimizations by known offenders, 49% were perpetrated by an acquaintance (other than family, an intimate partner or someone else in their household).
- Nearly a quarter of adolescent rape victims (23%) reported being physically injured during their sexual assault incidents and 6% received medical care for their injuries.

YOUTH VIOLENCE

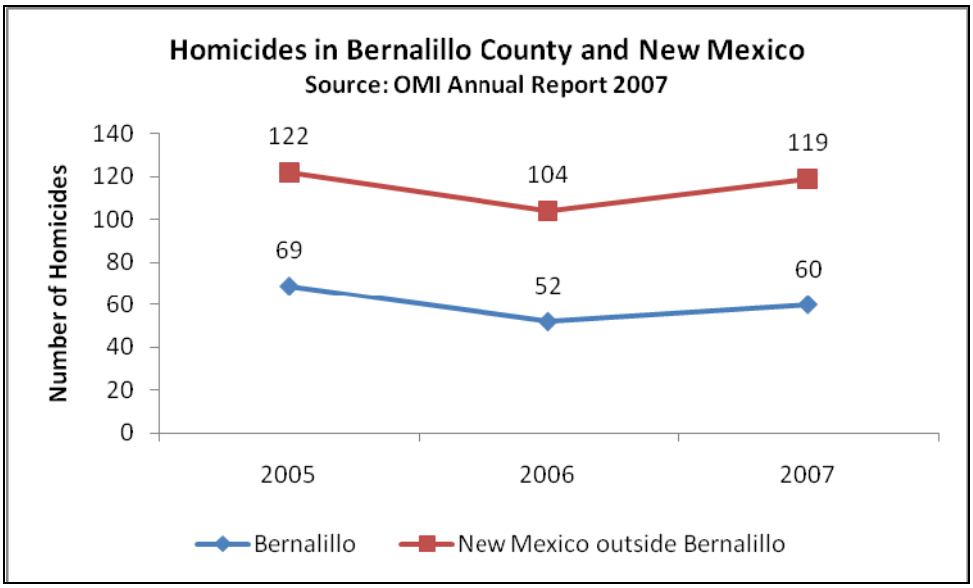
Far too many students do not feel safe at school. In 2007, 8.7% of County students reported skipping school in the past 30 days because they felt unsafe. 37.1% reported being in a physical fight in the past 12 months. 10.2% were threatened or injured with a weapon on school property in the past 12 months. 24.4% reported carrying a weapon such as a gun, knife or club in the past 30 days; 9.1% carried weapons on school property.

[83] Youth Risk Behavior Surveillance System, 2007. Centers for Disease Control and Prevention, http://apps.nccd.cdc.gov/yrbss.

HOMICIDE

The number of homicides in Bernalillo County and New Mexico shows no clear trend. (Figure XI-7) In 2007, there were 60 homicides in Bernalillo County. Victims in New Mexico were most frequently male (77%) and Hispanic (47%).[84] Most homicides occur between teens and adults. However, in New Mexico, homicide was the third leading cause of death for children 1-4 years.[85] In that year, there ten homicides to children were four years old or younger[86].

Figure XI-7 Bernalillo County and New Mexico Homicides

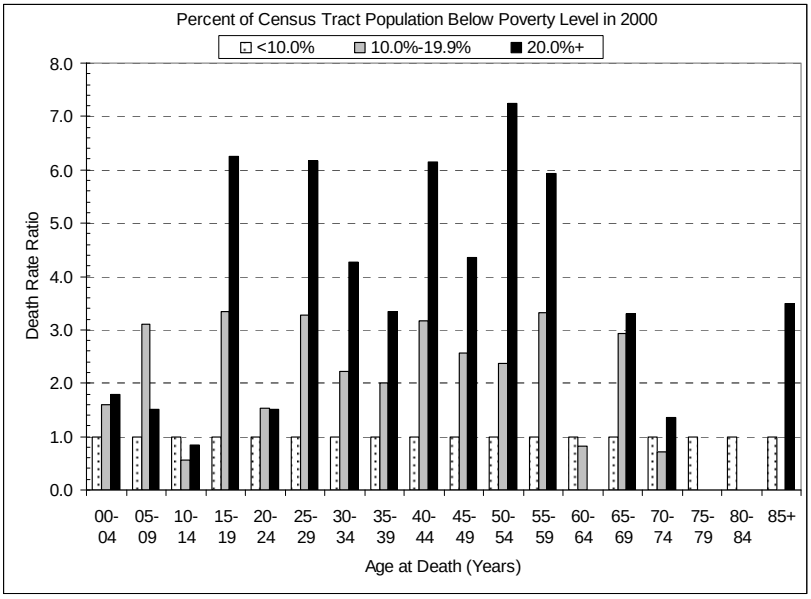


People living in low-income neighborhoods are much more likely to die of homicide. There is a six- to seven-fold increase for residents of high poverty areas compared to low poverty areas for most age groups between 15 and 59. (Figure XI-8) Homicide deaths between 1990 and 2005 in Bernalillo County census tracts is presented in Figure XI-9.

[84] OMI Annual Report, 2007, Office of the Medical Investigator, http://omi.unm.edu.
[85] New Mexico Selected Health Statistics, 2007
[86] Op. cit.

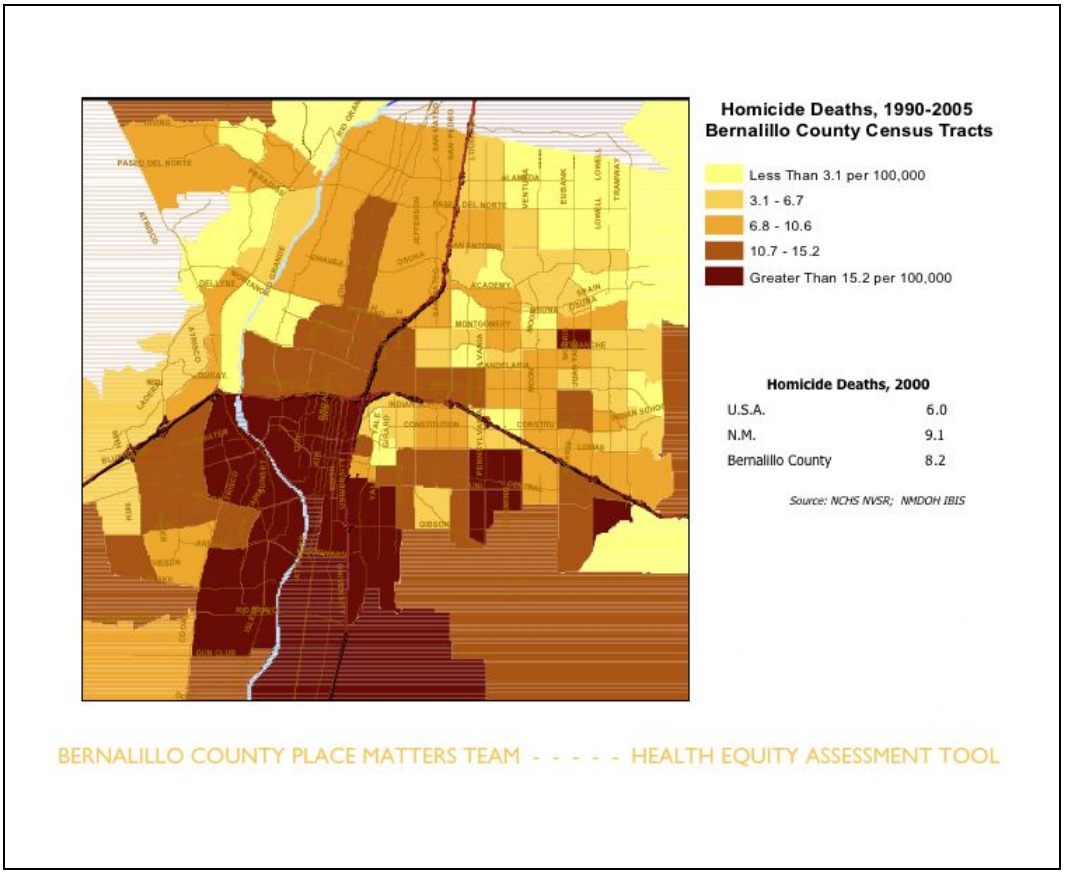
Figure XI-8: Homicide and Poverty

Homicide: Average Annual Age-Adjusted Death Ratio in Bernalillo County



Source: Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005,

Figure XI-9 Homicide Deaths by Bernalillo Census Tracts 1990 - 2005



Gun ownership is high in New Mexico, but guns were used less frequently in New Mexico homicides. Firearms were used 47.6% of murders in 2007, an 8% increase from 2006.[87] Nationally, guns were the mechanism of murder in nearly 70% of cases in 2005. Other mechanisms of homicide included beatings (22%), stabbings (17%), and other (13%). Research suggests that handguns, which account for 1/3 of gun ownership, are responsible for 80% of all homicides.[88]

A study of violent deaths in New Mexico in 2005 and 2006 indicated that intimate partner related violence was the leading cause of murder for women (37.3% of female deaths).[89] The New Mexico Coalition Against Domestic Violence estimates that there were 29 deaths due to domestic violence in 2005. This estimate is based on reviews of newspapers throughout the state. [90] Nationally, the relationship between the murderer and the victim is not known in approximately one-third of the cases. In cases in which the relationship is known, 33% of women murder victims were killed by intimate partners, and 44% were killed by immediate family members.[91]

[87] OMI Annual Report, 2007, Office of the Medical Investigator, http://omi.unm.edu.
[88] Cook, P.J. and Ludwig, J. The Social Cost of Gun Ownership, Sanford Institute of Public Policy, Duke University, December, 2004. http://www.pubpol.duke.edu/research/papers/SAN04-07.pdf.
[89] Styka, A.N., Chatterjee, BJ. Violent Death in New Mexico: Utilizing the New Mexico Violent Death Reporting System. New Mexico Epidemiology, Volume 2008, No. 10, December 5, 2008.
[90] Op. cit.
[91] Crime in the U.S., Federal Bureau of Investigation, http://www.fbi.gov/ucr/cius2007/offenses/expanded_information/data/shrtable_01.html.

XII. MENTAL HEALTH, SUBSTANCE ABUSE, SUICIDE

Mental and behavioral health concerns cover a wide range of conditions, including mental distress, episodes of major depression, and persistent conditions such as bipolar disorder or schizophrenia. Substance abuse is sometimes considered a mental health issue, or an outcome of difficult mental health conditions. The outcomes of mental or behavioral health conditions or substance abuse can include isolation, poor overall health, difficulties at work or school, violent behavior, and suicide or suicide attempt. This chapter includes an overview of mental health issues, substance abuse, and suicide.

MENTAL DISORDERS

Prevalence

The National Institute of Mental Health (NIMH) estimates that 26.2% of Americans suffer from a diagnosable mental disorder every year[92]; the Surgeon General estimates 21%. The main burden of illness falls on those who suffer from a serious mental illness (SMI), a term identified by Fed regulations that applies to disorders that interfere with social functioning. An estimated 6% of the population suffers from SMI. Serious and Persistent mental Illnesses (SPMI) include schizophrenia, bipolar, severe forms of depression and anxiety or obsessive-compulsive disorder. SPMI affects about 2.5% of the population.[93] Approximately 45% of those with any mental disorder meet the criteria for 2 or more disorders, with severity strongly related to comorbidity.[94]

The prevalence of mental illness in children is less well studied. However, it is estimated that about 20% suffer from some disorder. Anxiety disorders affect about 13% of the population under 18 years; mood disorders, 6.2%; disruptive disorders 10.3%; and substance use disorders 2%. About 5-9% of children age 9-17 meet the federal definition for serious emotional disturbance (SED), which means their mental disorder severely disrupts their ability to function socially, emotionally and academically. Although the prevalence of mental disorders is about the same for children and adults, childhood disorders often do not persist into adulthood, and many adults develop disorders as adults.[95]

The prevalence of mental illness in adults over the age of 55 is not well studied. The Surgeon General estimates that 19.8% have diagnosable conditions; 4% suffer from SMI; and 1% from SPMI. These statistics do not include cognitive impairments such as Alzheimer's. [96]

The Surgeon General's report suggests that based on available evidence, it appears that mental disorders are similar for all ethnic groups living in the community. However, the burden of mental health problems is greater for minorities. They have less access to services, and are less likely to receive needed services. They often receive poorer quality of mental health care, and are underrepresented in mental health research. There are barriers that affect all racial and ethnic groups, including cost, fragmentation of services, lack of series, and societal stigma toward mental illness. Minorities may also face additional barriers of mistrust and fear of treatment, fear of racism and discrimination and differences in language and communication.

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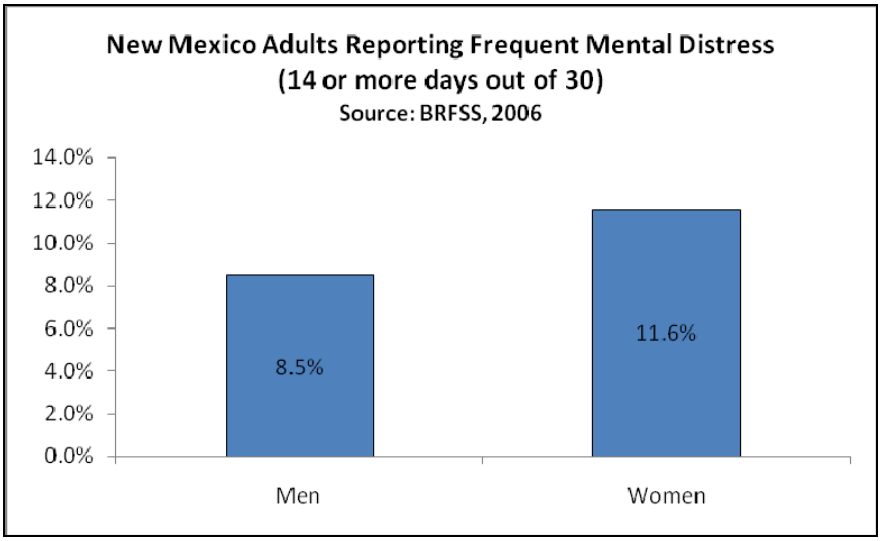
[92] National Institutes of Mental Health Statistics, www.nimh.nih.gov/health/statistics.
[93] Mental Health: A Report of the Surgeon General
http://www.surgeongeneral.gov/library/mentalhealth/chapter2/sec2_1.html
[94] National Institutes of Mental health Statistics, www.nimh.nih.gov/health/statistics.
[95] Mental Health: A Report of the Surgeon General
http://www.surgeongeneral.gov/library/mentalhealth/chapter2/sec2_1.html
[96] Mental Health: A Report of the Surgeon General
http://www.surgeongeneral.gov/library/mentalhealth/chapter2/sec2_1.html

Reported General Mental Health Problems

Adults: The Behavior Risk Factor Surveillance System (BRFSS) questionnaires include a number of questions regarding adult mental health. [97]

The percentage of New Mexicans reporting frequent mental distress (14 or more days out of the last 30 days) was comparable to the U.S. (10.1%, 10.2%). Bernalillo County data was only available for those experiencing seven or more days that were not good; that rate was 8.7%.[98] Women reported mental distress much more frequently then men.

Figure XII-1 New Mexico Adults Reporting Frequent Mental Distress



Between the years 2003-2007, there were noteworthy differences in frequent distress between different ethnic and racial groups in responses to the BRFSS. Blacks, Native Americans, and Hispanics were more likely to report frequent mental distress. Asian/Pacific Islanders were less likely to report mental distress than all other groups; the difference was statisitically significant between Asians and all other groups. The differences were statistically significant between Whites and Hispanics.

[97] NMDOH
[98] New Mexico Department of Health IBIS system, http://ibis.health.state.nm.us.

Table XII-1 Frequent Mental Distress – New Mexico 2003-07 (BRFSS)

New Mexico 2003-2007: Percentage with 14 or more Mentally Unhealthy Days (Frequent Mental Distress) Source: CDC, from BRFSS, Mental Health (http://apps.nccd.cdc.gov/HRQOL/)						
	White non-Hispanic	Black non-Hispanic	Hispanic	Asian/Pacific Islander	Native American	Other non-Hispanic
%	9.7	12.9	11.7	3.4	12.4	13.4
CI	(9.0–10.4)	(7.1–18.6)	(10.8–12.5)	(1.2–5.7)	(10.0–14.7)	(7.6–19.2)
n	16,768	362	9,952	253	1,524	

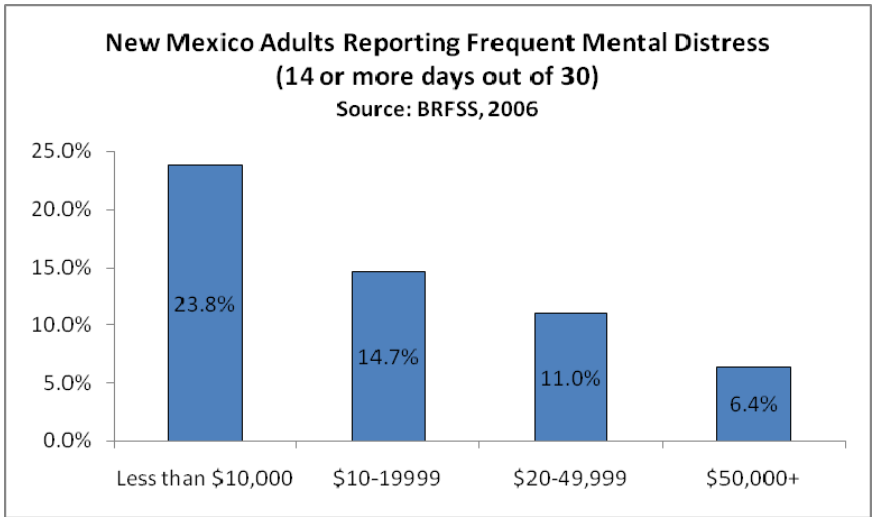
The available information from the BRFSS about mental distress in Bernalillo County shows those reporting fewer than 7 days that were not good. This is not directly comparable to the information about New Mexico and the United States, but it does indicate that Asians/Pacific Islanders in Bernalillo County experience less mental distress than other groups, and that Blacks experience more than other groups.

Table XII-2 Bernalillo County Fewer than 7 out of 30 days of Mentally Unhealthy Days

Bernalillo County Percent Responding fewer than 7 days of mental health "not good" Source: BRFSS						
	American Indian	Asian/Pacific Islander	Black/African American	Hispanic/Latino	White	Total
2004	86.68%	93.01%	81.97%	86.91%	89.89%	88%
2005	84%	100%	80%	88%	88%	89%
2006	86%	100%	91.00%	90.00%	94.00%	91%

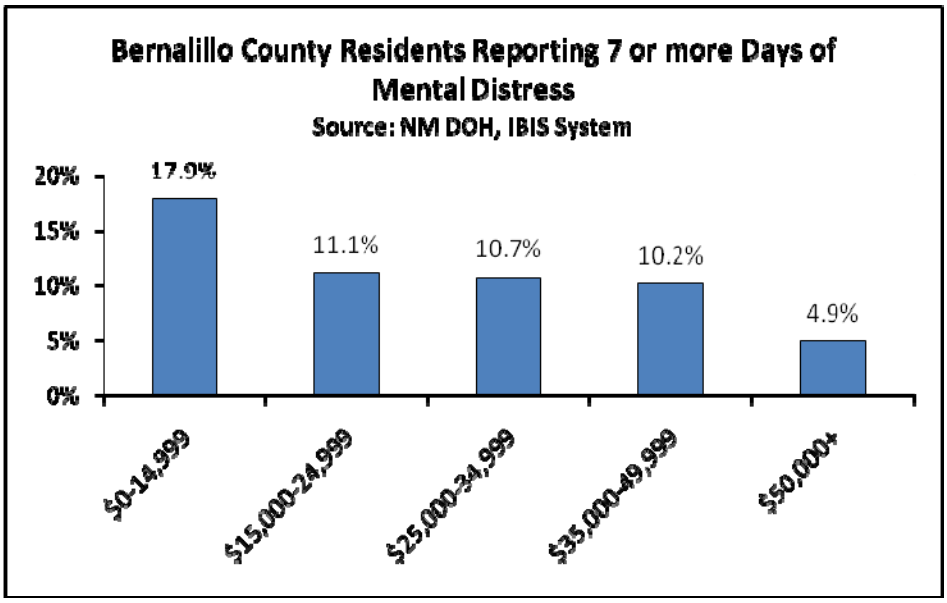
In 2006 New Mexico adults who live in low-income households report mental distress more frequently than more affluent adults.

Figure XII-2 New Mexico Adults Reporting Frequent Mental Distress



The percentage of Bernalillo County residents reporting mental distress seven or more days out of the past 30 is lower than the New Mexico number for 14 or more days. Nonetheless, the pattern is the same; lower income people are more likely to have more mentally unhealthy days than higher income people. It is also important to note that the number of Bernalillo County resident responses was low, and the confidence intervals very large.

Figure XII-3 Bernalillo County Residents, Mentally Unhealthy Days



Approximately 17% of U.S and New Mexico Adults have experienced a major depressive disorder in their lifetimes. Women are more likely to experience a major depressive disorder than men. Low income people are more likely to experience major depression than higher income people.

Figure XII-4 New Mexico Adults Reporting Diagnosed Depression

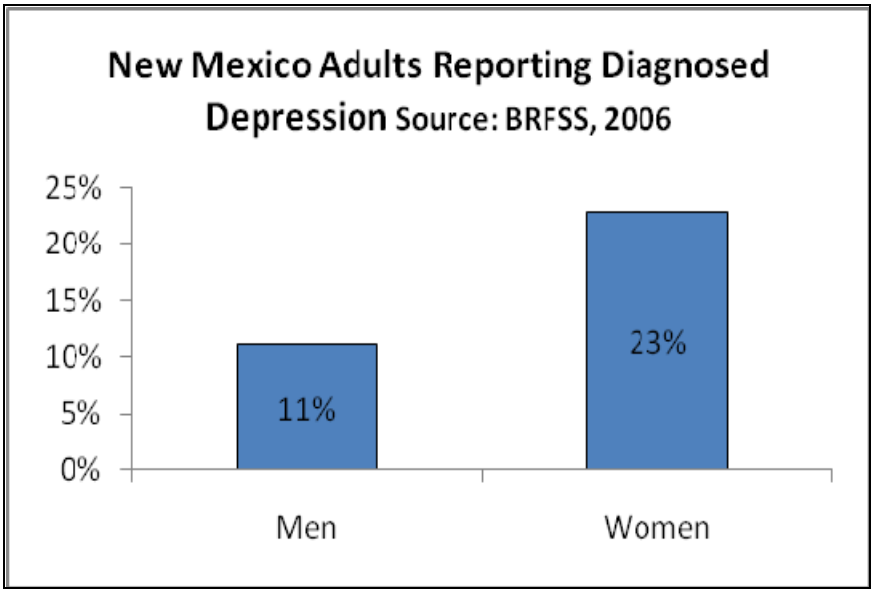
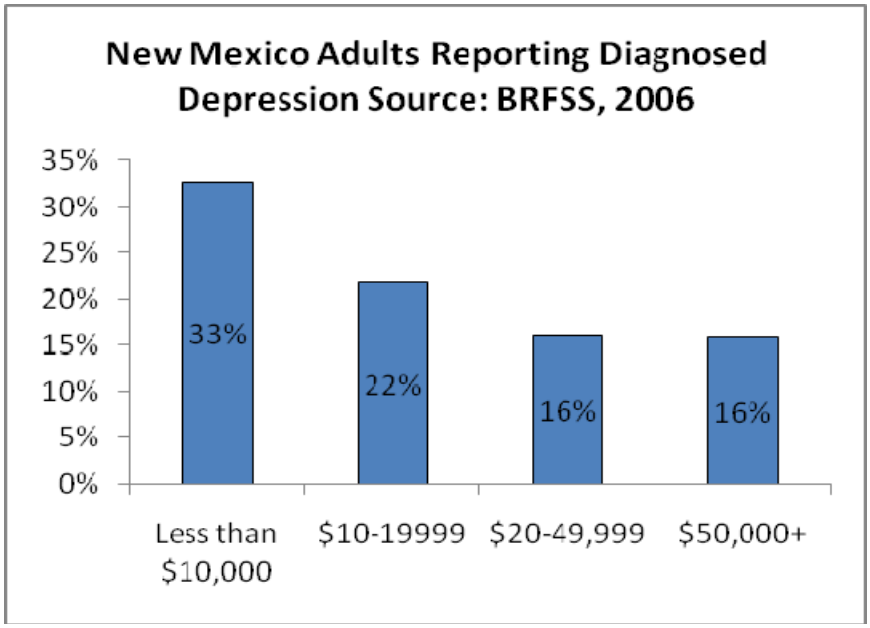


Figure XII-5 New Mexico Adults Reporting Diagnosed Depression



Youth: The New Mexico Youth Risk and Resilience Survey indicated that a high portion of New Mexico and Bernalillo County youth are at risk for mental health issues.

Special Populations and Mental Health

Homeless: Most studies of mental illness are based on telephone surveys and do not include institutionalized people. They also do not include homeless people. A 1999 report published by HUD found that among the homeless population, within the past month:

- 38 percent report indicators of alcohol use problems.

- 26 percent report indicators of drug use problems.
- 39 percent report indicators of mental health problems.
- 66 percent report indicators of one or more of these problems.[99]

Veterans: Veterans, particularly those who served in combat situations, appear to be vulnerable to mental health problems. The 1999 study of the homeless indicated that veterans were disproportionately represented among the homeless – veterans accounted for 13% of the general population but 23% of the homeless population. This study was done prior to the wars in Iraq and Afghanistan.

A more recent study indicates that soldiers in the current wars face mental health problems. Veterans Affairs (VA) clinicians administer mental health assessments when soldiers return from combat. 17% indicated some risk of mental health issues. When a second assessment was added after six months, the percent of soldiers at risk jumped to 27.1%. [100]

The National Alliance on Mental Illness reported 31% of veterans in a 2007 study received mental health and/or psychosocial diagnoses. The youngest group of veterans, age18-24 years, was at greatest risk for receiving mental health or posttraumatic stress disorder diagnoses compared with veterans 40 years or older.[101]

The number of veterans in Bernalillo County is not available. The current wars are doubtlessly increasing the numbers. This issue should be more fully addressed in the next update of the Profile.

HOSPITALIZATION AND HEALTH CARE[102]

Mental disorders account for a significant portion of inpatient hospitalizations. The primary source for inpatient hospitalization is the New Mexico Health Policy Commission. This state agency collects hospital discharge information from 36 general and 13 specialty hospitals in the state. The state does not obtain information from federal facilities, including military hospitals, the Veterans Administration Hospital or Indian Health Services facilities.

Bernalillo County and New Mexico hospitalization rate for mental disorders was lower than the U.S. rate; only the Southeast region was above the national rate. The reason for this difference is not immediately apparent, however, hospitalizations for all disease categories are lower in New Mexico. Health policy and access may be factors.

[99] Homelessness: Programs and the People They Serve – Highlights Report, HUD, December, 1999. http://www.huduser.org/publications/homeless/homelessness/highrpt.html

[100] States Respond to Veterans Call: Overview of Veterans Behavioral Health Legislation 2007. State Policy Focus, National Council for Community Behavioral Healthcare, December, 2007http://www.thenationalcouncil.org/cs/veterans

[101] Mental Illness and Veterans, National Alliance on Mental Illness, Veterans Resource Center, http://www.nami.org.

[102] 2007 Hospital Inpatient Discharge Data, New Mexico Health Policy Commission, October, 2008. http://hpc.state.nm.us/documents/HIDD%20Report_2007.pdf

Table XII-3 Mental Disorders Hospitalizations, 2007

Mental Disorders First-listed Diagnoses Hospital Discharge Rates per 10,000 Population, 2007							
	U.S.	New Mexico	Bernalillo (Central Region)	NE	NW	SE	SW
First Listed Diagnosis	81.1	66.4	66.5	55.8	54.5	88.9	71.8

For the state of New Mexico, mental disorders was the second of the top three reasons for hospitalizations in the 15-44 age group, and third for the 45-64 age group. HIDD data for Bernalillo County by age is available by special request and should be considered for future profiles.

Table XII-4 Mental Disorders First-Listed Diagnosis by Age, 2007

New Mexico Mental Disorders First Listed Diagnosis Hospital Discharge Rates per 10,000 Population by Age, 2007					
	Total	<15	15-44	45-64	65+
First Listed Diagnosis	13245 (rate 66.4)	1037 (25.2)	7388 (89.5)	3836 (72.9)	984 (39.7)

In New Mexico the hospitalization rate for males is higher than for females. In 2007 males were hospitalized at a rate of 69.5 per 10,000 and females 63.3.

University of New Mexico Health Sciences Center (UNMH) has provided information about service utilization for mental health. This data is not directly comparable to HIDD data. Since not all residents of Bernalillo County utilize UNMH services, it is not possible to calculate a population-based rate. Since most uninsured County residents utilize UNMH, UNMH data provides valuable information about utilization of services by uninsured County residents and residents with publicly funded insurance.

Approximately 55% of all UNMH patients are insured under public sources (Medicare, Medicaid, Value Options, County indigent funds, UNMCare UNM Care Initiative and other government sources). Together these payers account for 67% of the costs in the UNM system during 2007.

Nearly 14,000 Bernalillo County residents were seen for mental disorders at UNM for a total of 48,895 encounters. Most of the UNMH mental health encounters are at the Psychiatric Clinic (approximately 29,000). There were 5,900 encounters at the Center on Alcohol, Substance Abuse and Addictions (CASAA).

Since mental health patients services can involve weekly or monthly visits, approximately 96% of mental health-related "encounters" are on an outpatient basis. Therefore, although mental disorders are a leading cause of inpatient admissions, inpatient accounts for 4% of total mental health services offered at UNMH. However, Emergency Department Services - an expensive form of outpatient care - account for 6% of the total.

Table XII-5 UNM Mental Health Encounters by Type of Service, 2007

UNM Mental Health Encounters by Type of Service, 2007 Percent of all Mental Health Encounters, Bernalillo County Residents					
Type of Service	Age Group (number of encounters)				
	All Ages (n=48,895)	<15 (n=6,425)	15-44 (n=23,052)	45-64 (n=17022)	65+ (n=2,393)
Inpatient	4%	4.3	3.8	2.8	4.4
Emergency Room	6%	0.9	8.1	5.0	4.9
Other Outpatient	76%	82.6	75.9	77.6	68.0
Primary Outpatient	14%	12.2	12.2	14.6	22.8

Source: UNMH Health Service Database, NMDOH, OCAPE, T Sharmen

There were a total of 16, 845 patients who received mental health services at UNMH. Most received outpatient services. Those under the age of 15 were received inpatient services more frequently than older patients; this group had low emergency room utilization. People between the age of 16 and 44 had high emergency room utilization relative to other age groups. (Table XII-6)

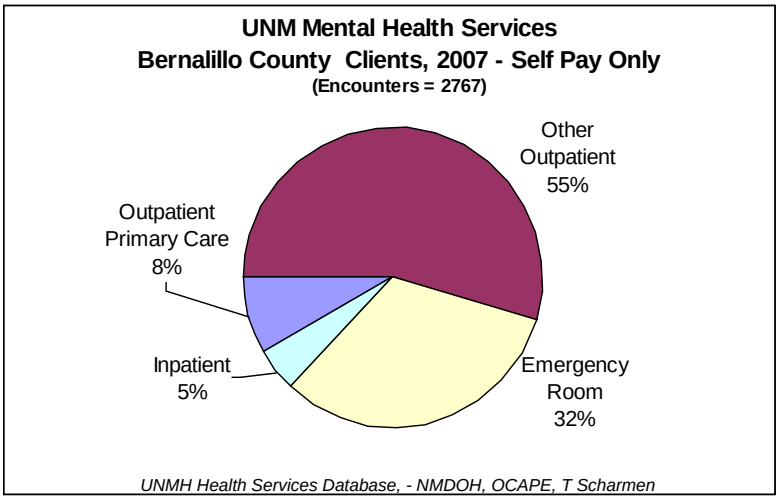
Table XII-6 UNM Mental Health Clients by Type of Service, 2007 (UNMH Health Services)

UNM Mental Health Clients by Type of Service, 2007 Percent of All Mental Health Clients, Bernalillo County Residents				
Type of Service	**Age Group** *(number of encounters)*			
	<15 *n= 1,972)*	**15-44** *(n=8,483)*	**45-64** *(n=5,367)*	**65+** *(n=1,023)*
Inpatient	10.4%	8.1%	6.9%	8.1%
Emergency Room	2.9%	17.1%	11.9%	10.4%
Other Outpatient	71.2%	54.8%	52.7%	44.5%
Primary Outpatient	15.4%	20.0%	28.5%	37.0%

Source: UNMH Health Services Database, - NMDOH, OCAPE, T Scharmen

Self-pay patients (the uninsured or underinsured) utilize emergency services are much more frequently than the general UNMH population. Emergency room services account for 6% of mental health encounters when all payers are included (Table XII-6); among self-pay patients, Emergency Room services account for 32% of all services.

Figure XII-6 UNM Mental Health Services, 2007 – Self-Pay



SUBSTANCE ABUSE

The abuse of alcohol and other drugs is one of New Mexico's most serious problems; the impacts of alcohol and illicit drugs lead to premature death, illness, crime, domestic violence, motor vehicle crashes, and the incarceration of large numbers of New Mexicans. In 2005, the New Mexico Department of Health, Substance Abuse Epidemiology Department published a comprehensive document regarding the impact of substance abuse. [103] Unless otherwise noted, the information contained in this section has been extracted from that document.

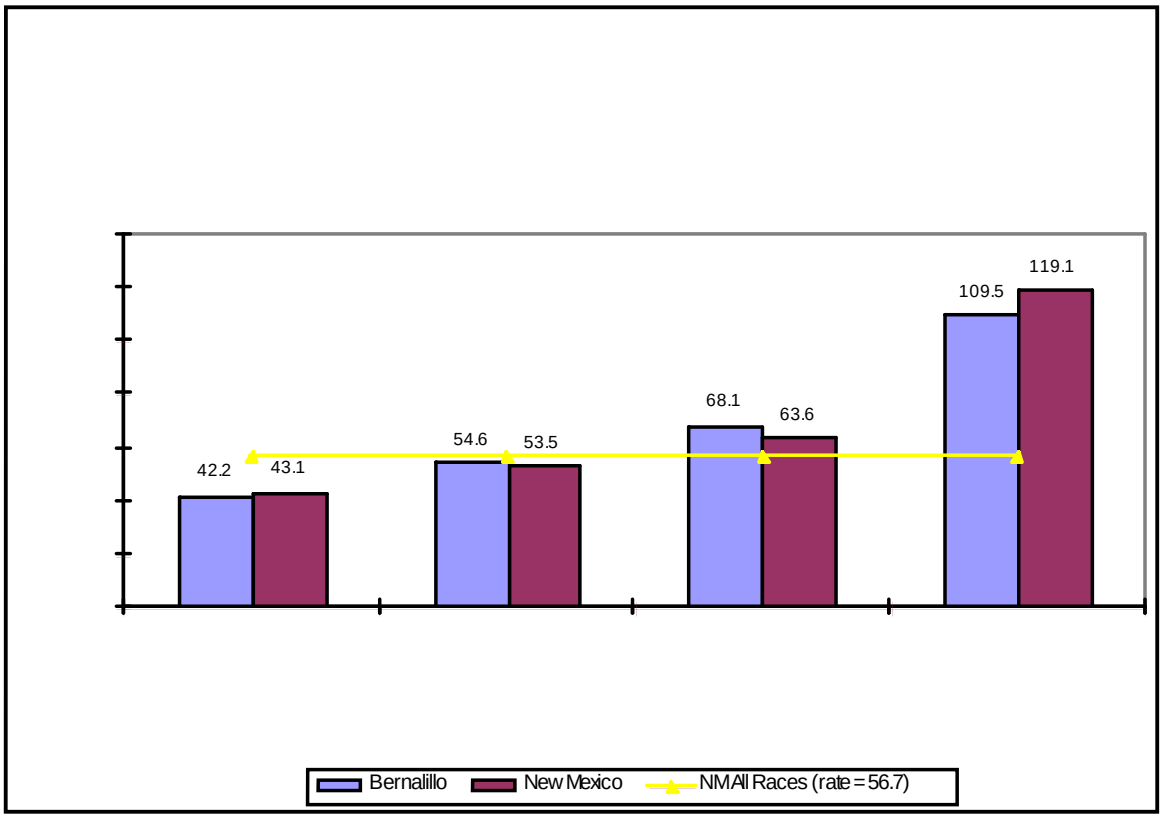
Alcohol Abuse

Alcohol problems are generally categorized as acute or chronic. Acute, or binge drinking, is defined as consuming more than 5 drinks over a period of several hours. Chronic drinking is defined as consuming 2 or more drinks per day for men, and 1 or more for women.

Nationally, in any one year nearly 4.5% of the population could be given a diagnosis of alcoholism, and 1.8% is dependent on drugs. New Mexico had the second highest death rate in the nation from alcohol-related causes in 2005. The overall alcohol-related death rates include both injury and death from chronic alcohol-related conditions.

[103] New Mexico State Epidemiology Profile, Substance Abuse Epidemiology Department, New Mexico Department of Health, Spring, 2005

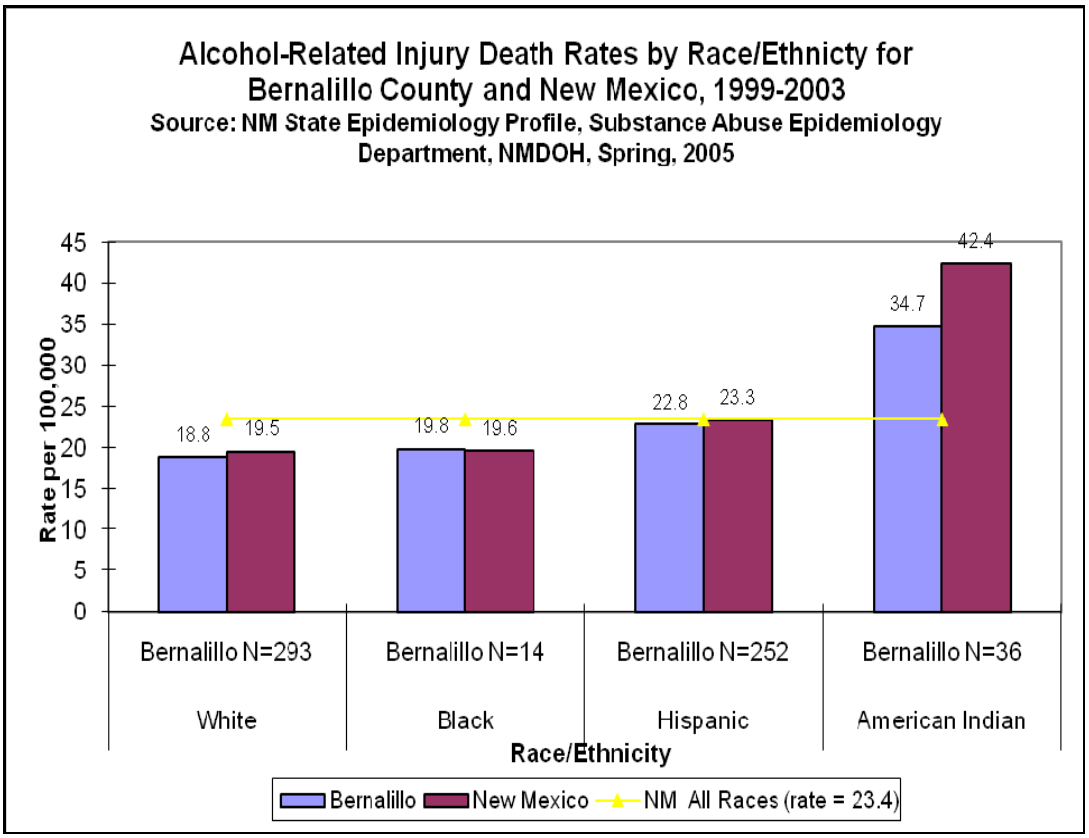
Figure XII-7 Alcohol-Related Death Rates, 1999-2003



Bernalillo County's overall alcohol-related death rate for Hispanics and American Indians are significantly higher than the rate for all races. The alcohol-related death rate for Bernalillo Hispanics is slightly higher than the death rate for all Hispanics in the state, and the alcohol-related death rate for American Indians is lower than the rate for all American Indians in the state. The alcohol-related death rate for Whites is below the state average for all races and nearly the same as the state average for all Whites. The alcohol-related death rate for Blacks is nearly the same as the state rate for all races in Bernalillo County and statewide.

Alcohol-Related Injury: Alcohol-related injury deaths include motor vehicle crashes, suicide, accidental falls, homicide, and alcohol poisoning. The leading cause of injury death is motor vehicle crashes. Other major causes of injury death include suicide, homicide, falls, and poisoning, all of which are more likely to occur when an individual is under the influence of alcohol or drugs.

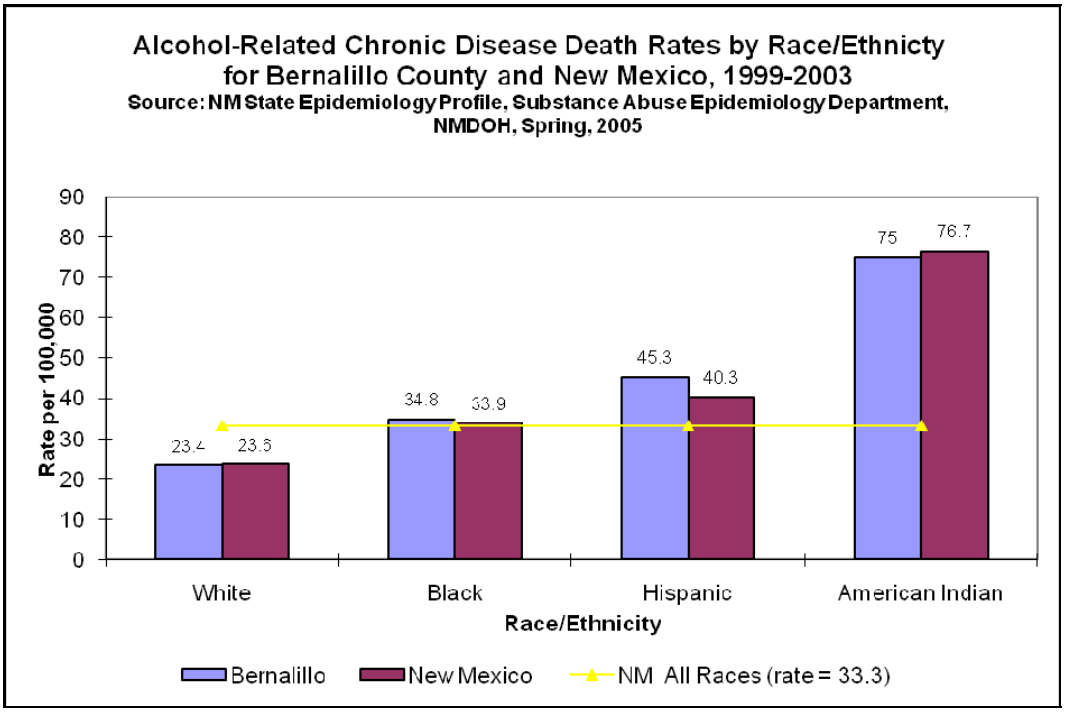
Figure XII-8 Alcohol-Related Injury Death Rates by Race/Ethnicity, 1999-2003



From 1999-2003, the alcohol-related injury death rate for Bernalillo County American Indians is substantially higher than other races in Bernalillo County, but lower than the State rate for American Indians. Given New Mexico's high rates of alcohol-related injury deaths, it is surprising that according to the NMDOH Behavior Risk Factor Surveillance System Report, binge drinking in New Mexico was less commonly reported than in the rest of the nation. In New Mexico, 14.4% of adults reported binge drinking in the past 30 days; the national percentage was 15.6%. Among New Mexico respondents, 18.3% of Hispanics, 11.9% of Whites, and 9.2% of American Indian respondents reported such behavior.

Alcohol-Related Chronic Disease: Chronic or heavy drinking is associated with significant rates of alcohol-related chronic disease death and morbidity. According to the latest estimates from the CDC, 100% of alcoholic liver disease, alcohol dependence syndrome, and a significant proportion of many other conditions, such as unspecified liver cirrhosis, pancreatitis are alcohol-related. These conditions are associated with chronic heavy drinking.

Figure XII-9 Alcohol-Related Chronic Disease Death Rates by Race/Ethnicity, 1999-2003



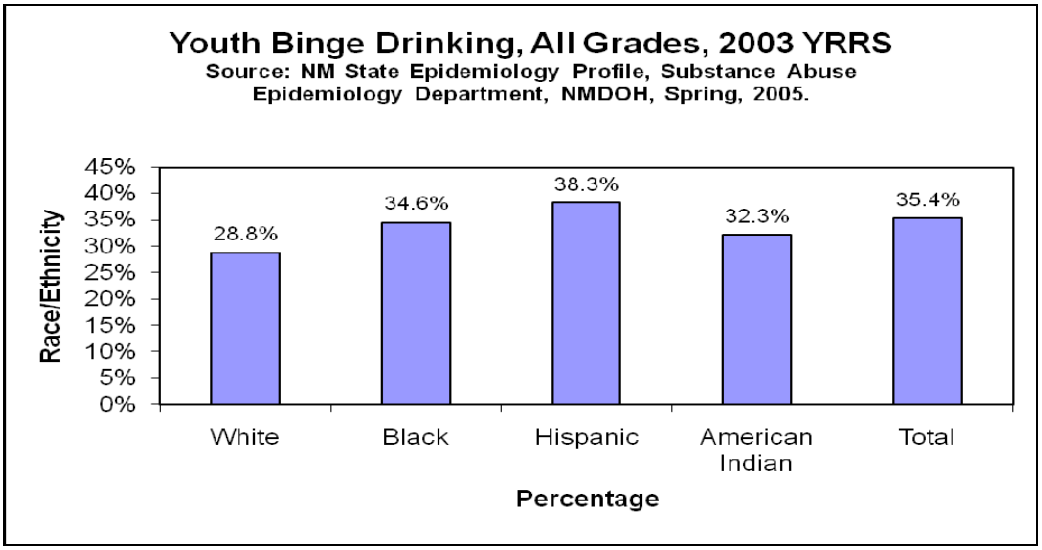
Bernalillo County's death rates from alcohol-related chronic disease were elevated for both Hispanics and American Indians for the years 1999-2003. The rate of deaths from alcohol-related chronic diseases is 33.3 per 100,000 statewide. For American Indians, the rate is 76.7 statewide and 75.0 in Bernalillo County. The rate for Hispanics is 40.3 statewide and 45.3 in Bernalillo County.

Adult chronic drinking was less commonly reported in New Mexico than in the rest of the nation. In 2007, 3.8% of Bernalillo County residents reported chronic drinking; 3.9% in New Mexico; and 5.2% nationwide. [104] American Indian women, who have the highest female rates of alcohol-related chronic disease outcomes, have the lowest reported chronic drinking rates.

Youth Drinking: Youth drinking is associated with death and disability, poor academic performance, more sexual partners and the use of marijuana. 28.3% of U.S. high school students reported binge drinking in the past month; 35.4% of New Mexico students reported doing so.

[104] Centers for Disease Control and Prevention (CDC). Behavioral Risk Factor Surveillance System Survey Data. Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2007.)

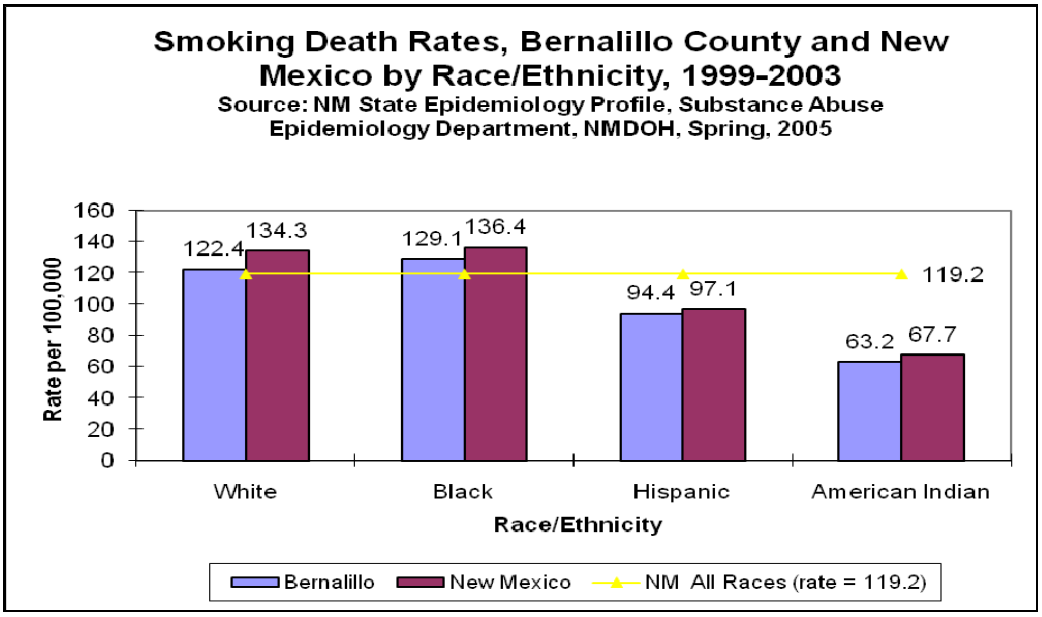
Figure XII-10 Youth Binge Drinking, 2003



Smoking

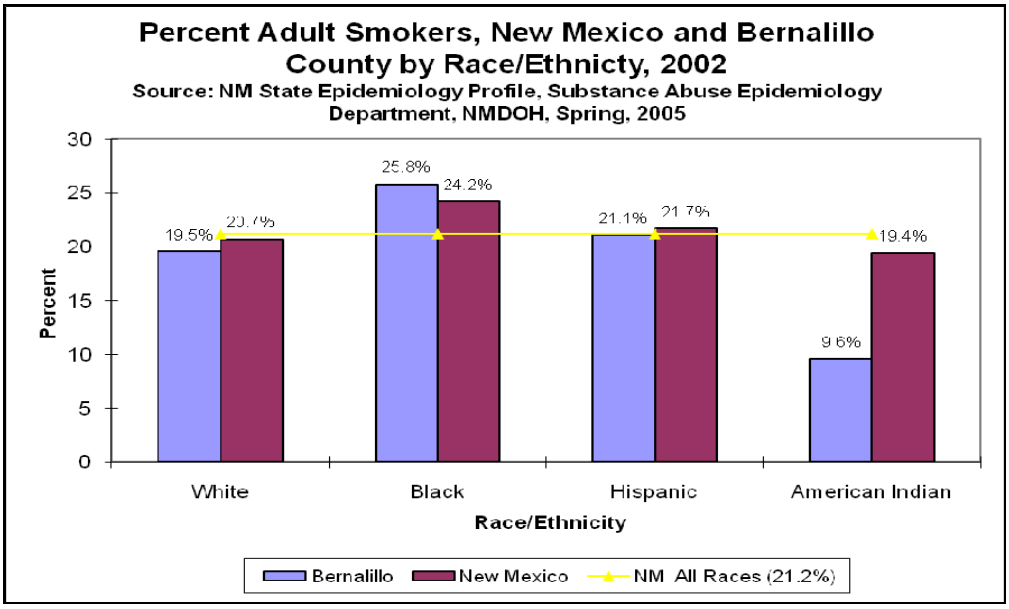
Smoking is the leading cause of preventable death. Smoking-related deaths are highest among Whites and Blacks in New Mexico and Bernalillo County. Smoking-related deaths are lowest among American Indians.

Figure XII-11 Smoking Death Rates by Race/Ethnicity, 1999-2003 (NMDOB, 2005)



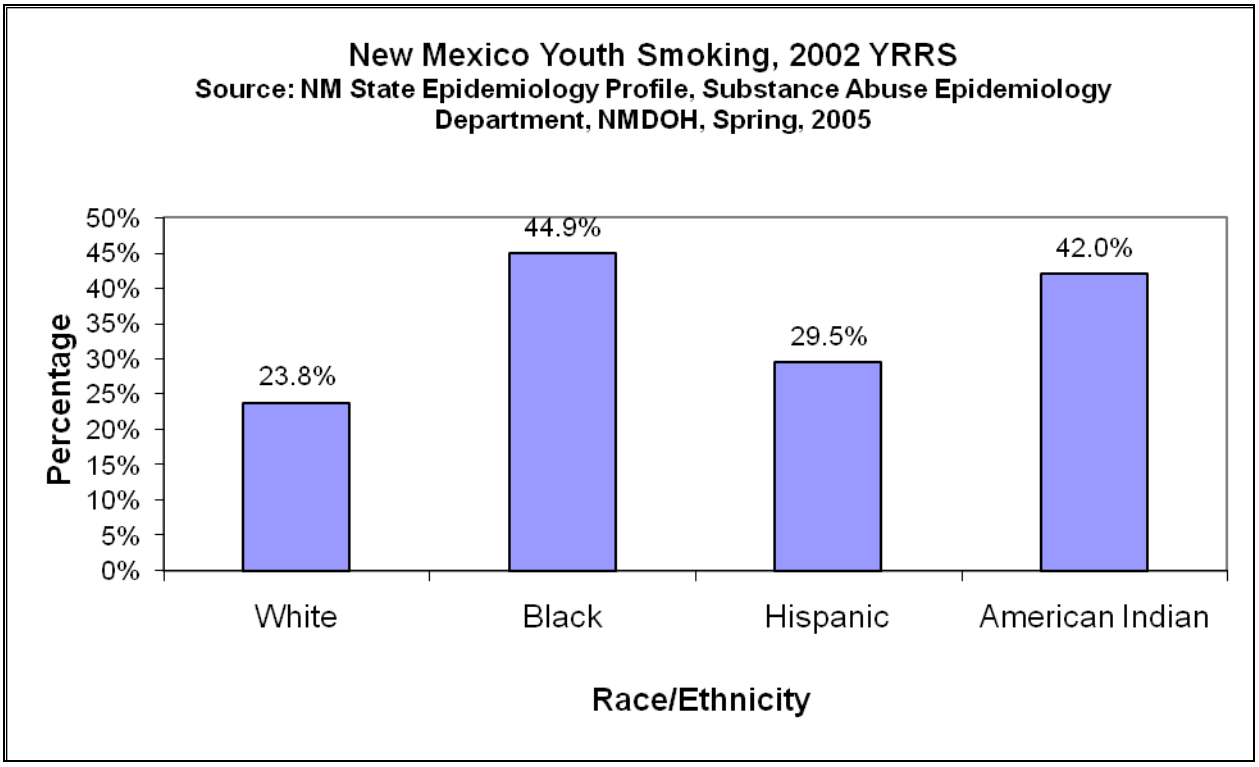
However, reported smoking rates do not follow similar ethnic breakdowns. Smoking rates are defined as having smoked more than 100 cigarettes in a lifetime, and currently smoking. Whites have elevated smoking-related death rates, but lower than average percent of smokers. American Indians have significantly lower smoking-related death rates on a state level, but the percentage smoking is approaching that of the state average.

Figure XII-12 Percent Adult Smokers by Race/Ethnicity, 2002



It is possible that the discrepancy between reported smoking and death rates within ethnic groups is related to changes in youth smoking. Reported smoking among youth continues to be high in New Mexico, particularly among American Indians and Blacks.

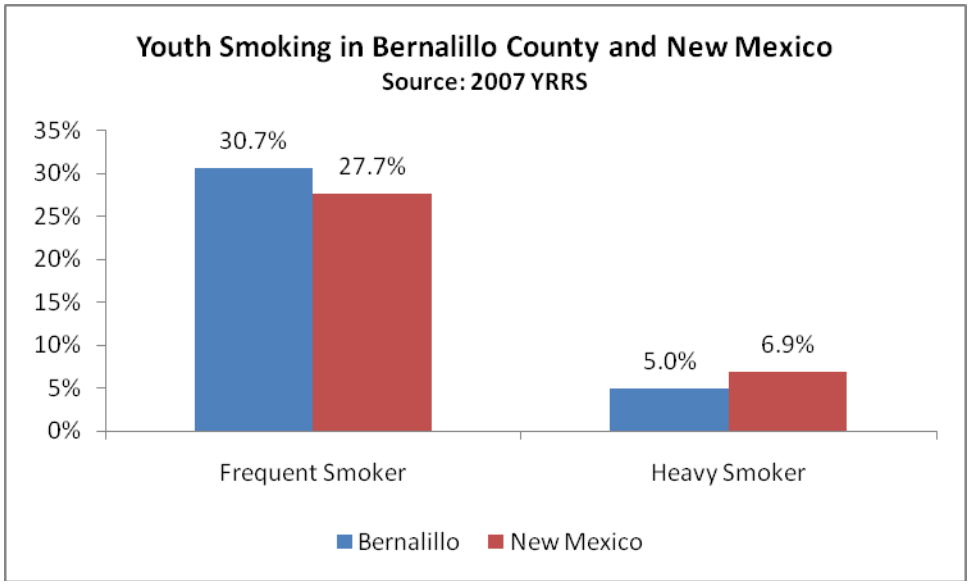
Figure XII-13 New Mexico Youth Smoking, 2002 (NMDOH, 2005)



The proportion of American Indian and Black youth smoking is very high, suggesting the possibility that more young adults in these groups are also smoking. If this trend continues, it could result in much higher death rates from smoking within these groups in the future.

Overall smoking among youth in Bernalillo County is comparable to the rest of the state.

Figure XII-14 Bernalillo County and New Mexico Youth Smoking



Drugs

New Mexico has had the highest drug-related deaths in the nation, mostly drug overdose. In 2005, New Mexico had the second highest drug-induced death rate in the nation, 20.9 deaths per 100,000 persons, compared to the U.S. rate of 11.2 per 100,000.[105] In the period 1999-2003, for which detailed information is available, the state rate of drug related deaths was 16.2 per 100,000. 65% of overdose deaths involved illicit drugs; 35% involved prescription drugs. 16% of drug-related deaths are suicides.

The Bernalillo County rate of drug deaths was 22.0 per 100,000 for all races. The rate for Whites was 18.1; Blacks 31.7; Hispanics, 28.5. The number of American Indian deaths in this period (8) was too small to calculate a rate. The death rate in Bernalillo County for each racial/ethnic group was higher than the rates for each of these groups in the state as a whole. The drug-related death rates are low compared to other causes of death, but 1,309 of the 1,459 deaths during this period were among people between the ages of 25 and 64, a group that has overall low death rates.

Reported past 30 day drug use by high school students is more prevalent in New Mexico (29%) than in the U.S. (22.4%). The past 30 day cocaine use in New Mexico is more than two times in national rate. The past 30 day use of coke, methamphetamine, or inhalants for the state is 13.9%. In Bernalillo County, 12.2% of youth reported using these drugs. In New Mexico, use of these drugs is particularly high among Blacks and American Indians.

[105] "Changing Trends in Drug Overdose Deaths, New Mexico, 2006-7". New Mexico Epidemiology, Volume 2008, Number 7. Epidemiology and Response Division, New Mexico Department of Health. September 26, 2008.

Figure XII-15 New Mexico Youth Drug Use by Ethnicity

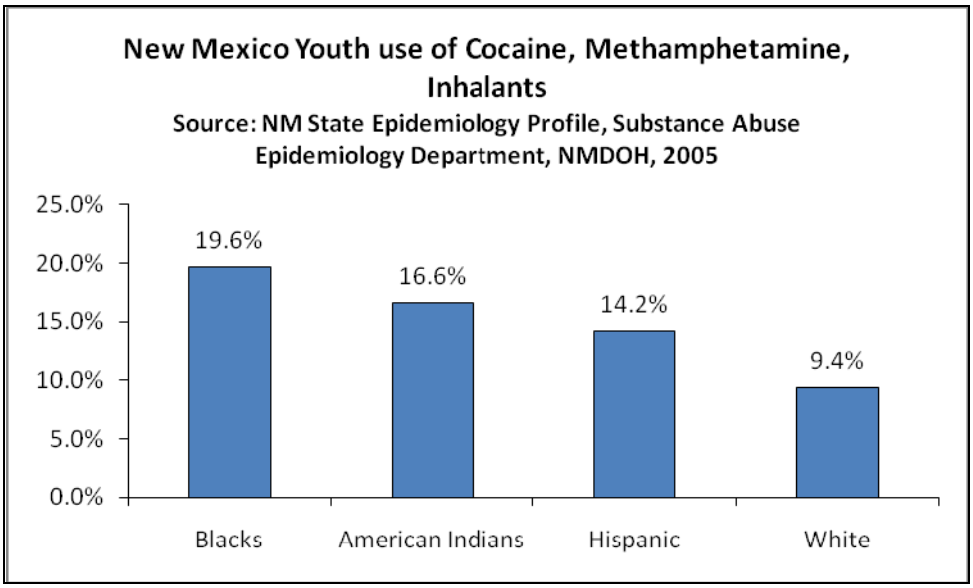


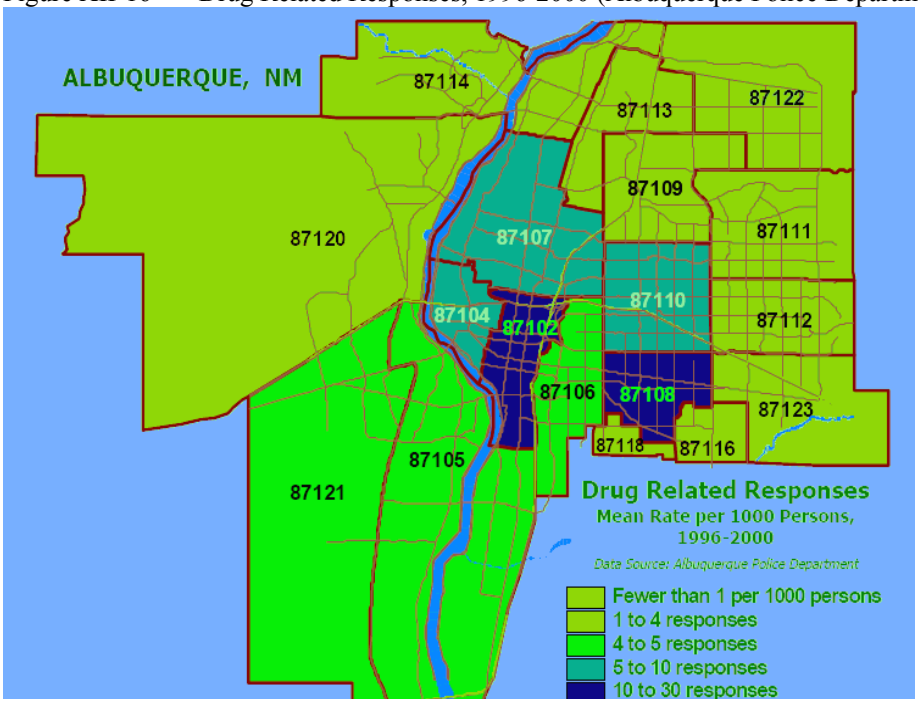
Figure XII-16 shows drug-related responses by the Albuquerque Police Department by zip code for the years 1996-2000. The drug problem has increased since that time. The responses may also indicate areas that were targeted by enforcement officers, and may therefore understate the problems in some neighborhood. Nonetheless, this map of police responses indicates areas in which the problems have been the most severe.

Substance Abuse During Pregnancy

Prenatal exposure to alcohol is one of the most identifiable causes of mental retardation and neurodevelopmental disorders. Even among mothers who intended their pregnancy, over 40% drank alcohol in the three months before pregnancy and 20% of pregnant women reported current drinking in the last trimester. In 2000, the prevalence of fetal alcohol syndrome (FAS) in New Mexico was similar to the national rate of 1.0 per 1,000 births. Each year in New Mexico about 36 children are born with FAS and another 72 are born with an Alcohol- Related Birth Defect (ARBD).[106]

[106] The Burden of Substance Abuse in New Mexico, 2004, New Mexico DOH,
Substance Abuse Epidemiology Unit, Office of Epidemiology, Public Health Division, New Mexico Department of Health.

Figure XII-16 Drug Related Responses, 1996-2000 (Albuquerque Police Department)



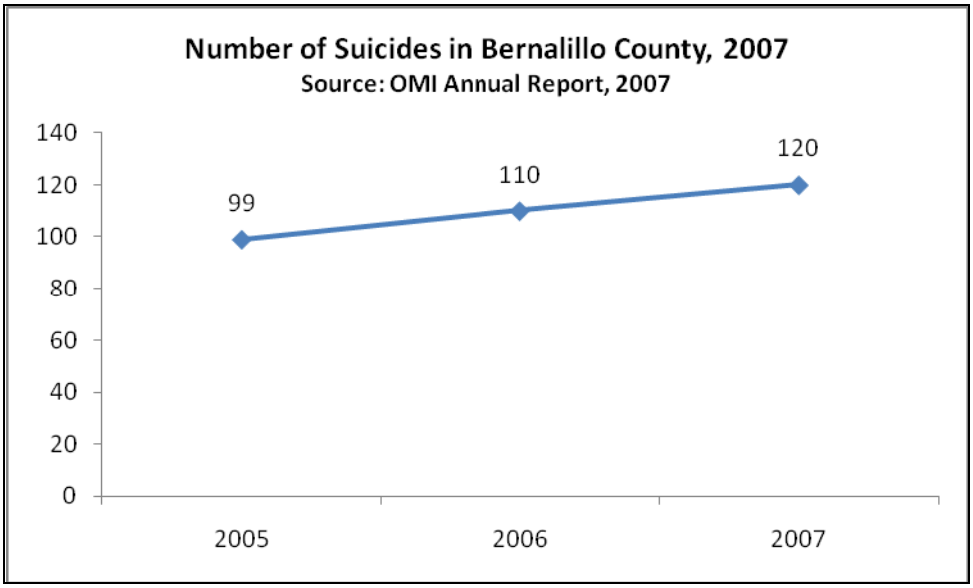
SUICIDE

The causes of suicide are complicated and can involve environmental, biological, and social factors, as well as psychological factors. People with mood or psychiatric disorders, chronic family issues, and a history of physical or sexual abuse appear to be predisposed to suicide. Access to lethal means, impulsive tendencies, and hopelessness certainly contribute to suicide.[107]

New Mexico's age-adjusted suicide rate was 56.9% higher than the national rate in 2005-6: New Mexico's rate was 17.1 per hundred thousand in 2006, compared to the U.S. rate of 10.9 per hundred thousand in 2005. In 2006, Bernalillo County's suicide rate was16.6 per hundred thousand. The estimated rate for 2007 was 19.8 per 100,000. [108] In New Mexico, there were 347 suicide deaths in 2005. There were 361 suicides in 2006 and 390 in 2007. In 2007, 32 of the suicide deaths were 19 years of age or younger. [109]

[107] Singh, V.D. et al. Youth Suicide in New Mexico: A 26 Year Retrospective Review, Journal of Forensic Medicine, May, 2008, Volume 53, Number 3.
[108] New Mexico Selected Health Statistics, 2007
[109] OMI Annual Report, 2007, Office of the Medical Investigator, http://omi.unm.edu.

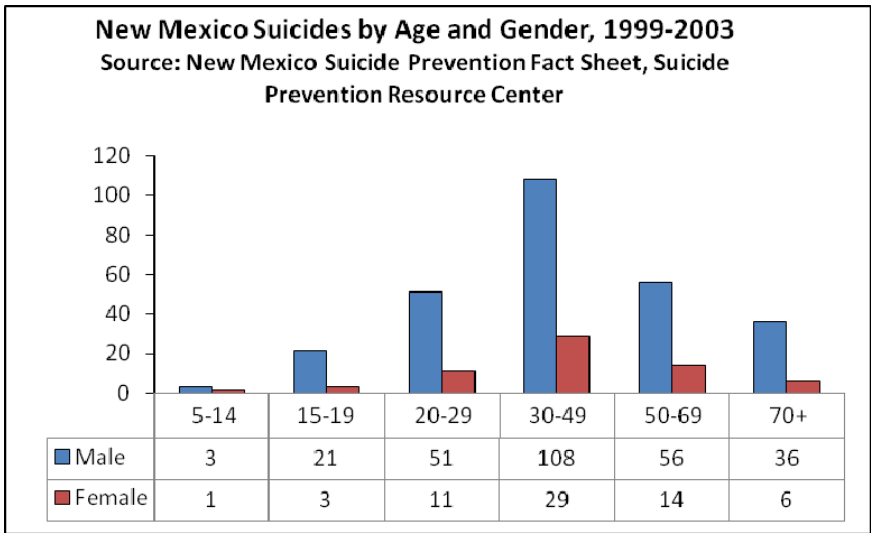
Figure XII-17 Suicides in Bernalillo County, 2007



Male suicide rates are particularly high in New Mexico and in Bernalillo County. The suicide rates were 18.0 for males in the U.S, but 28.8 for males in New Mexico and 27.4 for males in Bernalillo County. [110]

A review of New Mexico suicides by age and gender shows that males are much more likely to commit suicide than females, and that males 20-49 account for most of the suicides. The age-adjusted rate is highest for men over the age of 70 years.[111]

Figure XII-18 Suicides by Age and Gender, 1999-2003



[110] New Mexico Selected Health Statistics, 2007
[111] New Mexico Suicide Prevention Fact Sheet, Suicide Prevention Resource Center.

Table XII-7 Suicide Rates by Age and Gender, 1999-2003 (Suicide Prevention Resource Center)

New Mexico Age-Adjusted Suicide Rates by Age and Gender, 1999-2003 Source: New Mexico Suicide Prevention Fact Sheet, Suicide Prevention Resource Center						
	5-14	15-19	20-29	30-49	50-69	70+
Male	2.3	27.8	41.4	41.7	33	56.1
Female	0.9	3.9	9.2	10.7	7.8	6.4

An examination of hospitalized suicide attempts during the same period shows that women are much more likely to attempt suicide than men.

Table XII-8 Hospitalized Suicide Attempts, 1999-2003 (Suicide Prevention Resource Center)

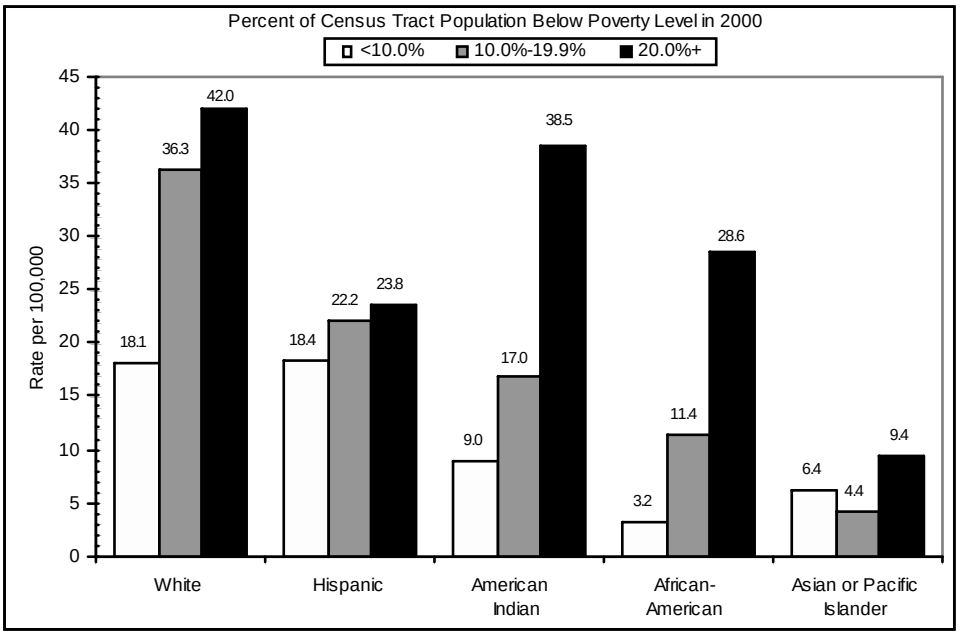
New Mexico Hospitalized Suicide Attempts, Number Rates by Age and Gender, 1999-2003 Source: New Mexico Suicide Prevention Fact Sheet, Suicide Prevention Resource Center				
	Male		Female	
	Number	Rate	Number	Rate
5-14	23	15.6	122	87
15-19	115	152	170	237.3
20-29	168	137.8	309	258.2
30-49	283	108.9	401	150.1
50-69	60	35.3	83	45.4
70+	13	19.6	14	16.3

There are noteworthy differences in suicide by race and poverty level. [112] In Bernalillo County, Whites were the group most likely to commit suicide. Whites living in low income areas were the most to take their own lives, followed closely by American Indians in low income areas. In middle-income areas, whites were far more likely to commit suicide than other groups, followed by Hispanics and American Indians. In areas with low poverty levels, Whites and Hispanics had suicide rates twice as high as American Indians and six times higher than African Americans in low poverty areas.

[112] Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, A Report to the Bernalillo County Environmental Health Department, March 2009 (ABC HEAT).

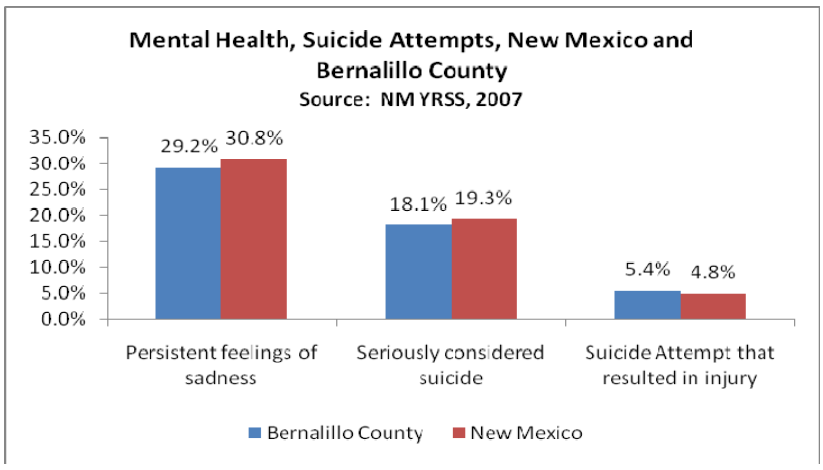
Figure XII-19 Bernalillo Suicides by Ethnicity and Poverty

Bernalillo County Suicide Death Rates by Ethnicity and Poverty Level, Age 20-49, 1996-2005



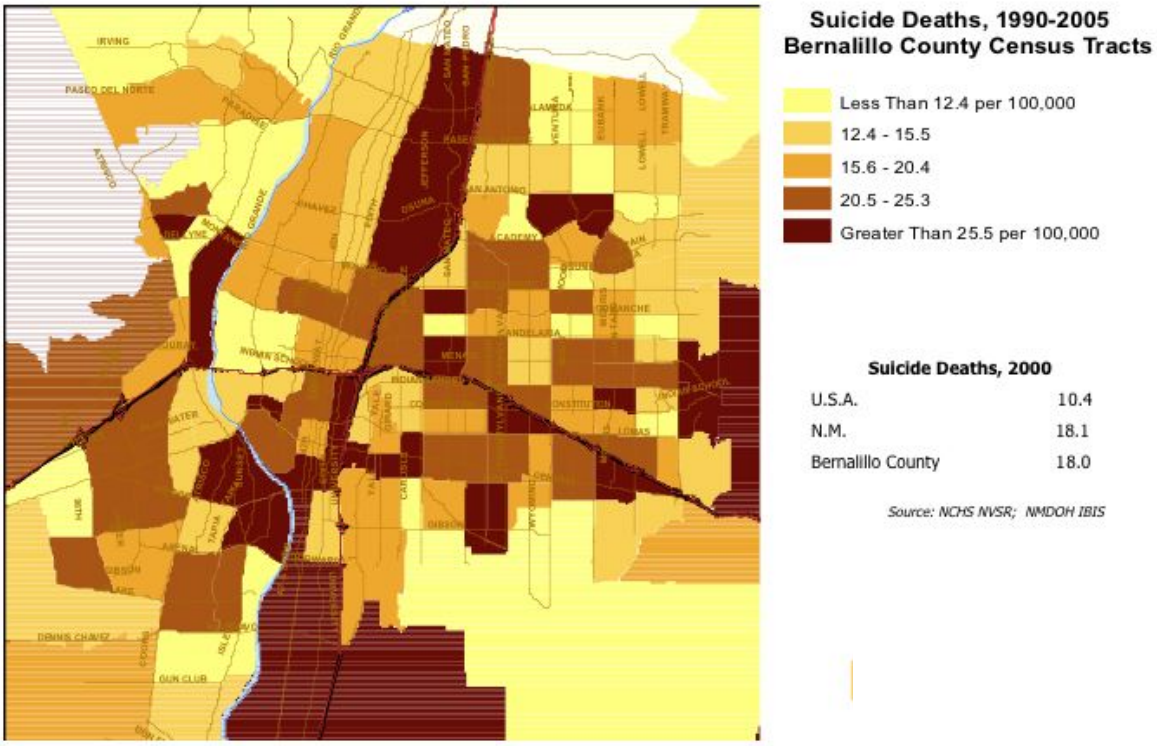
Although American Indians account for a small percentage of suicides, nationally the suicide rates for American Indian male youths (10-19) years is high (16.0 compared to 7.8 per 100,000).[113] In New Mexico, 47.4% of suicides used guns in 2007. Other mechanisms of suicide included hangings (26%), poisoning (21%) and other means (6%).[114] Figure XII-21 presents suicide rates by Bernalillo County census tracts from 1990-2005.

Figure XII-20 Mental Health, Suicide Attempts, New Mexico and Bernalillo County



[113] Singh, V.D. et al. Youth Suicide in New Mexico: A 26 Year Retrospective Review, Journal of Forensic Medicine, May, 2008, Volume 53, Number 3.
[114] OMI Annual Report, 2007.

Figure XII-21 Suicide Deaths by Census Tract



XIII. HEALTH SYSTEM CAPACITY

HEALTH CARE PROVIDERS

As the most populous County in New Mexico, with the greatest number of hospitals and health providers, Bernalillo County has a relatively large number of health providers per capita. However, it is important to note that many out-of-County residents utilize Bernalillo County health resources. Consequently, the relatively high ratios of providers/residents do not directly reflect resources available to County residents. With the exception of Certified First Responders and Emergency Medical Technicians, the per capita number of Bernalillo County health care providers is higher for each category of provider listed in Table XIII-1. There are only four Certified First Responders in Bernalillo County per 100,000 populations compared to thirty-three for the State as a whole. And the number of Emergency Medical Technicians per capita is 13% lower than the State average.

Table XIII-1 Health Care Providers, County, State, U.S.

HEALTH CARE PROVIDERS PER 100,000 POPULATION (2007)			
	US	NM	Bernalillo County
Dentists	66	45	70
Dental Hygienists	55	42	74
Pharmacists*	77	77	155
Licensed Practical Nurses*	212	140	179
Registered Nurses	824	785	1152
Nurse Practitioners*	42	30	48
Physicians	323	214	411
Physician Assistants	23	22	39
Psychologists*	34	27	52
Certified First Responders	NA	33	4
Emergency Medical Technicians	NA	142	124
*National Data Based on 2004 data			
Source: 2007 New Mexico Geographic Access Data System & Selected Health Professionals in New Mexico			

HEALTH FACILITIES

Hospitals

There are eleven hospitals in the City of Albuquerque. The University of New Mexico Hospital (UNMH) is responsible for providing services for low-income County residents. Based on a three-party lease agreement with Bernalillo County and the Department of the Interior in federal trust obligation for Native Americans, Bernalillo County levys taxes for the hospital, subject to voter approval, and obligates the hospital to care for indigent residents at the same level that it provides care to patients with third-party payment sources.

Table XIII-2 Bernalillo County Hospitals

Health South Rehabilitation Center
Heart Hospital Of New Mexico
Kindred Hospital Of Albuquerque
Lovelace Medical Center - Downtown
Lovelace Westside Hospital
New Mexico VA Health Care System (US Department Of Veterans Affairs
Presbyterian Hospital (Presbyterian Healthcare Services)
Presbyterian Kaseman Hospital (Presbyterian Healthcare Services)
Turquoise Lodge Chemical Dependency Hospital (New Mexico Department Of Health)
UNM Carrie Tingley Hospital (UNM Hospitals)
UNM University Hospital (UNM Hospitals)

Health Clinics Serving Uninsured and Underinsured Residents

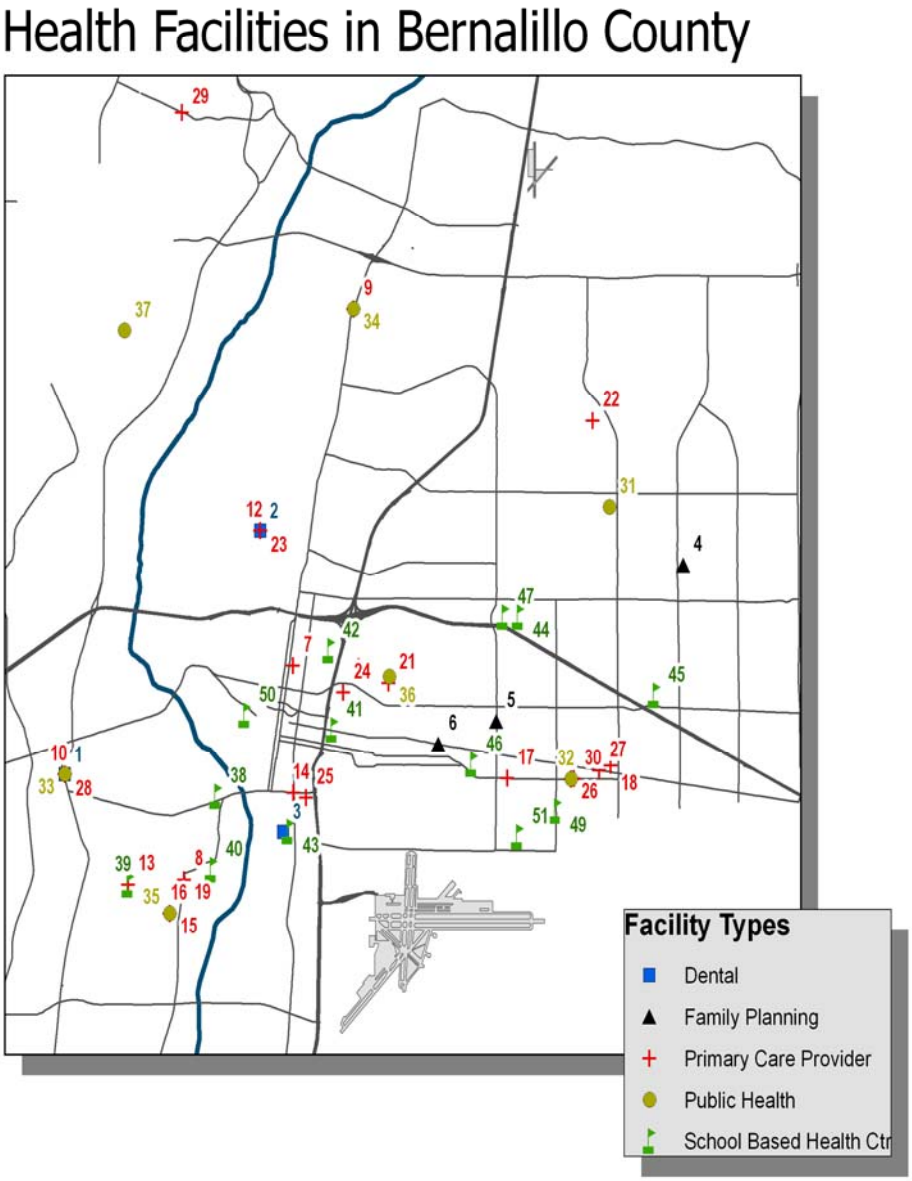
Table XIII-4 lists primary care, reproductive health, school based health centers, and dental clinics in Bernalillo County that provide services for uninsured and under-insured residents of Bernalillo County. Major service categories are also presented. The clinics offer free, low-cost, or sliding fee scale services. Most also accept Medicaid and other public and private insurance. More detailed information about the clinics is available at www.resourcesnm.org (NMRI).

Table XIII-3 Health Clinics in Bernalillo County Serving Uninsured/Underinsured Residents

Primary Care Clinics (CHC = Community Health Center)Ź
Albuquerque Healthcare For The Homeless Inc
Casa de Salud
First Choice CHC Alameda
First Choice CHC Alamosa
First Choice CHC Edgewood
First Choice CHC North Valley
First Choice CHC South Broadway
First Choice CHC South Valley
First Nations Community Health Source (FQHC)
One Hope Centro de Vida
University of New Mexico Hospital (UNMH) Clinic
UNMH Family Practice Center
UNMH Northeast Heights Clinic
UNMH Northwest Valley Clinic
UNMH Senior Health Clinic
UNMH South Broadway Clinic
UNMH Southeast Heights Clinic
UNMH Southwest Clinic
UNMH Westside Clinic
UNMH Young Children's Health Center
UNMH Proposed New Clinic (Central and Unser)
Dental Clinics
Community Dental Services - Alamosa Center
Community Dental Services - Candelaria
Community Dental Services - Alamosa Center
UNMH Dental Clinic
Planned Parenthood Ź
Planned Parenthood - San Mateo
Planned Parenthood - Central
Planned Parenthood - Candelaria
Public Health Offices (all PH offices include WIC)
Pubic Health Office Northeast Heights
Pubic Health Office Southeast Heights
Public Health Office Alamosa
Public Health Office Northwest Valley
Public Health Office South Valley Health Commons
Public Health Office Stanford
Public Health Office Taylor Ranch
School Based Health Centers (operator)
Albuquerque High (UNM)
East San Jose Elementary (UNM)
Freedom High School (UNM)
Grant Middle School (UNM)
Highland High School (UNM)
New Futures Clinic (UNM)
RFK Charter School (RFK)
Rio Grande High School (First Choice)
Roosevelt Middle School (UNM)
SBHC PB&J Pre-School (PB&J)
School on Wheels (DOH)
Van Buren Middle School (UNM)
Washington Middle School (UNM)
Wilson Middle School (UNM)
WIC KAFB Clinic

Figure XIII-1 Health Care Facilities Serving Uninsured and Underinsured County Residents

Note: There is a First Choice Clinic in Edgewood



Primary Health Care Clinics

First Choice and the University of New Mexico Department of Family and Community Medicine are the major providers of primary care services for low-income residents of Bernalillo County. UNMH contracts with First Choice, First Nations Community Health Source, and Healthcare for the Homeless to provide preventive primary care for Bernalillo County residents enrolled in four UNMH programs for low-income residents of Bernalillo County – UNMCare, State Coverage Initiative, Partners in Health, and County Indigent Fund. Over 150,000 persons made 632,000 visits to UNM Hospital and to UNMH clinics during 2007[115], including the ten primary care clinics included in Table 3. The seven First Choice clinics are "Community Health Centers" which are subsidized by the federal government to serve underserved populations. UNMH reimbursed First Choices for services received by 7427 patients making 19,509 visits. (Note: Data is not currently available to identify the number of patients receiving services at both UNMH and First Choice facilities).

School Based Health Services

Many students do not have access to preventive physical and mental health care information and services. Students and their families are more likely to seek assistance with a medical or mental health problem if that service is conveniently located and affordable. Schools are obvious sites for providing convenient health care services for students. The Albuquerque Public Schools (APS) Health and Wellness Department is responsible for development, implementation, and administration of APS health and wellness services.

Table XIII-4 presents the number of healthcare professionals serving APS students.

School- based health centers (SBHC) can provide a much wider range of services than are typically available within a school. They provide more comprehensive medical and mental health services to children in need of care. As part of the school environment, School-Based Health Center services promote collaboration between school staff, parents, and health professionals.[116] There are fourteen school-based health centers in Bernalillo County; services vary by site. From July – December 2008, almost 2000 APS students received one or more services at a School Based Health Center .

[115] UNM Hospitals: A Community Perspective on Access and Spending January - December, 2007, Community Advisory Council University of New Mexico Health Sciences Center, Prepared by Thomas N. Scharmen, MPH, MA, Terry Schleder, MPH

[116] New Mexico School-Based Health Centers, Annual Report, Office of School Health, Public Health Division, NM DOH

Table XIII-4 Albuquerque Public Schools, Health Service Providers, 2008/2009

ALBUQUERQUE PUBLIC SCHOOLS HEALTH SERVICE PROVIDERS 2008/2009	
Braided counselors	7
Dental Hygienists	2
Family Counselors	8
Health Assistants	125
Nurses	128
Psychologists	22
Redirectors	22
School Based Health Center Staff (excluding dental staff)	31
Social workers	127
Substance Abuse Counselors	7
	479
Source: APS Health and Wellness Department 3/5/09	

Table XIII-5 APS School Based Health Centers Utilization (July – Dec. 2008)

APS School Based Health Centers Utilization (July - Dec 2008)		
	# of Unduplicated Students	# of Visits
Albuquerque High School	169	408
East San Jose Elementary	80	173
Grant Middle School	230	815
Highland High School	454	911
RFK Charter High School	264	993
Roosevelt Middle School	105	251
Van Buren Middle School	144	324
Washington Middle School	184	391
Wilson Middle School	308	821
	1938	5087
Source: New Mexico Department of Health Office of School Health, 3/5/2009		

NEW MEXICO PUBLIC HEALTH OFFICES

There are seven Public Health Offices in Bernalillo County (Figure XIII-1). New Mexico Department of Health (DOH) Public Health Offices offer a variety of services including immunizations, family planning services, STD testing, TB treatment services, on site Medicaid application assistance, needle exchange, Children's Medical Services (for children with chronic diseases), and the Women, Infants, and Children (WIC) nutrition program. Services are free or on a sliding fee scale. No one is refused service due to inability to pay.

WOMEN INFANTS AND CHILDREN'S PROGRAM

The W.I.C. program is a federally funded, special supplemental nutrition program administered by the New Mexico Department of Health and tribal agencies; its purpose is to serve low-income families by providing high-nutrient density food to promote optimal health during pregnancies. Services include food assistance, nutrition education, and referral to health services. There is no fee to income-eligible families. Many families enrolled in WIC visit WIC sites once every other month for years, making WIC sites an excellent place to provide additional support services for young families.

There are twelve WIC sites in Bernalillo County. Over 20,000 women, infant, and children (0 to 5) are enrolled in WIC programs in Bernalillo County. In addition to offering WIC services at each Public Health office, DOH contracts with First Choice to provide WIC services at five First Choice clinics. First Nations Community Health Source operates a tribal WIC program.

Table XIII-6 Bernalillo County WIC Participants

WIC SITE	Pregnant Women	Breast-feeding Women	Post-partum Women	Total Women	Infants	Children	Total
First Choice Alamosa	401	259	306	966	1037	2441	4444
First Choice South Broadway	178	132	122	432	435	1013	1880
First Choice South Valley	192	181	148	521	596	1081	2198
First Choie North Valley	131	80	101	312	351	848	1511
First Nations Community Health	134	108	81	323	315	680	1318
KAFB	29	26	18	73	82	156	311
New Futures	65	41	16	122	93	62	277
Northeast Heights Health Office	312	231	207	750	871	1432	3053
Northwest Valley Health Office	101	89	79	269	296	494	1059
Southeast Heights Health Office	266	201	229	696	685	1559	2940
Stanford	49	33	55	137	138	303	578
West Side WIC Clinic	77	76	70	223	286	464	973
	1935	1457	1432	4824	5185	10533	20542

Source: NM WIC Participation Report 10/1/08 to 10/31/08

ON-LINE INVENTORY OF BERNALILLO COUNTY RESOURCES

New Mexico Resources Inventory (NMRI)

The Bernalillo County Community Health Council collects and updates health and social service resource information for Bernalillo County residents through the New Mexico Resources Inventory (NMRI), http://www.resourcesnm.org. NMRI is an online directory of local services related to health, social services, education, legal assistance, recreation services, and transportation. Through partnerships and collaborations, NMRI reaches out to service providers and consumers that need to connect themselves or others to local services and resources. NMRI is user-friendly, bilingual, and appropriate for different

literacy levels. At this time NMRI has few non- direct service listings such as advocacy groups, associations, and councils, however, is planning to add these listings as soon as 2009.

NMRI partners work together to develop, maintain, and update a user-friendly, shared electronic health and social service database, raise project funds, and train community members to educate their peers. The main role a partner plays is to be in charge of inputting and updating a particular market segment. Many agencies input their resource information into NMRI and update it as needed. Each agency handles its own information and only that. A partner, on the other hand, is generally in charge of multiple listings and updating all of them as needed. So instead of 40 different agencies inputting and updating their own listings, one agency (the project partner) oversees all of them. For example, one NMRI partner, the New Mexico Coalition to End Homelessness oversees the updates of multiple homeless shelters and food pantries in Bernalillo County.

NMRI also partners with the SALUD Manual project (www.saludmanual.org) to train community leaders and provide outreach to communities in Bernalillo County. Community leaders provide educational workshops, teaching their fellow community members to utilize computers while at the same time learning how to find health and health-related resources and overcome health disparities. Additionally, leaders and NMRI/SALUD administrators provide trainings and talks to service agencies about utilizing NMRI/SALUD to help clients and well as to administrators of other resource databases in order to explore opportunities to link and share strengths. NMRI/SALUD publishes the print version of the SALUD Manual in order to be accessible to those without computers and Internet.

XIV. HEALTH ACCESS

Barriers to healthcare access include:

- Financial barriers, even for many people with medical insurance
- Geographic/transportation barriers
- Linguistic and cultural barriers
- Inadequate number of providers
- Service hours that conflict with work and school hours

ECONOMIC AND RACE/ETHNIC DISPARITIES

Results of the Behavioral Risk Factor Surveillance Survey strongly indicate there are economic and race/ethnic disparities to accessing health care in Bernalillo County.

- Hispanic/Latino respondents reported the highest rate of "not seeing a doctor in the past 12 months due to costs", 16%, versus 10% for White respondents.

- 28 % of residents with incomes less than $15,000 reported they "did not see a doctor due to costs", compared to 4% of residents with incomes over $50,000.

Figure XIV-1 Residents who Could Not See A Doctor Due to Cost

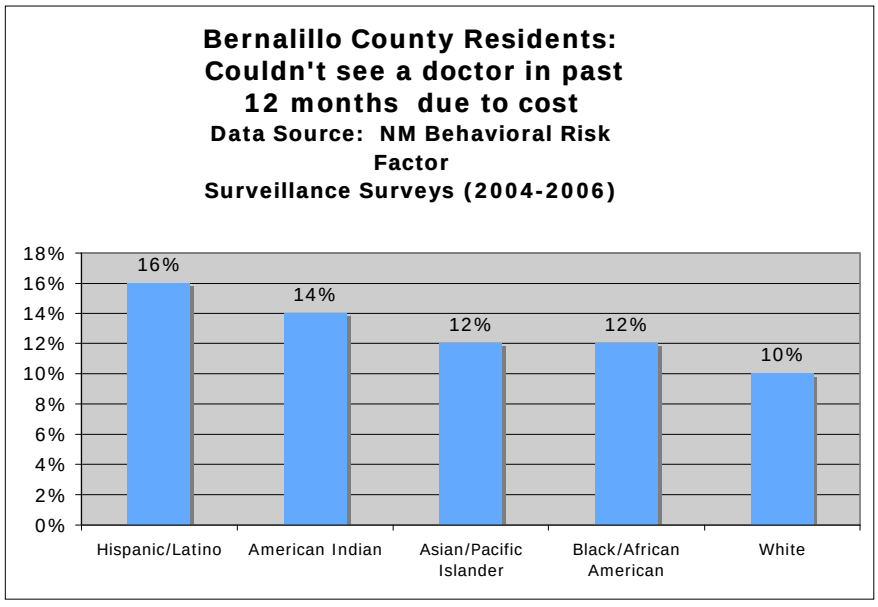
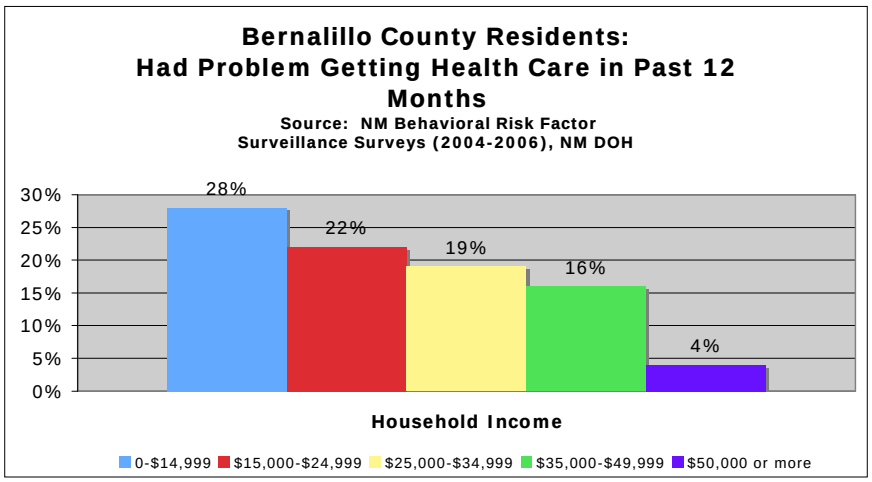


Figure XIV-2 Residents who had Problem Getting Health Care



HEALTH COVERAGE

Based on available data 16% to 21% of Bernalillo County residents are uninsured. Based on the Census Bureau "Current Population Survey", in 2005 21% of Bernalillo County residents were uninsured, compared to 24% in New Mexico[117], and 17% in the United States. In 2006, 16% of Bernalillo County residents surveyed through the Behavioral Risk Factor Surveillance Surveys reported they were uninsured. The BRFSS telephone survey does not include response from the 6% of County residents that do not have a telephone[118]; these residents may be uninsured at a higher rate. In response to the economic downturn, it is likely that the number of uninsured has increased over the past year. One indicator is the increase in the number of County residents enrolled in TANF and Medicaid. Enrollment in both of these programs has increased at a greater rate in Bernalillo County than in the State as a whole (Chapter II, County Overview).

There are substantial difference in health coverage in Bernalillo County by race/ethnicity and income[119].

- 25% of Hispanic/Latino respondents reported they were uninsured compared to 8% of White respondents.
- 37% of residents with incomes of $15,000 to $24,999 reported they were uninsured, compared to 4% of respondents with incomes over $50,000.

[117] Bernalillo County Community Snapshot, prepared by Epidemiology and Response Division, New Mexico Department of Health, 2009
[118] U.S. Census
[119] NM Behavior Risk Factor Surveillance Survey (2004-2006), data provided by NM DOH

Figure XIV-3 Residents without Health Insurance by Race

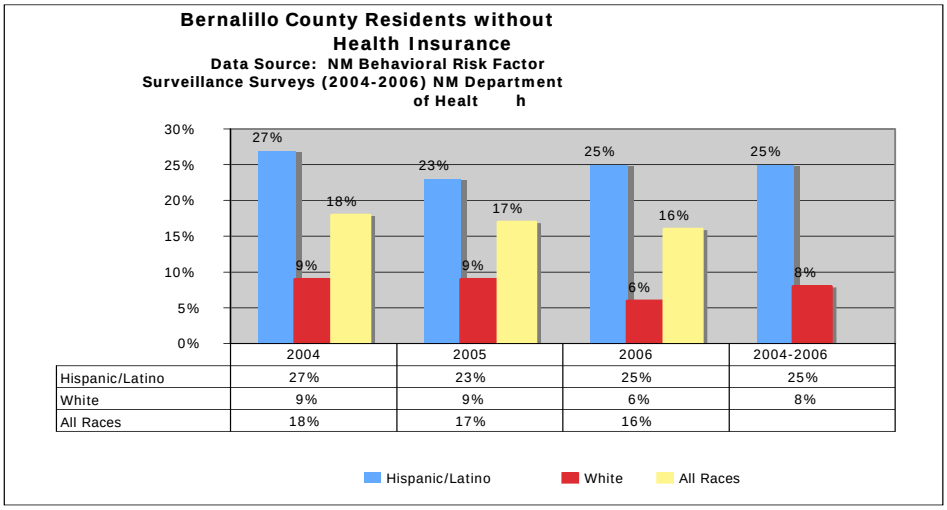
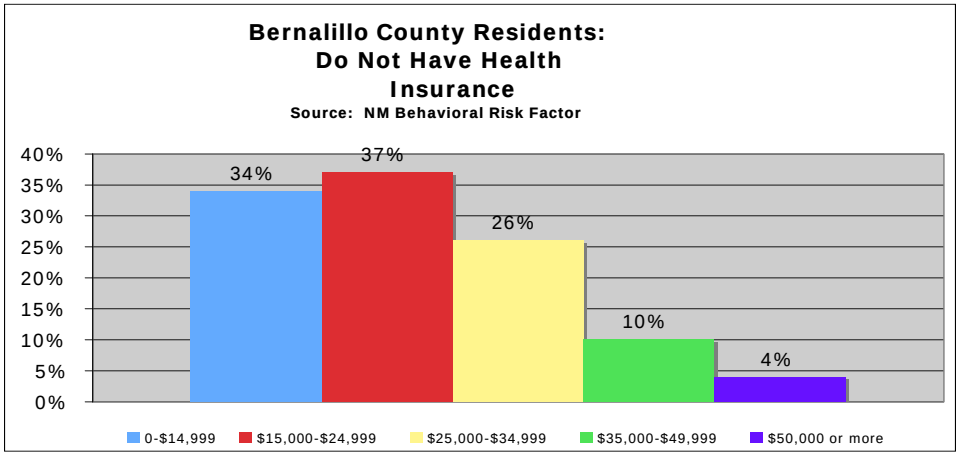


Figure XIV-4 Bernalillo County Residents without Health Insurance



A report by the Kaiser Commission on Medicaid and the Uninsured synthesized the major findings of the past 25 years of health services research, which assessed the most important effects of health insurance[120]. The major findings from the paper include:

- The uninsured receive less preventive care, are diagnosed at more advanced disease stages, and once diagnosed, tend to receive less therapeutic care (drugs and surgical interventions);
- Having health insurance would reduce mortality rates for the uninsured by 10 15 percent; and
- Better health would improve annual earnings by about 10 - 30 percent (depending on measures and specific health condition) and would increase educational attainment.

Findings from the New Mexico Behavioral Risk Factor Statistical Survey (BRFSS) are consistent with Kaiser Commission findings regarding less preventive care:

[120] Sicker and Poorer: The Consequences of Being Uninsured, Hadley, Jack, The Research Institute, May 2002

Table XIV-1 Preventative Care

PREVENTIVE CARE	INSURED	UINSURED
Mammogram (women over 50)	77%	47%
Endoscopy for colorectal cancer (adults over 5)	55%	26%
Had all recommended diabetes management services (adults)	49%	30%
New Mexico Behavioral Risk Factor Surveillance Survey 2006		

It should be noted that having health insurance does not necessarily result in a high level of health care access. Statewide performance measures by the three Medicaid Management Care Organizations that served New Mexicans in 2007, indicates that there are access issues for New Mexicans enrolled in Medicaid. For example, in 2007 the percent of children with one or more well child visit between the ages of 3 to 5 ranged from 36% to 43% for the three New Mexico Salud! programs. Data is not currently available (2/2009) at the County level.

Table XIV-2 Maternal and Child Health Care Access by Salud! Participants 2007

SALUD FY 2007 PERFORMANCE MEASURES Source: HEALTH PLAN EMPLOYER DATA AND INFORMATION SET (HEDIS)				
HEDIS Performance Measure	Lovelace	Molina	Pres	National Average
Childhood Immunization Rates Combination #3 vaccinations	38%	24%	44%	61%
Chlamydia Screening in Women (16 – 25)	49%	45%	50%	52%
Use of appropriate asthma medications ages 5 – 9	93%	94%	95%	90%
6 or more well child visits - 1st 15 months of life	50%	50%	69%	56%
Children 12 -24 months with 1 primary care visit	97%	98%	97%	94%
One or more well child visit/year - ages 3 - 5	36%	41%	43%	44%
Children 25 to 6 years with 1 primary care visit	90%	90%	88%	83%
% with at least one dental visit per year - ages 2-3	44%	42%	42%	NA
% with at least one dental visit per year - ages 4-6	70%	69%	67%	50%
Timeliness of prenatal care (1st visit in 1st trimester)	87%	76%	86%	81%
Frequency of prenatal care (% receiving 81+% of recommended care)	57%	45%	68%	57%
Timely postpartum visit (21 to 56 days after delivery)	58%	50%	59%	59%

MEDICAL FINANCIAL ASSISTANCE PROGRAMS

Low income residents of Bernalillo County are eligible for a number of Federal, State and County medical financial assistance programs. The Federal and County programs (Table XIV-3) provide most of the resources for County residents. The Medicaid program serves the great number of residents; 122,000 residents were enrolled in the federally funded Medicaid program in 2008.

As of December 2007, an additional 8,062 County residents with incomes up to 200% of poverty were enrolled in UNM Care Initiative, which is also funded by federal Medical funds. In addition to the UNM Care Initiative and additional 18,100 County residents with income up to 235% of poverty are eligible for UNM Care. Both UNM programs cover services provided at University of New Mexico Hospital (UNMH), UNMH clinics, and First Choice Community Health Centers. UNMH contracts with First Choice to provide preventive care for individuals enrolled in UNM Care or UNM Care Initiative (Table XIV-3)

Table XIV-3 Medical Financial Assistance for Bernalillo County Residents

PROGRAM	DESCRIPTION	ELIGIBILITY/FEES	Enrolled
Medicaid	Eligible services vary by Medicaid program.	Income eligibility is based on income guidelines for specific programs. The major of Medicaid participants are children in families with incomes up to 235% of poverty.	122,000 (9/2008)
UNM Care	Medically necessary services are provided including wellness exams, immunizations, behavioral health services, diagnostic services, hospital stays, medical, surgical and obstetric services, urgency and emergency care, prescriptions, radiology and lab services, physical, speech and occupational therapy, 24 nurse hot-line.	UNM Care is available to citizens and "qualified legal aliens" who are residents of Bernalillo County and are below 235% of the federal poverty level. Eligible reimbursements are only for services provided at UNM Hospital and Clinics and First Choice Community Healthcare, Inc	18,100[121] (12/31/07)
UNM CARE Initiative	Same as UNM Care, funding source is from State as opposed to County Mill Levy.	UNM Care is available to citizens and "qualified legal aliens" who are residents of Bernalillo County and are below 200% of the federal poverty level. Eligible reimbursements are only for services provided at UNM Hospital and Clinics and First Choice Community Healthcare, Inc	8,062 (12/31/07)
UNM Limited Financial Assistance	Emergency Care, immunizations and treatment of communicable disease. It covers services that are necessary for the treatment of an emergency medical condition, an immunization or the treatment of a communicable disease, as determined by the hospital's utilization review.	This assistance is available to immigrants who do not qualify for any other financial assistance program, including documented immigrants who (1) are residents of New Mexico; and (2) have an income below 235 % of the federal poverty level.	
UNMH Low Income	Available for non-emergency medically necessary care, as	UNMH offers a 40% discount to uninsured patients up to 350% of	

[121] Source: UNMH Decision Support Services 1/14/08 (Appendix to UNM Hospitals: A Community Perspective on Access and Spending, Community Advisory Council, University of New Mexico Health Sciences Centers, Scharmen, Thomas, Terry Schleder

PROGRAM	DESCRIPTION	ELIGIBILITY/FEES	Enrolled
Uninsured Patient Discount	well as emergency care	the federal poverty level. This "discount" is applicable to all medically necessary services, which are not covered by any other insurance program.	
UNMH Maternity and Family Planning Clinic	Offers prenatal care to women, regardless of immigration status, on a sliding scale fee, depending on income.		
First Choice Sliding Fee Scale Community Health Centers	Primary care services including physical, behavioral, prenatal, and dental. First Choice Community Health Centers receive a grant from the Bureau of Primary Health Care to provide medical and dental services to the uninsured and underinsured residents.	Sliding fees are based on income eligibility criteria. There are no residency requirements.	
Presbyterian Charity Care	Provides free medically necessary services.	For patients with income up to 200% of the federal poverty guidelines. Assets may be considered in determining patients who qualify for assistance. www.phs.org/phs/about/community assistance/index.htm	

AMBULATORY CARE SENSITIVE CONDITIONS

Ambulatory care–sensitive conditions are chronic and acute conditions for which good outpatient care can potentially prevent the need for hospitalization, or for which early intervention can prevent complications or more severe disease. ACSC chronic conditions include asthma, congestive heart failure, hypertension, angina, diabetes, hypoglycemia and epilepsy. Among the ACSC acute diseases are tuberculosis, congenital syphilis, pneumonia, cellulites, gastroenteritis, severe ENT (Ears, Nose, Throat) infections, and immunization preventable diseases. The rate at which people are hospitalized for ambulatory care sensitive conditions is a reflection of lack of access to preventive care.

Examples of the impact on preventive care on ambulatory care sensitive conditions include:

- Patients with diabetes may be hospitalized for diabetic complications if their conditions are not adequately monitored or if they do not receive the patient education needed for appropriate self-management.
- Patients may be hospitalized for asthma if primary care providers fail to adhere to practice guidelines or to prescribe appropriate treatments.

- Patients with appendicitis who do not have ready access to surgical evaluation may experience delays in receiving needed care, which can result in a life-threatening condition—perforated appendicitis.

The Federal Agency for Health Research Quality monitors 14 ambulatory care sensitive conditions.[122]

- Diabetes, short-term complications
- Perforated appendicitis
- Diabetes, long-term complications
- Chronic obstructive pulmonary disease
- Hypertension
- Congestive heart failure
- Low birth weight
- Dehydration
- Bacterial pneumonia
- Urinary infections
- Angina without procedure
- Uncontrolled diabetes)
- Adult asthma
- Lower extremity amputations among patients with diabetes

Although hospitalization rates are also influenced by socioeconomic factors such as poverty (Blustein et al. 1998), high or increasing rates of potentially preventable hospitalizations might indicate inadequate access to high-quality ambulatory care, including preventive and disease management services (Bindman et al. 1995).

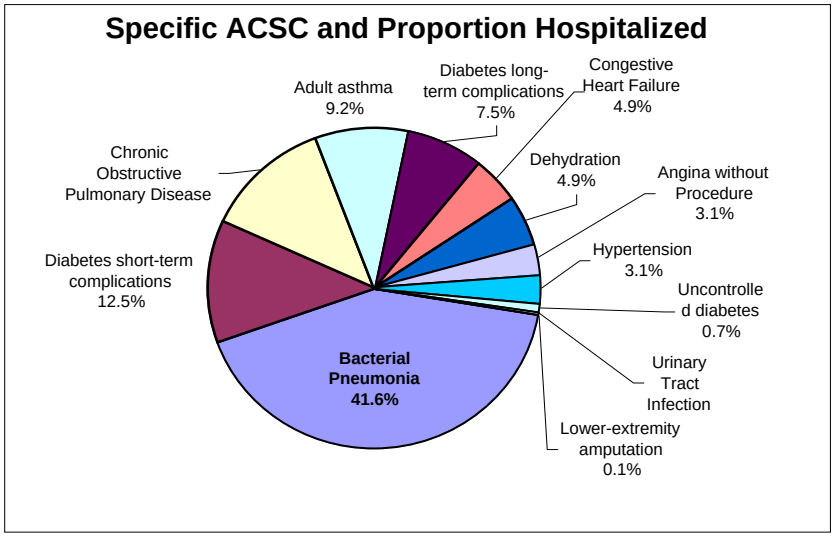
UNMH Hospitalization Rates for Ambulatory Care Sensitive Conditions

Most low-income adult residents of the County, who are not insured or are not eligible for VA benefits, are hospitalized at UNMH. There were 12,109 hospitalizations at UNMH in 2007 for all payer sources, 5.7% of all hospitalizations were for ambulatory care sensitive conditions. Eight percent of hospitalizations for low-income County residents enrolled in UNM Care Initiative and UNM Care were for ambulatory care sensitive conditions. (Comparisons of national and State hospitalizations would be useful). Bacterial pneumonia comprised 42% of all ACSC hospitalization, followed by COPD (12.2%), diabetes short-term complications (12.5%) and diabetes long-term complications (7.5).[123]

[122] Guide to Prevention Quality Indicators: Hospital Admission for Ambulatory Care Sensitive Conditions, Department of Health and Human Services, Agency for Healthcare Research and Quality, October 2001, Version 3.1, March 12, 2007 http://www.qualityindicators.ahrq.gov

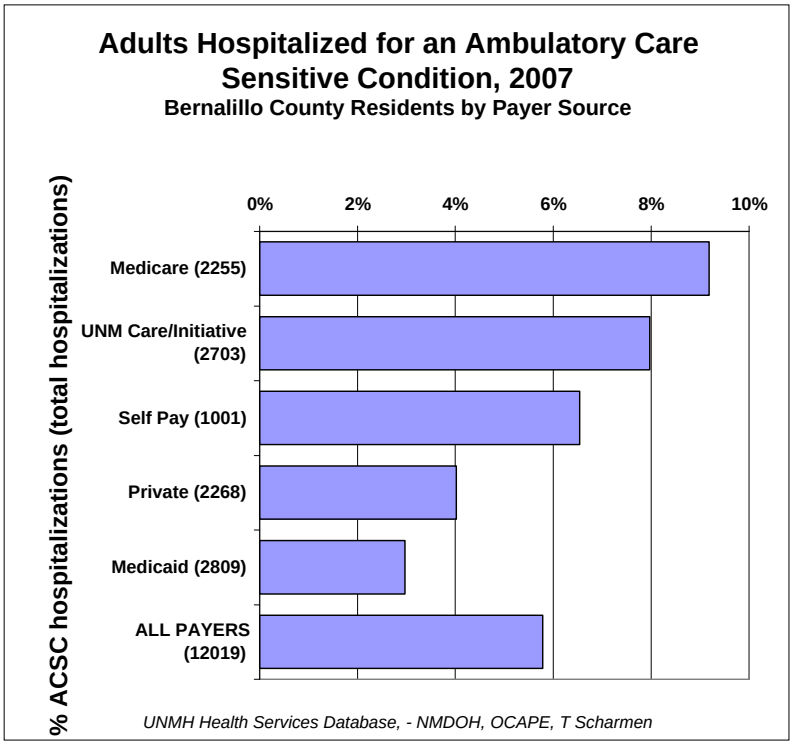
[123] UNMH Encounter data analyzed by Tom Scharmen, NM DOH OCAPE, utilizing AHRQ Prevention Quality Indicators Technical Specifications 3 Version 3.2, February 29, 2008, AHRQ Quality Indicators Web Site: http://www.qualityindicators.ahrq.gov

Figure XIV-5 Specific ACSC and Proportion Hospitalized

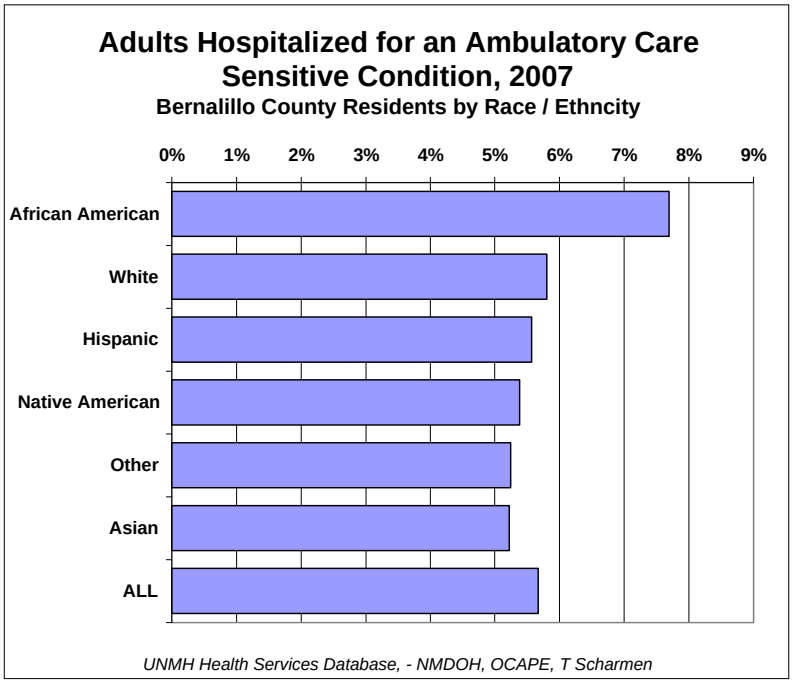


Prevention Quality Indicators Technical Specifications 3 Version 3.2 (February 29, 2008), UNMH Health Services Database - MNDOH, OCAPE, T. Scharmens

Figure XIV-6 Adults Hospitalized for an Ambulatory Care Sensitive Condition, 2007



Prevention Quality Indicators Technical Specifications 3 Version 3.2 (February 29, 2008),



Prevention Quality Indicators Technical Specifications 3 Version 3.2 (February 29, 2008),

A recent study of Bernalillo County death statistics from 1996 – 2005, identified substantial differences in death rates by poverty and ethnicity for six diseases, which are impacted by access to ambulatory care:

- Heart disease
- Cancer
- Cerebrovascular
- Chronic Obstructive Pulmonary Disease
- Chronic Liver Disease and Cirrhosis
- Pneumonia and Influenza

Death rates (by ethnicity, age, and sex) and poverty rates were calculated for each Bernalillo County census tract. Utilizing 2000 census data, census tracts were divided into three poverty categories based on the percent of the population living below the federal poverty line: less than 10%, 10 to 20% and greater then 20%. In general, as the percent of poverty increased, the death rate increased.

Highlights of the study include:

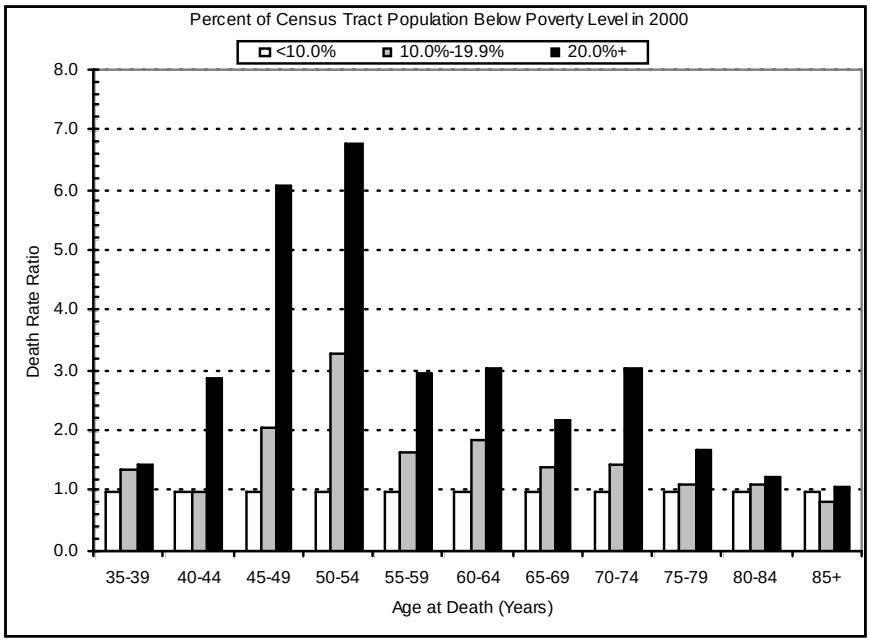
- Socioeconomic health disparities in Bernalillo county varied markedly by age for each mortality outcome examined, and were generally confined to the population of persons under 75 years of age.

- The socioeconomic disparity in death rates from all causes of mortality combined was greatest in the age range 25 to 59 years, where death rates in the high poverty group were 2- to 3- fold higher than those in the low poverty group.

- For cerebrovascular disease, chronic obstructive pulmonary disease, and chronic liver disease death rates within specific age categories were three times or more high in census tracts with the greatest number of people living below the federal poverty line.

Death rates within poverty groups varied by race/ethnicity for all mortality outcomes, particularly between Hispanics and Whites, who collectively accounted for 95% of all deaths in Bernalillo County between 1996 and 2005. Figure XIV-8 presents an example of poverty disparities for pneumonia/influenza. In every age category, as the percent of poverty increases mortality increases. The greatest difference is for ages 50 to 54 where there was almost a six-fold difference.

Figure XIV-7 Pneumonia and Influenza Mortality by Age and Poverty, Bernalillo County 1996-2005



Source: Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, March, 2009.[124]

BEHAVIORAL HEALTH CARE ACCESS

State Funded Behavioral Health Services

State mental health agency expenditures for mental health were lower in New Mexico than in any other state. In 2004, New Mexico spent $28 per capita, compared to the U.S. average of $98. From 2001-2004, expenditures increased 6.6% in the U.S, compared to a 5.3% decrease in NM. In 2004, 15 state agencies pooled funds to reduce fragmentation in service delivery; Value Options was hired to manage the system; on July 1, 2009, OptumHealth will begin providing services.

The 2009 Value Options' Directory listed the following services in Bernalillo County:

[124] Athas, WF. Area Socioeconomic Variations in Select Mortality Outcomes in Bernalillo County, 1996-2005, March, 2009.

Table XIV-4 State Funded Behavioral Health Services

SERVICE TYPE	STATE DEPARTMENT PROVIDING FUNDING ADMINISTERED BY VALUE OPTIONS				
	Children Youth and Families	Department of Health	Corrections Department	Income Support Division (Medicaid)	Income Support (TANF)
Outpatient	19	21	10		1
Group homes		21		11	
Residential Treatment				7	

There are four sources for inpatient care in Bernalillo County listed in the Value Options behavioral health services directory. UNMH, Kaseman, Desert Hills and Lovelace are listed as Medicaid providers. UNMH services are also funded through the New Mexico Departments of Health, Children Youth and Families, and Corrections. In 2006, there were 80 adult, 15 geriatric and 39 adolescent/child inpatient beds in Bernalillo County for acute care, in 2009, the number of beds decreased by 22. Many residents of other counties also use these resources.

The Bernalillo County Local Collaborative (BCLC) is an advocacy group committed to uniting the voices of all people involved with the behavioral health care system in Bernalillo County. The BCLC has the following concerns about access to behavioral health services[125].

- The number of beds for Residential Treatment Centers for children and other community based services for children has decreased.
- There have been large cuts in "enhanced" services.
- There are long waits for psychiatric evaluations. Anecdotal information suggests that children in crisis wait 8-30 hours and adults 10 hours or more.
- Case management services have been eliminated.

Other Payors and Services

Psychiatrists, psychologists, therapists, and other providers of mental health services accept insurance or offer sliding fee services. In 2000, New Mexico enacted "parity" legislation required that mental illnesses should be insured like other illness. Health plans were allowed to define mental illness, and therefore to determine which conditions would be covered. Many mental health services are excluded or limited.

UNMH offers a wide variety of mental health care services, including child and adult inpatient care, counseling, and psychiatric services. Value Options covers 1 in 6 mental health patients at UNMH, including 26% of all visits and 38% of all charges. UNMCare pays for 1 in 5 patients, 18.6% of encounters, and 15.4% of charges. People without insurance, including those that do not pay for the services they receive, accounts for 5% of all charges[126].

[125] Telephone interview 3/2009

[126] UNM Hospitals: A Community Perspective on Access and Spending, Community Advisory Council, University of New Mexico Health Sciences Centers, Scharmen, Thomas, Terry Schleder

Bernalillo County Substance Abuse Programs

Bernalillo County Public Safety Division operates a number of substance abuse treatment programs. Approximately 7,000 people are served each year by these programs. 85% have incomes less than $10,000 per year. Funding is from LDWI, CDWI, Bernalillo County General Operating Funds, and Value Options.

Free, voluntary public programs include:

- MATS Program: a 45 bed, 3-5 clinically managed detox program
- MOTU: Medical Observation Treatment Unit – alternative to Emergency Departments if intoxicated individuals need medically monitored detox or care for minor injuries. Projected opening date is April, 2009.
- Supportive Aftercare Community: long-term care (6 month to 1 year) with licensed Counselors, 80 beds.
- Community Case Management Program: 15 case managers in the fieldwork to stabilize high-risk situations.
- Detox facility for women with children: will start with 8 families in June 2008.
- DOH/Turquoise Lodge: Detox program funded by DOH, leases space at MATS.
- Crisis Response Team/Methamphetamine Crisis Response Team – Works with police, EMS and others to de-escalate situations, make referrals, and offer support to families.

Offender Programs:

- Alternative Sentencing for Juveniles
- Jail-based treatment programs
- Outpatient treatment connected with community custody programs
- Community reintegration services for those who completed sentences.

Prevention Programs:

- Safe Ride Home: Offers rides to anyone who feels they are too drunk to drive - "A 100% effective prevention program" – everyone who calls gets home safely.
- Protecting You/Protecting Me: prevention programs for elementary schools, in 67 of 84 APS schools.
- Mid and High School prevention programs.

Other Programs for Substance Abuse or Mental Health in Albuquerque

- Turquoise Lodge: Hospital inpatient, residential treatment, day treatment, outpatient, partial hospitalization. Self-pay Medicaid, Medicare.
- Albuquerque Metro Central Intake: Run by UNMH, participation voluntary.
- Albuquerque Health Care for the Homeless.

AN INNOVATIVE APPROACH TO IMPROVING ACCESS TO HEALTH & SOCIAL SERVICES IN BERNALILLO COUNTY

In April 2008, the UNM Regents and Bernalillo County committed to funding the "Pathways Project". This innovative project will increase resources available to help County residents access health and social services. The University of New Mexico Health Sciences Center, Office of Community Affairs (OCA) is administering the project, and has committed eight years of funding for the project. The initial award period will be from the time that the contract is signed by all parties, through June 30, 2011, provided that the contractor performs satisfactorily in the first year. A new RFP will be issued in spring 2011 that will incorporate all of the lessons learned and modifications made to the Pathways model over the first eighteen-plus months of implementation.

The Pathways model is patterned after the "Pathways Community Outcomes Production Model", designed by a pediatrician, Dr. Mark Redding, in Ohio. Different versions of this model have been implemented in a number of other states. The Pathways model is designed to reduce unmet needs, address health disparities, and improve the overall health of the residents of Bernalillo County. It focuses on positive health outcomes by utilizing community health workers as care coordinators (Navigators) who have the ability to find the community's most disconnected, at-risk residents, connect them with the appropriate resources, and follow their progress toward improved health outcomes. Meaningful outcomes for the clients are reached by following a step-by-step approach (Pathways) for each of the needs, problems, or barriers that inhibit improved health for the client. For example, while working to address unmanaged diabetes for a client, a community health worker (CHW) might also help the client navigate through other Pathways such as housing, food security, transportation barriers, and domestic violence. For each of these Pathways, there are specific benchmarks that are clearly recognized and documented that help the client move toward successful completion of each Pathway. While individual clients attain improved health as outcomes are met, common systems issues are also brought to light and result in stronger service coordination.

The mission of the Bernalillo County Pathways Project is to improve the health of our County by:

- Connecting underserved county residents with health care and other support systems and assisting them as they navigate through it;
- Coordinating services for the underserved residents to achieve positive individual-level health outcomes; and
- Assuring collaborative planning and improvement of our health care system.

Through a series of community planning meetings that occurred during 2008, long term, community-specific outcomes were identified and agreed upon as goals to attain through the Bernalillo County Pathways Project. These outcomes encompass four primary themes:

1. People in Bernalillo County will self report better health
2. People in Bernalillo County will have a health care home
3. Health and social service networks in Bernalillo County will be strengthened and user friendly
4. Advocacy and collaboration will lead to improved health systems

The Office of Community Affairs (OCA) will serve as the Project "Hub", or central support system for those organizations funded through this Project. The responsibilities of the Hub are to:

- Maintain regular communication with the Navigators and their supervisors;
- Coordinate appropriate trainings that allow for continuing education opportunities for the Navigators, and to help them perform their roles to the best of their abilities;
- Assist with preventing duplication of clients across organizations;
- Assure that the Pathways are completed with quality and accountability;
- Collect and disseminate the data; and
- Provide ongoing support for the Navigators

The OCA reports to the Office of the Executive Vice President of the UNM Health Sciences Center (HSC) and to the HSC Community Advisory Council (CAC), which serves in an external advisory role to the UNM HSC on issues concerning the community, including oversight on the design and implementation of the Pathways Project.

In this model, many community-based organizations and providers will work together to improve health outcomes for the population as a whole. Organizations will share information, cross-refer clients, collaborate on reducing duplication of services, and work collectively on addressing systems-level problems that have been identified. An evaluation team has been established and is in the process of creating a community-based evaluation advisory committee. The evaluation team will track both individual client and community level outcomes, identify Project areas in need of improvement, and also focus on population health measures of at least three indicators that were selected by the community as the most serious health issues in the community planning process: depression, dental health, and diabetes care & prevention.

For more information on the Pathways model, please refer to the following websites:

- http://www.innovations.ahrq.gov/content.aspx?id=2040
- http://www.chap-ohio.net/documents/PathwaysManual.pdf
- http://hsc.unm.edu/about/community

XV. ADVOCACY/ADVISORY GROUPS ADDRESSING COMMUNITY HEALTH ISSUES

There are many organizations, which advocate for improving the health of Bernalillo County residents and communities. Table XV-1 presents a list of organizations, which address community health concerns in Bernalillo County, and which are NOT direct service providers. This list was compiled based upon input from the Bernalillo County Health Profile survey and focus groups, as well as from service providers that work in community health. The New Mexico Resources Inventory (NMRI) will be expanded to include these organizations, including contact information and web sites.

Each organization is identified as addressing one or more of the following focus areas:

- Access & Equity (Health and Social Services)
- Alternative / Traditional Medicine
- Built environment
- Children services
- Community services (fire, police, transportation, etc.)
- Disabilities / Injury and Rehab
- Disease - Chronic, Common, Complex
- Education (all ages)
- Early Prevention / Children / Youth
- Environmental Health
- Hearing / Vision
- Housing
- Immigrants
- Mental Health, Addictions & Recovery
- Poverty
- Primary Care/ Public Health / School-based
- Wellness & Prevention

Table XV-1 Organizations that Advocate for Community Health

Agency Name	Description of Services	Health Advocacy Focus (1-3 areas)
ACHIEVE	Bring communities together to prevent chronic diseases and promote healthy lifestyles.	• Disease - Chronic, Common, Complex • Environmental Health • Wellness & Prevention
Agua es Vida	A group of ABQ citizens who have concerns about water and the San Juan Chama Diversion.	• Environmental Health
Albuquerque Public Schools Community Safety Commission		• Wellness & Prevention • Primary Care/Public Health/School Based
Albuquerque Public Schools School Health Advisory Council		• Wellness & Prevention • Primary Care/

Agency Name	Description of Services	Health Advocacy Focus (1-3 areas)
American Cancer Society Cancer Action Network		• Disease - Chronic, Common, Complex
American Heart and Stroke Association		• Disease - Chronic, Common, Complex
The Arc of New Mexico	Improve the quality of life for individuals with developmental disabilities of all ages by advocating for equal opportunities and choices in where and how they learn, live, work, play and socialize.	• Disabilities / Injury and Rehab • Access & Equity
Association of New Mexico Family Provider	Support family living providers under the DD Waiver, with education, newsletters, seminars and advocacy.	• Disabilities / Injury and Rehab
Asthma Allies	Raise awareness; provide evidence-based education to individuals, families, schools and healthcare professionals; addressing disparity and access issues; and encourage comprehensive asthma self-management through a team approach.	• Disease - Chronic, Common, Complex • Access & Equity
Bernalillo County Local Collaborative	Advocate for positive change through networking, teaching, influencing policy, and planning for effective behavioral systems.	• Mental Health, Addictions & Recovery
Brain Injury Advisory Council State Chair	Advocate for the development of a statewide system of comprehensive, community based resources that will maximize the personal choices and functional independence of persons with brain injuries; promote prevention and increased public awareness to decrease the	• Disabilities / Injury and Rehab

Agency Name	Description of Services	Health Advocacy Focus (1-3 areas)
	incidence of preventable brain injuries.	
Cancer Services of New Mexico	Identify and gaps in cancer-related services and develop programs to address them.	• Disease - Chronic, Common, Complex
Central New Mexico United Way	Create lasting change in our community. We partner with people from all across the community to make the greatest difference. We're focusing on building financially stable families, preparing children to succeed, and creating a cohesive community.	•
Clinical Prevention Initiative	Through DOH and NM Medical Society - focuses on the following interventions based on burden of illness, preventability of the condition, cost, current level of services, availability of leadership, and programmatic support: adult pneumococcal vaccination, tobacco use prevention and cessation, mammography screening, colorectal cancer screening, healthier weight, screening and treatment for chlamydia and gonorrhea, screening and intervention for problem drinking, childhood immunization, and prevention of unintended pregnancy.	• Wellness & Prevention
Community Coalition for Health Care Access	Advocacy and patient rights education related to health issues. Educate the community on how to maneuver through the health system and provide information of community resources.	• Access & Equity

Agency Name	Description of Services	Health Advocacy Focus (1-3 areas)
Developmental Disabilities Planning Council		• Disabilities / Injury and Rehab
DWI Improvement Council		• Wellness & Prevention • Mental Health, Addictions & Recovery
El Centro de Igualdad y Derechos	Educate the Latino immigrant community about rights, to change and preserve pro-immigrant policies, and create a space in which the community can participate in social change.	• Access & Equity
Environment New Mexico	A statewide, citizen-based environmental advocacy organization working on issues related to clear air, clear water, clean energy, and global warming.	• Environmental Health
Family Parent Involvement Advisory Council -NM PED	Provide advocacy, guidance, and support for child centered policies and practices affecting family, school, business, and community engagement to local and state decision-makers.	• Early Prevention / Children / Youth
First Choice Community Advisory Group		
Greater Albuquerque Housing Partnership	Works with local neighborhood associations and residents, listening to their input, in order to create housing developments that truly reflect the needs and desires of the community.	• Housing
Greater Albuquerque Immunization Network		• Wellness & Prevention
Health Action New	Educate consumers and policy makers about health care access	• Access & Equity

Agency Name	Description of Services	Health Advocacy Focus (1-3 areas)
Mexico	and reform issues facing New Mexico.	
Healthcare United	Nurses, doctors, and healthcare workers uniting to build a national movement to reform our country's healthcare system.	• Access & Equity
La Comunidad Habla (Southwest Creations Collaborative and Young Children's Health Center)	Increase access to information and health resources. Create health advocacy media tools.	• Access & Equity
MANA de Albuquerque	Empower Latinas through leadership development, community service, and advocacy.	•
NAMI Westside	National alliance on mental health - support, education, and advocacy	• Mental Health, Addictions & Recovery
National Federation of the Blind of Albuquerque	Improve blind people's lives through advocacy, education, research, technology, and programs encouraging independence and self-confidence.	• Hearing / Vision
Native American Health Advisory Council	Offer the Department of Health their knowledge and insight into health issues and concerns facing Native American communities and individuals in New Mexico. With the Council's help, we will identify the most pressing issues, craft effective strategies to address those issues, and act together to improve the overall health of Native Americans throughout the state.	
Network of Health Professionals for a		

Agency Name	Description of Services	Health Advocacy Focus (1-3 areas)
National Health Program		
New Mexico Alliance for School-Based Health Care	Promote, facilitate, and advocate for comprehensive, culturally competent health care in New Mexico's schools.	• Primary Care / Public Health / School-based
New Mexico Association of Addiction Professionals		• Mental Health, Addictions & Recovery
New Mexico Association for the Deaf	Strengthen the unity among Deaf, Hard of Hearing and Deaf-Blind individuals by advancing and promoting full access and equal opportunities.	• Hearing / Vision • Access & Equity
New Mexico Autism Society		• Disease - Chronic, Common, Complex
New Mexico Cancer Coalition	Develop, implement and evaluate the New Mexico Cancer Plan. Our goal is to increase access to information, prevention and treatment.	• Disease - Chronic, Common, Complex • Wellness & Prevention • Access & Equity
New Mexico Center on Law and Poverty	Work to assure that the policies, laws and practices intended to address the problems of those living in poverty are well designed and are implemented legally, fairly and effectively.	
New Mexico Chronic Disease and Prevention Council		• Disease - Chronic, Common, Complex • Wellness & Prevention
New Mexico Coalition Against Domestic Violence	Serves as a clearinghouse for information and referral. It collaborates with agencies and advocates in the areas of program development, public	

Agency Name	Description of Services	Health Advocacy Focus (1-3 areas)
	policy, education, training, and funding proposals.	
New Mexico Commission for the Deaf and Hard of Hearing	Provide effective leadership, education, advocacy and programs to reduce barriers to the social, economic, educational, cultural and intellectual well - being of Deaf and Hard of Hearing New Mexicans and their families, friends and colleagues.	• Hearing / Vision
New Mexico Community Health Worker Association	Provide training for Community Health Workers/Promotoras as well as work with patients by providing prenatal education, education on EMSA, and referrals.	• Access & Equity
New Mexico Counseling Association		• Mental Health, Addictions & Recovery
New Mexicans for Alternative Treatment Solutions NMATS		• Alternative / Traditional Medicine
New Mexico Health Equity Working Group		• Access & Equity
New Mexico Breastfeeding Task Force		• Early Prevention / Children / Youth
New Mexico Primary Care Association		• Primary Care / Public Health / School-based
New Mexico Public Health Association	Provide a forum for public health professionals, community and agency advocates to share research and practices that promote the health of all New Mexicans. It also provides a base for networking and action to implement policies that improve health and quality of	• Primary Care / Public Health / School-based

Agency Name	Description of Services	Health Advocacy Focus (1-3 areas)
	life.	
New Mexico School Nurse Association	Improves the health and educational success of children and adolescents by defining and promoting the profession of school nursing. This process involves conducting and utilizing research to develop best practice models.	• Primary Care / Public Health / School-based
New Mexico Stroke Advisory Committee		• Disease - Chronic, Common, Complex
New Mexico Teen Pregnancy Coalition		• Early Prevention / Children / Youth • Wellness & Prevention
New Mexico Voices for Children	We work to eliminate child poverty and improve the health and well-being of New Mexico's children, families and communities by shaping public policy.	• Early Prevention / Children / Youth
Office of Community Affairs -	Strength the collaboration between community and Health Sciences Center (HSC) partners to: build and sustain healthier communities across the state, promote access to services, enhance responsiveness and accountability of HSC patients and community members from diverse cultural and socioeconomic backgrounds.	• Access & Equity • Primary Care / Public Health / School-based
Office of Community Affairs Community Advisory Council (CAC) -	Discuss issues that impact patients, families and community members that use UNM Hospitals and the other services offered at UNM Health Sciences Center. Serve in an external advisory role to the UNM Health Sciences Center. The CAC oversees Pathways	• Primary Care / Public Health / School-based

Agency Name	Description of Services	Health Advocacy Focus (1-3 areas)
	program.	
School Health Advisory Committee		• Primary Care / Public Health / School-based
Southeast Heights Health Coalition	Address the various components of healthy communities and encompasses the social determinants of health – Employment, Safety, Housing, Education, Access to Health Care.	• Access & Equity • Wellness & Prevention • Housing
St Joseph Center for Children & Families Advisory Council		• Mental Health, Addictions & Recovery • Access & Equity • Wellness & Prevention
St. Joseph Community Health	Connect people to resources, advocate for change, offer tools for communities, and educate about factors beyond medical care that impact health.	• Access & Equity • Wellness & Prevention
University Hospital Health Access Committee		• Access & Equity
UNM Patient Access Committee		• Access & Equity
YWCA	Eliminate racism and empower women. The Health Equity program links people without adequate health insurance to free and low-cost health services and educates and supports clients as they navigate the healthcare system. The program also actively supports policies that create healthcare access for all, regardless of race and insurance status.	• Access & Equity