The State of Health in New Mexico 2011

New Mexico Department of Health

New Mexico Health Trends 1998–2009

Improving Trends

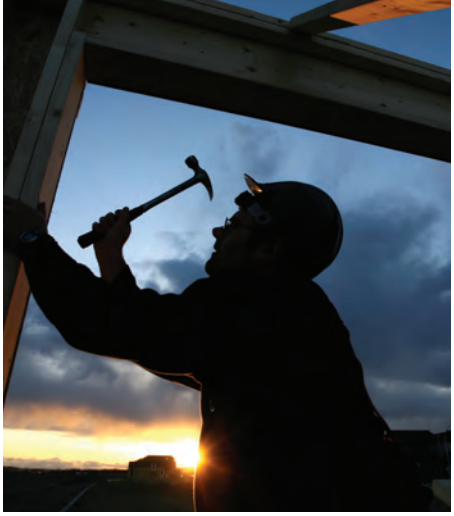
Teen birth
Infant mortality
Older adult (65–84 years) mortality
Heart attack mortality
Heart disease hospitalization
Cancer hospitalization
Hepatitis A
Hepatitis B
Adult health care coverage
Adult smoking
Adult binge drinking
Youth suicide attempt
Youth smoking
Youth methamphetamine use
Youth cocaine use
Youth binge drinking
Youth drinking and driving
Youth seatbelt use

Stable Trends

Prenatal care in first trimester
Child (1–14 years) mortality
Teen (15–24 years) mortality
Adult (35–64 years) mortality
Elderly adult (85 years and older) mortality
Motor vehicle crash mortality
Suicide
Homicide
Firearm injury mortality
Alcohol-induced mortality
Drowning
Adverse effects of medical and surgical care mortality
Heart disease mortality
Stroke mortality
Diabetes mortality
Chronic liver disease and cirrhosis mortality
Influenza and pneumonia mortality
Lower respiratory disease mortality
Cancer mortality
Tuberculosis mortality
HIV mortality
Septicemia mortality
Unintentional injury hospitalization
Motor vehicle crash hospitalization
Falls hospitalization
Firearm injury hospitalization
Pneumonia hospitalization
Stroke hospitalization
Diabetes hospitalization
Asthma hospitalization
Chlamydia infection
Tuberculosis infection
HIV new infection
Pertussis infection
Salmonellosis infection
Adult general health status
Adult physical activity
Adult current asthma prevalence
Youth marijuana use
Youth heroin use
Youth sexual activity
Youth condom use
Youth physical fighting
Youth weapon carrying

Worsening Trends

Caesarean section
Vaginal birth after Caesarean section
Low birth weight
Young adult (25–34 years) mortality
Unintentional injury mortality
Falls mortality
Poisoning mortality
Alzheimer's disease mortality
Suicide attempt hospitalization
Adverse effects of medical and surgical care hospitalization
Arthritis hospitalization
Septicemia hospitalization
Cellulitis and abscess hospitalization
Adult diagnosed diabetes prevalence
Adult obesity prevalence
Adult ever tested for HIV
Adult high cholesterol prevalence
Youth obesity
Youth spit tobacco use



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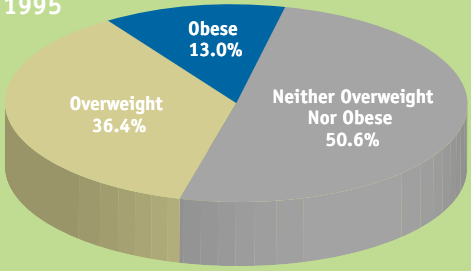
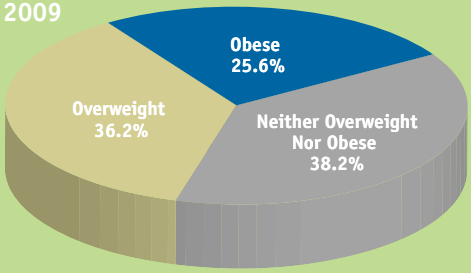
1995



2009



Source: NM Behavioral Risk Factor Surveillance System

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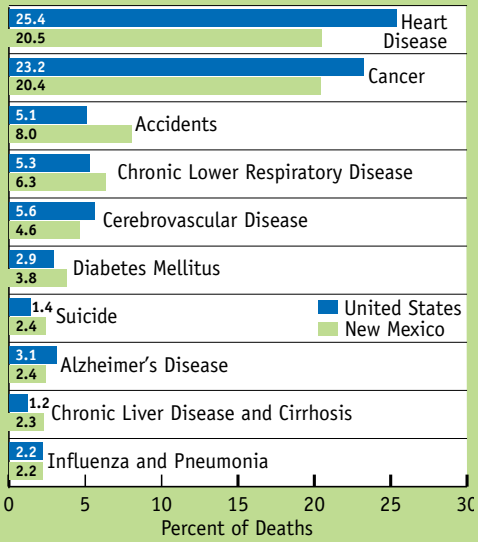

Source: 2007 U.S.: CDC National Center for Health Statistics, NVSR Vol. 58, No. 19, May 20, 2010. (2007 latest final U.S. data available. 2009 NM: NM Vital Records and Health Statistics

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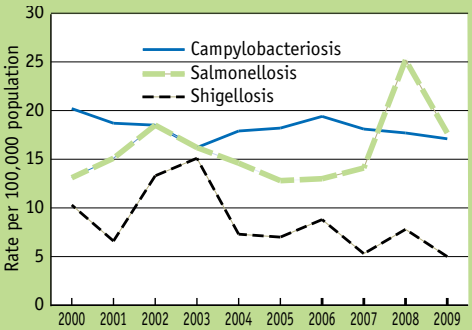
Selected Foodborne Disease Rates
NM, 2000–2009



Source: NM Electronic Disease Surveillance System

There are numerous public health challenges for New Mexico during the next several years. New Mexico's population of approximately 2 million is spread over a large geographic area with relatively low population density. Our rich history and multicultural heritage are strengths, but these social and cultural differences also pose challenges for improving health status for our citizens. Health status issues that need attention or intervention are discussed below.

Physical Activity, Nutrition, and Obesity

Nationally, obesity rates have doubled for adults and tripled for children in the last 20 years. New Mexicans have followed a similar pattern (Figure 1). Obesity rates have risen steadily over the last 15 years for adults. Sixty-two percent of adults in New Mexico and the U.S. were overweight or obese in 2009. Youth obesity rates as measured in the Youth Risk and Resiliency Survey in NM have been lower than national rates but have been increasing over the last decade. Poor dietary choices and lack of exercise contribute to this trend. Eating a balanced diet containing substantial quantities of fruits and vegetables combined with regular exercise are needed to reduce this trend.

Substance Abuse—Alcohol, Illicit and Prescription Drugs

New Mexicans continue to surpass national rates for the negative consequences of excessive consumption of alcohol and use of both illicit and prescription drugs. For over 15 years, New Mexico's death rate for alcohol related chronic diseases (e.g., chronic liver disease and cirrhosis, alcohol dependence, etc.) has been first or second in the nation with rates 1.5 to 2 times the national rate (Figure 2). In addition, over the last 15 years, New Mexico's death rate for alcohol related injury (motor vehicle crashes, drowning, suicide, homicide, etc.) has also consistently been among the worst in the nation ranging from 1.4 to 1.8 times the national rate.

New Mexico also suffers from a high burden of both illicit and prescription drug overdose. There has been a rise in prescription drug overdose both nationally and in New Mexico. In 2008, the most common drug types causing overdose death in the state were prescription opioid pain killers (e.g., methadone, oxycodone, hydrocodone), heroin, tranquilizers and muscle relaxants (e.g., benzodiazines), cocaine and antidepressants. The overdose death rate from a combination of illicit and prescription drugs increased 150% in the past five years. Prevention of drug abuse among adolescents is key to stemming this trend.

Infectious Diseases—Food-borne Illnesses, Healthcare-Associated Infections, and Vaccine-Preventable Diseases

There are numerous infectious disease challenges over the next several years. However, three categories of disease are of high importance: food-borne illnesses, healthcare-associated infections, and vaccine-preventable diseases. Food-borne illnesses (e.g., salmonella, shigella, and campylobacter) continue to account for a substantial burden of illness, hospitalization, and occasionally death (Figure 3). Our complex, globalized food supply and lack of attention and resources directed to food safety have helped keep rates of these diseases at relatively high levels.

Healthcare-associated infections (HAI) are getting increased attention at national and state levels. Almost 100,000 persons each year are estimated to die from healthcare-associated infections. These infections increase costs, length of hospitalizations, and death rates. Since many of these infections are preventable, New Mexico has established an HAI Advisory Committee to work with hospitals and medical providers and has begun to track several categories of infections in order to make improvements.

While there has been a tremendous reduction in most vaccine-preventable infections over the last five decades, new vaccines and new combinations of vaccines

allenges

mean opportunities for further reductions of disease burden.

Tobacco

Tobacco use is the leading preventable cause of death in the United States and New Mexico. Tobacco use kills an estimated 440,000 people per year in the U.S and about 2,100 people per year in NM. Fortunately, the adult smoking rates have dropped from 24% in 2001 to 18% in 2009. Of concern is the fact that currently 24% of high school youth in NM smoke compared to 20% nationally. Should these youth continue smoking into adulthood, our statewide adult rates will increase. New Mexicans are protected by strong legislation, the Dee Johnson Clean Indoor Air Act. Continued efforts to prevent youth from initiating smoking behaviors will be important in the future.

DWI/Motor Vehicle Injury and Mortality

Motor vehicle mortality rates for New Mexico have dropped dramatically over the last several decades. Alcohol-impaired motor vehicle crash death rates have also dropped dramatically during this time. Despite these reductions, injuries and deaths from motor vehicle crashes remain a burden in New Mexico. Motor vehicle crashes are the leading preventable cause of death in young people. Graduated drivers' licenses have been an effective tool for reducing motor vehicle crashes among youth. Numerous efforts have been implemented to reduce driving while intoxicated (DWI) in recent years. A comprehensive DWI prevention program involving enhanced DWI and liquor control law enforcement and related media activity, has contributed to a 40% reduction in the alcohol-impaired motor vehicle traffic crash fatality rate from 2004 to 2008. New Mexico has also done a remarkable job improving seat belt use. Safer cars, improved road design and construction, and continuous enforcement of laws and prosecution of offenders may lead to changing social norms and further reductions in motor vehicle crash injuries and deaths.

Violence—Homicide and Suicide

The World Health Organization defines violence as the intentional use of force or power, threatened or actual, against oneself or another person, group, or community. Intentional, most often violent, injuries consist primarily of suicides, assaults, and homicides. New Mexico had the second highest violence-related injury death rate among states nationally in 2007—66% higher than the rate for the U.S. The causes and prevention of violence are complex and require intervention at multiple levels.

Aging Related Disease and Injury—Alzheimer's Disease, Falls in the Elderly, Suicide

With the aging of the population as time goes along, we would anticipate more health issues seen in older populations. Three areas where we know we already have increasing rates are Alzheimer's disease, falls in the elderly, and suicide among the elderly. New Mexico has seen dramatic increases in rates of Alzheimer's disease similar to those seen nationally. Unintentional fall deaths among the elderly have also increased dramatically. Suicide rates increase with age and are very high among those 65 years of age and older, because older adults are more likely to be suffering from physical illnesses and to be divorced or widowed.

Access to Healthcare in a Changing Healthcare Delivery Environment

With recent federal legislation to extend healthcare coverage to most Americans, the impact on public health remains uncertain. Greater access to healthcare should mean improved medical care for those who did not have access previously, however, this legislation will not affect underlying socioeconomic, community and population dynamics that drive most conditions and diseases of public health importance. With the economic downturn, it is likely that the need for public health interventions will increase into the foreseeable future.

What is Being Done

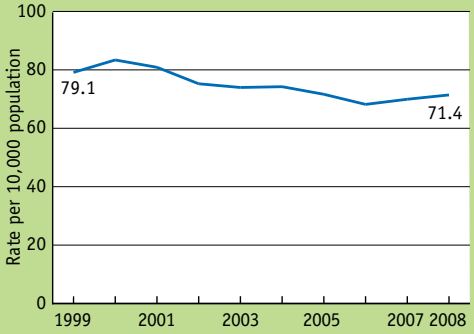
- Statewide DWI prevention programs have been effective and need to continue.
- Statewide tobacco control efforts have been useful in reducing tobacco consumption.
- New efforts to reduce healthcare associated infections have been implemented in the state.
- Immunization efforts have been successful in eliminating or reducing many preventable infectious diseases.

What Needs to Be Done

- A comprehensive effort to reverse the obesity and overweight trend in New Mexico.
- An in-depth review of the effectiveness of substance abuse programs in the state.
- Development of a comprehensive food safety program in New Mexico.
- Review of systems and support for elderly persons in New Mexico.
- Planning for how the Department of Health can support health status improvements in a changing healthcare environment.

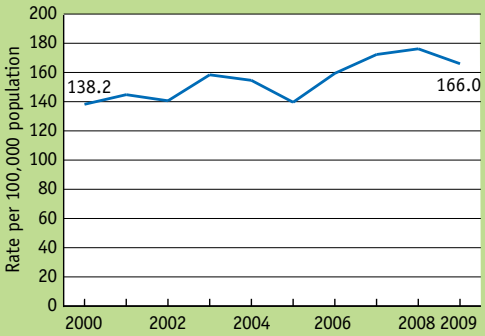
New Mexico Health Tren

Figure 1
Heart Disease Hospitalization Rates
NM, 1999–2008



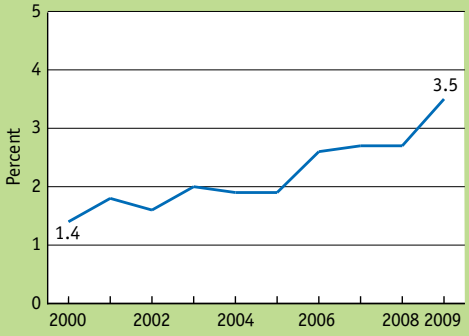
Source: Hospital Inpatient Discharge Database, NM Health Policy Commission. Rates age-adjusted to the 2000 U.S. Standard Population

Figure 2
Deaths Among Young Adults (25–34)
NM, 2000–2009



Source: NM Vital Records and Health Statistics

Figure 3
Adult Morbid Obesity Prevalence
NM, 2000–2009



Source: NM Behavioral Risk Factor Surveillance System

The health status of a population tends to remain stable over the short term. When change does occur, it generally happens gradually, over many years or decades. Occasionally health status will improve rapidly such as when a new vaccination is introduced into the population, or deteriorate rapidly such as in Russia following the breakup of the Soviet Union and the subsequent political and economic upheaval. An examination of health trends in NM over the last decade showed that a majority of the analyzed health status indicators did not change significantly, while there were some key exceptions that improved or worsened.

Improving Health Trends

Over the last decade, a number of health status indicators in New Mexico had statistically significant improving trends (Table). Perhaps the most important for overall impact on health status has been the decrease in current smoking (see page 16) that followed the implementation of two major cigarette tax increases and a major anti-smoking marketing campaign. This trend suggests that when society gets fully behind a health campaign it can improve health status. A number of health outcomes known to be associated with smoking also showed improvement during the decade including infant mortality, mortality among those 65–84 years, heart attack deaths, heart disease hospitalizations (Figure 1), and cancer hospitalizations. Decreases in smoking played a role in all of these important health improvements.

Vaccination has continued to be responsible for improvements in health status. Over the last decade, both hepatitis A and hepatitis B rates decreased, with credit going to relatively recently introduced vaccines. Furthermore, maintenance of historically low rates of many infectious diseases can be attributed to their corresponding vaccines.

The teen birth rate decline has and will have major ongoing societal impacts. A teen birth affects economic and educational opportunities for the mother but also for the infant. This ripple effect is seen in communities with high rates of teen birth. Ultimately, any of the numerous health trends which are associated with poverty should be influenced by teen birth rates.

Decreases in binge drinking rates bode well for New Mexico, but this trend has not translated, as has happened with the smoking rate decline, into recent improvements in associated health outcomes such as alcohol-related death and unintentional injury. Perhaps this is because NM has not invested the same resources in combating the consequences of problem drinking as we have for smoking. It may also be due to the fact that chronic heavy drinking, more than binge drinking, causes a significant portion of alcohol related death such as chronic liver disease and cirrhosis. Anti-problem drinking marketing campaigns have not been used as extensively or successfully as those against smoking, and these campaigns have to compete against pro-alcohol advertising. Additionally, the cost of alcohol has not increased to the degree that the cost of smoking has where cost can have a major impact on consumption.

The decline in the percentage of New Mexico adults without health care coverage will hopefully translate into improvements in health. For this to happen, NM will need to see increased coverage for clinical preventive services such as pap smears and colorectal cancer screening, as well as improved compliance with evidence-based medical therapies and practice guidelines.

Worsening Health Trends

That was the good news. A number of health status indicators have trended in the wrong direction over the last decade and many of these indicators cluster around particular types of health outcomes or risk factors. The first cluster is comprised of injury-related indicators, including deaths due to unintentional injury, falls, and poisonings (which are largely due to drug overdose), deaths among 25–34 year olds (Figure 2), and hospitalizations related to suicide attempts. Drug overdoses,

ds are Largely Stable

including prescription drug overdoses, contribute significantly to all of these indicators except deaths from falls. However, prescription drug use may also be a factor in fall deaths occurring largely among older and elderly adults, since many people in these age groups are taking multiple medications which could interact in harmful ways.

A number of worsening health trends are associated with the rising obesity rates. Both obesity and morbid obesity, typically 100 pounds or more overweight, have markedly increased with the morbid obesity rate (Figure 3) in NM doubling during the last decade. The increasing prevalence of obesity is likely contributing to the worsening diabetes prevalence rate and the worsening arthritis hospitalization rate in NM.

Several trends for indicators that reflect the quality and appropriateness of health care in NM are worsening. This analysis showed that caesarean section rates are increasing, vaginal births after C-section are decreasing, HIV screening rates are decreasing, and hospitalization rates for adverse effects of medical and surgical care are increasing. The fact that all of these rates in NM are worsening suggests that evidence-based medical practice guidelines need to be followed more rigorously, and additional systems, such as surveillance of healthcare-associated infections, need to be developed for assuring appropriate care.

The last cluster of worsening health trends is associated at least partly with an aging population. While these rates were age-adjusted such that the rate was indexed to a standard US population age structure, some rates of older adult and elderly disease and death are increasing. Rates for Alzheimer's disease deaths, fall deaths, arthritis hospitalizations, and septicemia hospitalizations all are associated with an aging population.

Future Health Trends

As mentioned earlier, most health trends did not significantly change over the last decade. Perhaps some currently unchanging health trends may improve during the next decade. With healthcare reform and further reductions in the number of people without health care coverage, healthcare sensitive indicators such as prenatal care in the first trimester of pregnancy, asthma hospitalization, hypertension hospitalization, and diabetes hospitalization may improve. In addition to improved health care coverage rates, greater adherence to evidence-based practice guidelines in New Mexico's healthcare system will also be required for these healthcare system sensitive indicators to move in the right direction.

Also on the wish list for the next decade would be decreasing obesity and problem drinking trends in New Mexico. Through aggressive targeting of these health risk behaviors—similar to what has already occurred for smoking—obesity and problem drinking rates should decrease. Successfully reducing these health risk behaviors will have a positive snowball effect on many related health outcome trends and significantly improve the health status of New Mexico.

The final item on the next decade health wish list would be a reduction in the New Mexico poverty rate. The poverty rate, and associated income inequality, has a greater impact on overall health status in New Mexico than any other single indicator.

Selected Health Trends in New Mexico for Various Years 1998–2009

Improving Trends
Teen birth
Infant mortality
Older adult (65–84 years) mortality
Heart attack mortality
Heart disease hospitalization
Cancer hospitalization
Hepatitis A and B
Adult health care coverage
Adult smoking
Adult binge drinking
Youth smoking
Youth binge drinking

Worsening Trends
Caesarean section
Vaginal birth after Caesarean section
Young adult (25–34 years) mortality
Unintentional injury mortality
Falls mortality
Poisoning mortality
Alzheimer's disease mortality
Suicide attempt hospitalization
Adverse effects of medical and surgical care hospitalization
Arthritis hospitalization
Septicemia hospitalization
Adult diagnosed diabetes prevalence
Adult obesity prevalence
Adult ever tested for HIV
Youth obesity

Stable Trends
Prenatal care in first trimester
Child (1–14 years) mortality
Teen (15–24 years) mortality
Adult (35–64 years) mortality
Elderly adult (85 years and older) mortality
Motor vehicle crash mortality
Suicide
Alcohol-induced mortality
Heart disease mortality
Diabetes mortality
Influenza and pneumonia mortality
Cancer mortality
Diabetes hospitalization
Asthma hospitalization
Tuberculosis infection
HIV new infection
Pertussis infection
Salmonellosis infection
Adult physical activity
Youth sexual activity

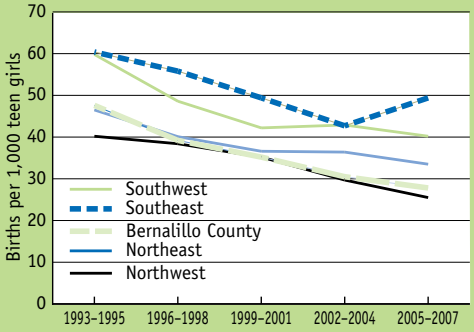
Healthy Mothers Make H

Table
Mothers' Experience of Pregnancy and Childbearing, NM, 2007–2009

Race/ Ethnicity	Hispanic	American Indian	White
Pregnancy was unintended	46.5%	48.8%	39.6%
Did not get prenatal care as early as wanted	23.0%	26.5%	21.6%
Abused during pregnancy	5.0%	8.7%	3.8%
Experienced postpartum depression	19.9%	24.6%	18.1%

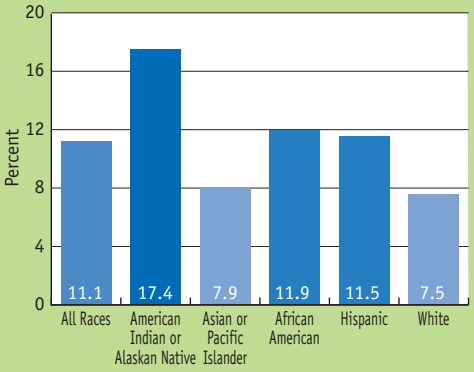
Source: NM Pregnancy Risk Assessment and Monitoring System. African-American and Asian/Pacific Islander data not included because of small numbers.

Figure 1
Births Among Teen Girls by Region Age 15–17, NM, 1992–2007



Source: NM Vital Records and Health Statistics

Figure 2
Percent of Births with Low/No Prenatal Care by Mother's Race/Ethnicity, NM, 2007



Source: NM Vital Records and Health Statistics

About 30,000 babies are born every year in New Mexico. Mothers whose pregnancies are intended, who enter prenatal care in the first trimester, and whose lives are free from domestic violence are better able to grow, deliver, and nurture healthy babies.

Under ideal circumstances, babies are born to mothers who do not use tobacco or alcohol, and who take nutritional supplements containing folic acid before and during pregnancy in order to prevent certain birth defects. Good mental health is essential.

Racial/ethnic disparities affect mothers' experiences of pregnancy and childbearing (Table). The New Mexico Pregnancy Risk Assessment Monitoring System (PRAMS) asks each participating mother if her pregnancy was intended or unintended, if she was able to initiate prenatal care as early as she wanted to, if she was physically abused when she was pregnant, and if she experienced symptoms of postpartum depression.

Teen Births

The rate of births to 15–17 year old girls in New Mexico decreased steadily from 52.9/1,000 girls in 1992 to 32.9 in 2007. The northeastern region consistently had the lowest teen birth rates, while the southeastern region had the highest rates (Figure 1). Hispanic teens have the highest birth rates both in New Mexico and nationally. Almost half of the population of females ages 15–17 years in New Mexico is Hispanic, yet they account for 70% of the births to this age group.

Prenatal Care

In 2007, 73% of live births were to mothers who initiated prenatal care in the first trimester, up from 65.3% in 2000. During that same year, 11.1% of live births were to women who received either low or no prenatal care. American Indian mothers had the highest percent of births with low or no prenatal care, followed by African-American mothers, Hispanic mothers, and White mothers. Asian or Pacific Islander mothers were least likely to have received low or no prenatal care (Figure 2).

Abuse

The percent of mothers reporting that they were physically abused during pregnancy declined steadily from 7.2% in 2003 to 4.4% in 2007. From 2003–2007, mothers with 12 or fewer years of education were more than twice as likely to report being abused by their partners as those with 13 years or more. American Indian mothers were most likely to have been abused (9.6%) followed by Hispanic mothers (5.7%) and White mothers (3.9%).

Tobacco and Alcohol Use During Pregnancy

Abstaining from alcohol and tobacco is essential to a healthy pregnancy. During 2001–2007, White mothers (13.5%) were almost twice as likely to smoke during their last three months of pregnancy as compared to Hispanic mothers (7.4%) and more than three times as likely as American Indian mothers to do so (4.3%). White mothers were also more likely to consume alcohol during the last three months of pregnancy (7.2%) than American Indian (4.5%) and Hispanic mothers (3.9%).

Maternal Depression

Maternal depression affected an estimated 18% of New Mexico mothers in the postpartum period during 2006–2008. Women on public assistance (24.2%), who experience domestic violence (39.8%), who are teens (26.2% among 15–17 year olds), or who are Native American (22.7%) experienced higher rates of postpartum depression symptoms compared to all NM mothers.

Infant Mortality

From 2000 to 2009, the infant mortality rate for all of New Mexico was 5.9 infant deaths per 1,000 live births. The rate was highest for African American infants at 13.5/1,000, followed by American Indian infants (7.6), Hispanic infants (5.6), White infants (5.3) and Asian infants (2.1). During that five year period, a total of 857 infants died before the age of one year.

ealthy Babies

Prematurity and Low Birth Weight

From 2006–2008, 5,341 low birth weight babies (<2500 grams) were born to New Mexico mothers. African-American mothers were most likely to have a low birth weight baby at 14.3% of all live births, followed by Asian mothers (9.2%), Hispanic mothers (8.9%), White mothers (8.7%) and American Indian mothers (8.0%). At 16.1% of all live resident births, African-American mothers were most likely to deliver their babies prematurely before 37 weeks gestation, followed by American Indian and Hispanic mothers (10.3%), White mothers (9.6%) and Asian mothers (8.9%)

Preventing Birth Defects

All New Mexico babies are screened for certain genetic, metabolic, hemoglobin and endocrine disorders. The New Mexico Newborn Screening Program offers screening for 27 disorders, and provides services to over 28,000 babies and their families annually.

Currently, about 60% of women take a folic acid supplement before conception. In 2010 the Department of Health and the NM March of Dimes started the Folic Acid Workgroup to examine ways to educate women of child-bearing age about the importance of folic acid consumption prior to becoming pregnant. Health experts recommend that women of child-bearing age take 400 micrograms of folic acid in a multivitamin every day. If taken before conception and throughout pregnancy, folic acid can prevent serious birth defects in a baby's brain and spine.

Access to Pregnancy Care

Good prenatal care means having access to culturally appropriate care at the right time and in the right place. Women who receive adequate prenatal care tend to have fewer complications and have healthier babies. Group prenatal care is one strategy that has resulted in more women seeking and receiving adequate care. Efforts are being made to implement and sustain this model of care throughout the state.

The Rural and Primary Health Care Program collaborates with agencies to collect data to enhance current prenatal care practices and develops strategies for ameliorating access problems. Other services to ensure healthy pregnancies such as WIC, Families First, Family Planning and home visiting continue to help New Mexico families have positive birth outcomes. In addition, fatherhood projects to encourage male involvement in healthy births are important. Taos MEN (Men Engaged in Nonviolence), the South Valley Male Involvement Project, New Mexico Young Fathers Project, and the New Mexico Fatherhood Forum all work to increase fathers' knowledge and willingness to participate in healthy families.

Supporting Maternal Mental Health

Depression can compromise a parent's ability to provide consistent care in a safe environment. Evidence suggests that depression can interfere with parenting, leading to poor physical and mental health in children. In 2010 the Maternal Child Health Program conducted a pilot project for screening, referral and treatment of WIC prenatal and postpartum clients with prenatal or postpartum depression in two counties in New Mexico. The project demonstrated that Perinatal Mood Disorder (PMD) screening should be done as routine prenatal and postpartum care for mothers accessing public health services. Substance abuse remains a significant co-factor with PMD and requires continued education, screening and referral sources. Bilingual staff is essential when facilitating education/support groups for New Mexico's Spanish speaking population.

The health of New Mexico's mothers and infants has improved in many areas, yet disparities persist. Discovering their causes, and developing strategies to address them are two of the top priorities for maternal and child health throughout the state.

What is Being Done

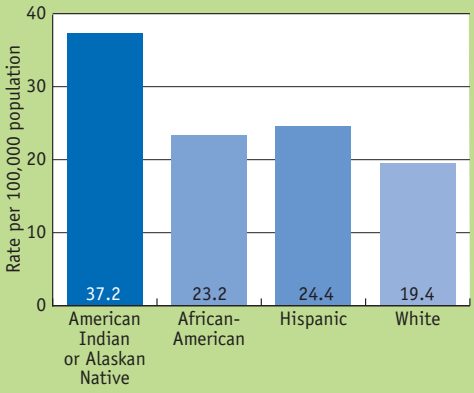
- Text4baby is a free mobile information service designed to promote maternal and child health. Women sign up by texting BABY (or BEBE for Spanish) to 511411 to receive text messages about their babies' health each week, timed to their due date or baby's date of birth.
- The Postpartum Depression Task Force looks for ways to diagnose, treat and refer women to services for postpartum depression and partners with communities to expand resources available to families suffering with postpartum depression.
- The Cocoon Project immunizes mothers and caregivers of infants against pertussis.

What Needs to Be Done

- Increase birthing services providers throughout the state by developing strategies for providing culturally appropriate care for hard-to-reach populations, particularly in rural communities.
- Increase awareness of social marketing programs for families by implementing the First Time Motherhood/New Parents Initiative designed to develop awareness of pre-conception, family planning and parenting programs throughout the State.
- Increase support through home visiting programs with funds provided through the Federal Affordable Care Act.

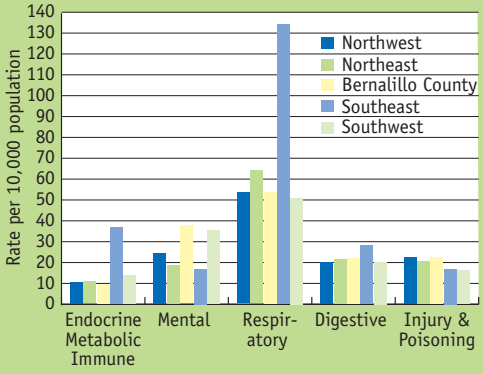
NM Makes Progress Impr

Figure 1
Death Rates of Children Ages 1–14 by Race and Ethnicity, NM, 2000–2009



Source: NM Vital Records and Health Statistics. Asian/Pacific Islander data not included because of small numbers.

Figure 2
Hospitalization Rates of Children Ages 1–14 by Race and Ethnicity NM, 2000–2009



Source: Hospital Inpatient Discharge Database, NM Health Policy Commission. HIDD does not include data from Indian Health Service (IHS) facilities, which account for a large proportion of hospitalizations for NM's American Indian population.

Table
Impact of Children with Special Health Care Needs on their Family, NM, 2005–2006

Child's Special Needs Impact on Family	Percent	Estimated Number of Families
Families pay $1,000 or more out-of-pocket per year for care	19.9	11,737
Child's conditions cause family financial problems	20.4	12,053
Families spend 11 or more hours per week providing health care	13.0	7,671
Child's condition(s) cause family members to cut back or stop working	25.1	14,807

Source: National Survey of Children with Special Health Care Needs http://cshcndata.org/

In 2009, there were 387,339 children ages 1–14 years in New Mexico—18.4% of the total population. Results from the 2007 National Survey of Children's Health showed that 84.4% of New Mexico's children were in excellent or very good health. Approximately 24% of New Mexico children live in poverty, and from 2006–2008, 8.6% lived in families where no parent had full-time employment, which was down from 10.0% in 2005–2007. Close to 33% of children are overweight or obese, and 14% of children ages 1–5 years engage in four or more hours of "screen time" every weekday, including TV and videos. In 2008, it was estimated that 12.8% of New Mexico children did not have health insurance.

Child Deaths

From 2005–2009, there were 457 deaths to New Mexico children ages 1–14 years. Compared to Hispanic and White children, American Indian children had the highest death rate during those years (Figure 1).

The leading cause of death for all children in New Mexico was unintentional injury, which accounted for 174 deaths during the five year period. Motor vehicle crash deaths, where the child was either an occupant or pedestrian, were the leading cause of child unintentional injury death, followed by drowning and fires.

For younger children ages 1–4 years, the second and third leading causes of child deaths were birth defects and homicide. The rates for birth defects during the periods 2000–2004 and 2005–2009 were 2.5/100,000 and 2.6/100,000, respectively. Homicide rates for those same periods dropped from 2.5 to 1.5/100,000. For older children ages 5–14 years, cancer and suicide were the second and third leading causes of death. From 2001–2009, the number of deaths of children from cancer ranged from 3 (2005 and 2009) to 11 (2004 and 2008). The number of New Mexico children that committed suicide ranged from 3 (2002 and 2006) to 10 (2003).

Childhood Illness

In 2008, the vast majority of hospital discharge diagnoses for all children were for respiratory disease (Figure 2). From 2004–2008, children ages 1–4 years were hospitalized for respiratory disease at a rate of 169/10,000, and those ages 5–14 years at a rate of 30/10,000. In 2008, there were 2,477 hospitalizations for respiratory disease among children ages 1–14 years. For younger children, the next leading diagnoses were injury and poisoning (256 hospitalizations) and endocrine/nutritional & metabolic diseases/immunity disorders (265 hospitalizations.) For older children, mental disorders (976 hospitalizations) and diseases of the digestive system (831 hospitalizations) were the second and third leading diagnoses.

Children with Special Health Care Needs

In 2005–2006, the second national survey of Children with Special Health Care Needs (CSHCN) estimated that 59,535 (12.1%) of New Mexico children had special health care needs, compared to 13.9% nationally. Nine percent were American Indian, 10.7% were Hispanic, and 15.2% were White. The most common diagnosis for CSHCN in New Mexico is asthma. Fewer New Mexico special needs children lived in poverty compared to nationally. About 5% of special needs children did not have health insurance at the time of the survey, and 36% had insurance that was inadequate. New Mexico compares favorably with the nation in the percentage of CSHCN who are screened early and continuously for special health care needs at 64%.

The health of New Mexico's special needs children improved in many areas from 2001. Fewer families reported that their child's condition affected their activities a great deal, and the percent of CSHCN without health insurance at the time of the survey dropped from 8.9% in 2001 to 5.5% in 2005–2006. The percent of children without a usual source of care, or who relied on the emergency room for care, dropped from 8.0% to 4.9%. Fewer families reported that

oving Children's Health

their child's condition caused their family financial problems (Table), however the percent of CSHCN whose families had to pay $1,000 or more out-of-pocket for their child's care more than doubled from 9% to 20% between the two survey periods.

Preventing Childhood Injuries

Most unintentional injuries are preventable, and New Mexico has passed legislation that protects children, such as the child booster seat law in 2005 and the 2007 child helmet law. In 2005, New Mexico began requiring ignition interlock devices for all convicted drunk drivers. The New Mexico SAFE KIDS state coalition, established in 1991 now manages a network of 12 coalitions and chapters statewide, with local sponsorship or active membership by the entire network of nine trauma centers.

Suicide and Homicide

Family, community, and school violence contribute to child suicide and homicide. New Mexico Voices for Children works on youth violence prevention through its youth leadership and policy development program. School districts in New Mexico develop and implement comprehensive Safe School Plans that include violence prevention activities such as mentoring, mediation, and anti-bullying programs and policies. The New Mexico Suicide Crisis Line Network provides 24/7 toll-free coverage, and the New Mexico Behavioral Health Collaborative works to address the mental health needs of all New Mexicans.

There is greater awareness of positive youth development approach principles and more people want practical steps on how to implement and incorporate them within their work and daily lives. Best and promising practices point toward youth engagement and youth-led projects for positive youth development, but funding for these types of activities is limited.

Respiratory Disease

New Mexico initiated a series of six pediatric asthma summits in five locations around the state, to seek input from the community about reasons for and solutions to the asthma problem. Regional differences in need, asthma triggers, resources, asthma activities, and access to care and training/education were discovered. This information helped to tailor interventions that could have the greatest chance of success in a given area. One important purpose of the asthma summits was to mobilize communities to be a crucial part of the solution to the problems they face. As a result of the statewide asthma summits there has been an increase in the use of asthma action plans for children seen in asthma clinics, leading to improved collaboration between pediatric pulmonary specialists, school health nurses, primary care practitioners, and families; extensive community asthma education training provided by Project ECHO and Asthma Allies; targeted outreach to the northwestern and southeastern parts of the state where asthma rates are highest; and the establishment of the Asthma Council, a private public partnership to address pediatric asthma.

The health of New Mexico's children is determined by a complex interaction of physical, social, emotional, economic, educational, and environmental factors. New Mexico continues to work to ensure that children are fed, housed, educated, safe, and cared for within healthy families. Because no single agency or program can address every factor that affects child health, improvement depends on continued successful collaboration among families, health professionals, educators, and advocates from the government and private sector.

What is Being Done

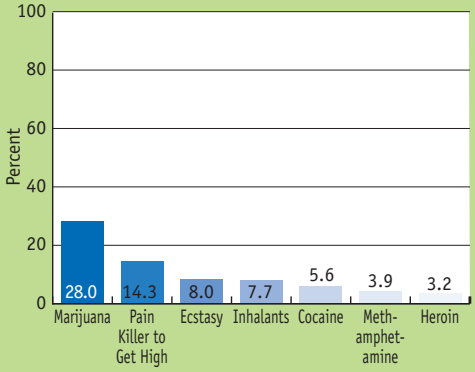
- Early Childhood Action Network (ECAN) is a large network of early childhood advocates throughout the state who work on and promote early child issues.
- Family Leadership Action Network (FLAN) is an initiative designed to promote parent involvement and build family leadership in shaping the system that impacts their lives and their children's future.
- Children's Medical Services works with the UNM Center for Development and Disability's LEND Program to train future leaders in health policy and programs by enhancing education about children and youth with special health care needs.

What Needs to Be Done

- Increase the number of children covered by New MexiKids (Children's Medicaid and State Children's Health Insurance Program).
- Promote Early Periodic Screening, Diagnostic, and Treatment (EPSDT) services for all children.
- Increase coordinated, family-centered, community-based care for children and families.
- Encourage health care providers to practice in underserved areas of New Mexico.
- Support healthy food choices and physical activity for children.

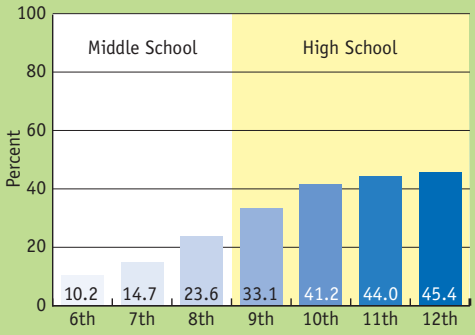
Healthy Youth Become H

Figure 1
Past 30-Day Drug Use Among Youth Grades 9–12, NM, 2009



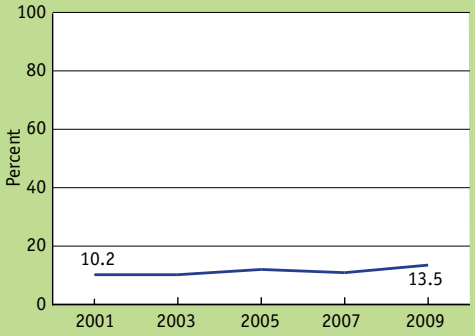
Source: NM Youth Risk and Resiliency Survey

Figure 2
Current Alcohol Use Among Youth Grades 6–12, NM, 2009



Source: NM Youth Risk and Resiliency Survey

Figure 3
Obesity Among Youth, Grades 9–12 NM, 2001–2009



Source: NM Youth Risk and Resiliency Survey

The behaviors of New Mexico youth have a great impact on their health as young people and later as adults. Risk behaviors initiated during adolescence are closely associated with disease, disability, and death among youth and older people.

From 2007 to 2009, the three leading causes of death among New Mexico adolescents ages 13–19 years were injuries—predominantly motor vehicle crashes, suicide, and homicide.[1] These causes of death are associated with alcohol use, drug use, suicidal ideation and attempts, physical violence, and other behaviors. The chronic diseases that are among the leading causes of death for older New Mexicans, including heart disease, cancer, respiratory disease, stroke, and diabetes, are associated with risk behaviors that are often initiated during adolescence. These behaviors include tobacco use, alcohol use, inadequate physical activity and poor nutritional practices. Unsafe sexual behaviors put young people at risk of unplanned pregnancy and sexually transmitted infections including HIV/AIDS. All of these behaviors were examined among high school and middle school students with the 2009 New Mexico Youth Risk and Resiliency Survey (YRRS).

Alcohol, Tobacco, and Other Drug Use

Alcohol use at an early age is associated with adverse outcomes later in life, such as alcohol dependence and abuse and chronic liver disease.[2] Alcohol use is also highly associated with traffic-related fatalities and other injuries. Most alcohol related behaviors have decreased in prevalence in recent years among New Mexico high school students. Current drinking (at least one drink in the past 30 days) decreased from 50.7% in 2003 to 40.5% in 2009. Over the same years, binge drinking decreased from 35.4% to 25.0%, and drinking and driving decreased from 19.1% to 9.7%. Compared to the U.S., NM high school students had a very high rate of alcohol use before the age of 13 years (NM 29.4%; U.S. 21.1%).

Illicit drug use among adolescents is associated with heavy alcohol and tobacco use,[3] violence, and suicide. Drug use among adolescents in NM remained high in 2009 (Figure 1), although some important measures of drug use have decreased in recent years. Among high school students from 2003 to 2009, past 30-day use of methamphetamine and cocaine both decreased (methamphetamine from 7.3% to 3.9%; cocaine from 8.9% to 5.6%). 14.3% of high school students used painkillers to get high, a very risky behavior because of opiates present in these prescription medications. New Mexico high school students had a higher rate than the rest of the U.S. for use of cocaine, heroin, methamphetamine, ecstasy and injection of illegal drugs. Among middle school students, 15.1% ever used marijuana, 14.2% ever used inhalants, and 5.7% ever used cocaine.

Cigarette smoking increases the risk of several chronic diseases, such as heart disease, chronic obstructive pulmonary disease, acute respiratory illness, stroke, and various cancers.[4] Spit tobacco, or smokeless tobacco, is associated with oral cancer and other oral conditions, heart disease, and stroke. In 2009, 24.0% of high school students and 6.8% of middle school students were current smokers, defined as having smoked cigarettes in the past 30 days. While several measures of cigarette smoking have decreased in recent years, use of spit tobacco has increased.

For most measures, alcohol, tobacco and drug use increased dramatically by age group over grades 6–8, and increased much less markedly from grades 9–12 (Figure 2).

Mental Health

The past 12 month suicide attempt rate in 2009 was 9.7% among high school students. While this was substantially lower than the 2007 rate (14.3%), it was higher than the U.S. rate (6.3%). Suicidal ideation and persistent feelings of sadness or hopelessness were more common among girls than boys. Among middle school

ealthy Adults

students, 6.8% ever tried to kill themselves. As with high school students, suicidal ideation was more common among girls than boys.

Sexual Behaviors

Adolescents who initiate sexual intercourse at an early age are less likely to use contraception, are at higher risk for unplanned pregnancy, and are likely to have a greater number of lifetime sexual partners than those who wait until later to engage in sex.[5] In 2009, 48.0% of high school students and 10.8% of middle school students ever had sexual intercourse. Among middle school students, ever having sexual intercourse was more common among boys than girls (14.0% vs. 7.8%), but there was no statistical difference between the rates for boys and girls in high school. Middle school students had higher rates of condom use than high school students. Only 5.5% of sexually active high school students used both a condom and a highly effective form of birth control, such as birth control pills or injectable birth control like Depo-Provera.

Violence

Physical fighting was more common among New Mexico high school students than U.S. students (37.3% vs. 31.5%). Among middle school students, half (50.4%) had ever been in a physical fight. Fighting was more common among boys than girls in both high school and middle school. Teen dating violence in the last 12 months decreased among high school students from 12.6% in 2007 to 9.8% in 2009. Being bullied on school property was reported by 19.5% of high school students and 31.2% of middle school students.

Body Weight, Nutrition, and Physical Activity

Obesity in adolescents is associated with diseases such as type 2 diabetes and hypertension, negative psychological and social consequences,[6] and an increased risk of adult obesity. Obesity among New Mexico high school students has been increasing in recent years. In 2009, 13.5% of New Mexico high school students were obese, up from 10.2% in 2003 (Figure 3). An additional 14.6% were overweight, for a total of 28.1% whose body weight was above the normal range. Boys were more than two times as likely as girls to be obese (18.3% vs. 8.5%).

Poor nutrition is associated with obesity, overweight, and other chronic conditions.[7,8] A diet high in fruits and vegetables may lead to a decreased risk of being obese or overweight, while consumption by children of sugar sweetened beverages is a risk factor for overweight and obesity. In 2009, only 20.9% of high school students ate five or more servings of fruits or vegetables per day, and 30.4% drank at least one soda per day.

Regular physical activity can reduce body fat, maintain body weight, and reduce the risk of chronic diseases.[9] At least 60 minutes of daily physical activity is recommended for children aged 6–17 years. 23.4% of high school students and 30.2% of middle school students achieved this level of physical activity. In both high school and middle school, boys were more likely than girls to attain recommended levels of physical activity (HS 29.4% vs. 17.5%; MS 35.9% vs. 24.6%). About one-third of students in both middle school (33.2%) and high school (32.6%) watched television for 3 or more hours per day on a typical school day.

In recent years, New Mexico has seen improving trends in rates of youth alcohol, tobacco, and drug use, and an increase in the rate of youth obesity. Compared to the rest of the United States, New Mexico youth have high rates of suicide attempts and ideation, behaviors associated with violence, tobacco use, alcohol use, and drug use. Many students initiate risk behaviors during the middle school years. While prevention measures among high school students should be maintained, it is also important to target prevention efforts among younger students.

What is Being Done

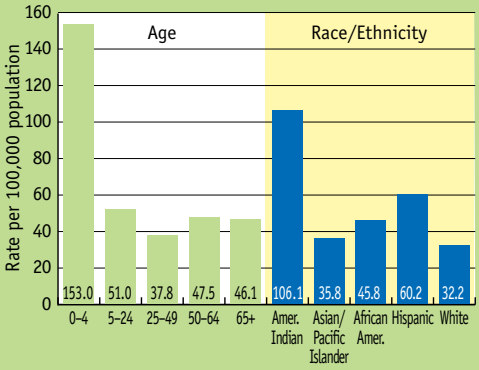
- Trends in youth health statistics are being monitored with the NM Youth Risk and Resiliency Survey.
- Alcohol and drug prevention programs at the local level.
- Seventy-nine school based health centers offer services and information throughout the state related to primary care, reproductive health, mental health, and substance use.
- Suicide prevention programs.
- Peer-to-peer mentoring.

What Needs to Be Done

- Increase positive youth development and leadership programs, with meaningful engagement with youth to develop, implement, and evaluate them.
- Increase and improve services available at school based health centers, including primary care and confidential health services, in areas such as reproductive and behavioral health.
- Increase healthy nutrition and physical activity interventions targeting middle school aged youth.

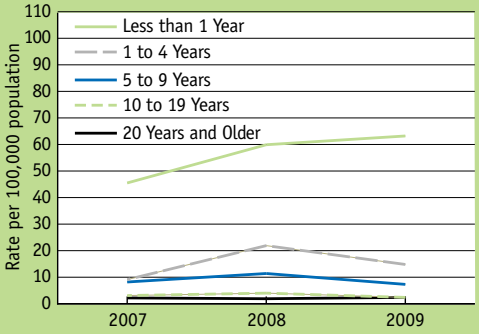
Old Infections, New Prev

Figure 1
Hospitalization Rates by Age and Race/Ethnicity, NM, 2009–2010 Influenza Season



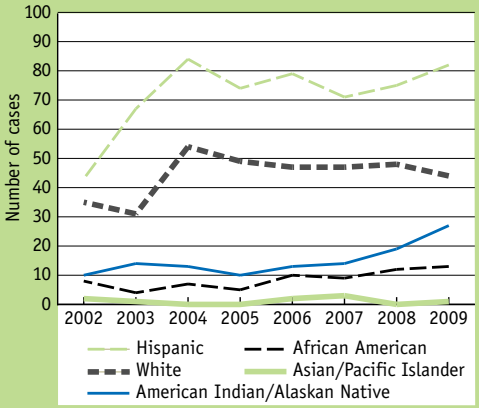
Source: Infectious Disease Epidemiology Bureau

Figure 2
Pertussis Rates by Age, NM, 2007–2009



Source: NM Electronic Disease Surveillance System

Figure 3
HIV Diagnosis by Race/Ethnicity NM, 2002–2009



Source: Enhanced HIV/AIDS Reporting System

Influenza

Influenza pandemics have been occurring for at least 500 years, with the first recognized pandemic occurring in 1510 throughout Africa and Europe.[1] Even before documented influenza pandemics occurred, the term *influenza* was first used in Italy in 1357.[2] Historical records reveal that influenza pandemics occur approximately every 36 years, with the worst pandemic recorded in history occurring in 1918. The influenza virus itself was not isolated in a laboratory until the 1930s.[1]

The 2009–2010 pandemic influenza A (pH1N1) virus provided an opportunity to learn more about pandemic influenza disease in New Mexico. During the 2009–2010 pandemic in New Mexico, there were 1,056 influenza hospitalizations identified from April 2009 to May 2010. Hospitalization rates were highest among the 0–4 year age group and lowest among the 25–49 year age group (Figure 1). Hospitalization rates were highest among American Indians and lowest among Whites. Hospitalization rates by geographic region revealed that Bernalillo County had the lowest rate, and the southeastern region had the highest rate. Among hospitalized individuals, the most common medical conditions were asthma and chronic lung disease, chronic cardiovascular disease and diabetes.

In New Mexico, there were 58 influenza deaths identified from April 2009 to May 2010. Death rates were highest among the 50–64 year age group and lowest among the 5–24 year age group. American Indians had the highest death rate, while no deaths were identified among Asian/Pacific Islanders or African-Americans. Death rates by geographic region showed that Bernalillo County had the lowest rate and the southeastern region had the highest rate. Among those who died, the most common medical conditions were asthma and chronic lung disease, chronic cardiovascular disease and diabetes.

Prevention remains a key strategy for managing influenza. There are 3 main recommended prevention strategies: 1) get the influenza vaccine every year, 2) stop the spread of germs by washing your hands, covering your cough/sneeze, avoiding close contact with sick people, staying home if you are sick with influenza-like illness until at least 24 hours after your fever is gone, and 3) take influenza antiviral drugs if your doctor prescribes them.[3]

Pertussis

Pertussis or "whooping cough" is a highly contagious respiratory illness caused by the *Bordetella pertussis* bacteria which was first isolated in 1906. However, outbreaks of the illness were first described as early as the 16th century. The World Health Organization estimated that 294,000 children died from pertussis in 2002. Since vaccine-induced immunity to *Bordetella pertussis* is of limited duration, generally less than 12 years, most adults have little or no residual immunity. Most reported pertussis cases among adolescents and adults are thought to occur because of this decline in protective immunity. Young infants who are too young to have been fully vaccinated are at high risk of severe and potentially life-threatening illness from exposure to people with active disease.

Whole cell pertussis vaccine, combined as diphtheria, tetanus and pertussis or DTP, was introduced in 1944. Cases of pertussis were reduced by more than 90 percent following introduction of DPT. However, pertussis disease rates have steadily increased since 1980. National epidemics of pertussis occur approximately every three to four years. Improved acellular vaccines were licensed for the primary childhood vaccine series in 1996. In the U.S., three acellular pediatric vaccines (DTaP) had been licensed until 2005 when adolescent and adult formulations (Tdap) were added for the first time. Tdap is recommended for children 11–18 years, adults 19–64 years, pregnant women, and healthcare workers.

Pertussis is seen throughout New Mexico among infants, children, adolescents and adults of all ages (Figure 2), as individual sporadic cases, family clusters and community outbreaks. The last deaths reported due to pertussis in NM were in 2004 and 2005 when four infants died.

ention Strategies

In 2008, the national Advisory Committee on Immunization Practices (ACIP) published recommendations for the prevention of pertussis among pregnant and postpartum women and their infants in order to help prevent such deaths.[4] The appropriate use of Tdap among women of childbearing age who might become pregnant and among postpartum women is strongly recommended.

In addition, parents can limit infant exposures to persons who have respiratory illness until they are determined to be noninfectious. When pertussis exposure occurs, antimicrobial medications can prevent illness among persons exposed to pertussis thereby interrupting transmission of disease. Parents should ensure that infants begin the pediatric DTaP vaccination series at the recommended age of 6–8 weeks for their protection and to reduce the severity of disease if it occurs. It is known that administration of two or three doses of pediatric DTP or DTaP can prevent hospitalization for pertussis and its complications. In October 2010, ACIP recommended filling gaps in pertussis vaccination to further protect babies with new vaccine recommendations for children 7–10 years and adults greater than 64 years.

Human Immunodeficiency Virus (HIV)

In the spring of 1981, the Centers for Disease Control and Prevention *Morbidity and Mortality Weekly Report* included the first report of gay men diagnosed with rare diseases.[5] Within months, other reports of rare conditions, and opportunistic infections, occurring primarily among gay men, were published. In 1982, reports of similar infections among hemophiliacs and injection drug users began to appear. The syndrome was named Acquired Immunodeficiency Syndrome or AIDS. In 1983, the virus responsible for AIDS was identified, and it came to be known as the Human Immunodeficiency Virus or HIV.

The number of diagnosed cases of HIV/AIDS and the number of deaths attributed to AIDS rose quickly in the United States. By 1985, the number of deaths attributed to AIDS surpassed 10,000, and the number continued to climb. In 1995, nearly 50,000 Americans died of AIDS.[6] Relief was found in 1996 with the advent of Highly Active Antiretroviral Therapy (HAART), and ushered in a new era. HAART slowed the progression of HIV to AIDS considerably, and the number of deaths attributable to AIDS began to decline.

Between 1998 and 2002, the annual number of newly diagnosed HIV infections in New Mexico declined from 160 to a little over 100. While the decline in new diagnoses occurred in most segments of the population, it was especially evident among White and Hispanic persons. Since 2002, however, the trend has reversed, and more cases of HIV are being diagnosed each year. In 2009, 168 newly diagnosed cases—the highest number ever—were reported. The number of new cases has increased among persons of all racial/ethnic groups, with marked disparities. Among Whites, infections increased 26 percent, while infections in African-Americans increased 63 percent, infections in Hispanics increased 91 percent, and infections in American Indians increased 170 percent (Figure 3).

The recent rise in the number of new infections reinforces the importance of prevention efforts. During the 2010 session, the New Mexico Legislature amended the HIV Test Act to allow the Department of Health to seamlessly provide testing, counseling, and referral services to sexual and needle-sharing partners of persons diagnosed with HIV infection. In addition, culturally appropriate best practices are being developed and implemented throughout the state. These effective programs need to be made available to populations with increasing incidence rates, including American Indians, African-Americans and Hispanics.

What is Being Done

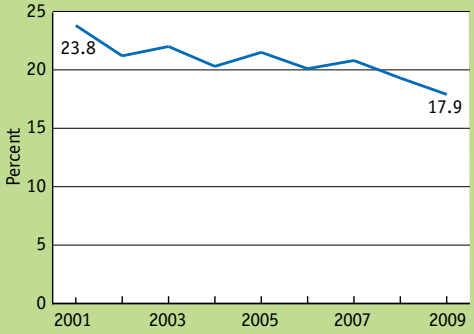
- U.S. recommends influenza vaccine for everyone ≥ 6 months who does not have a medical contraindication.
- Initiatives in New Mexico hospitals are vaccinating post-partum mothers and others who will be caring for newborn infants.
- The HIV Test Act was updated by the New Mexico Legislature to allow the provision of confidential and voluntary partner services and HIV testing to sexual or needle-sharing partners of persons newly diagnosed and reported with HIV.
- Community-based providers have developed, and are delivering, evidence-based HIV prevention programs that are culturally appropriate for American Indian, African American and Hispanic communities.

What Needs to Be Done

- Inform the public and convince them of the value of influenza vaccination for all individuals ≥ 6 months without medical contraindication.
- Decrease pertussis through the appropriate use of standardized and improved laboratory tests, increased use of age-specific vaccinations, and correct application of treatment and prophylaxis guidelines.
- Increase the availability of culturally appropriate and effective HIV prevention interventions specific for American Indian, African American and Hispanic communities in New Mexico.

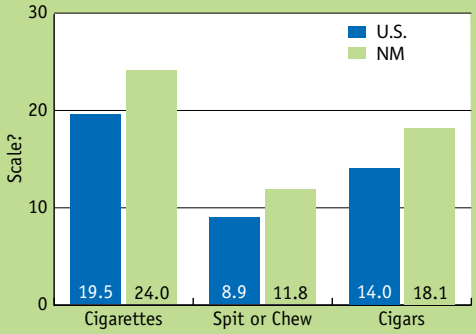
Health and Economic Im

Figure 1
Current Smoking Among Adults
NM, 2001–2009



Source: NM Behavioral Risk Factor Surveillance System

Figure 2
Youth Tobacco Use in Past 30 Days
Grades 9–12, NM and U.S., 2009



Sources: Sources: NM Youth Risk and Resiliency Survey and CDC Youth Risk and Behavior Surveillance

Table
Smoking by Selected Population Groups
NM, 2005–2008

Population Group	Percent Who Smoke
Bisexual	39.1%
Household income <$10,000 per year	32.5%
Unemployed	31.0%
No health insurance	30.0%
No high school diploma	28.3%
Lesbian or gay	27.2%
Disability that limits activities	26.2%
African American	25.3%
Asian or Pacific Islander	25.0%
18–24 years old	24.2%
NM general adult population	20.1%

Source: NM Behavioral Risk Factor Surveillance System

About 2,100 New Mexicans die every year as a result of tobacco use, and an estimated 42,000 people are afflicted with tobacco-related diseases in the State.[1] Cigarette smoking has a harmful impact on virtually every organ in the human body and has been linked to chronic bronchitis, heart disease, emphysema, stroke, cataracts, pneumonia, periodontitis, and cancers of the lung, stomach, pancreas, cervix, and kidney.[2] The leading causes of smoking-related death in New Mexico are chronic obstructive pulmonary disease and lung cancer.[3] Although New Mexico's rates of smoking-related death are among the lowest in the nation, the burden of death associated with smoking is much greater than the burden associated with alcohol and other drugs.

Tobacco use, as the leading cause of death, is estimated to cost New Mexico $976 million annually—$483 million in direct medical costs and $493 million in lost productivity.[4] As of 2010, the state excise tax per pack of cigarettes is $1.66, and the average retail price of a pack of cigarettes is $5.79.[5] Each pack of cigarettes sold in New Mexico costs the state $14.00 in smoking-related medical and lost productivity costs.[5]

Who is Using and Being Affected by Tobacco

In 2009, 17.9% of New Mexico adults smoked cigarettes, which is similar to the national rate and a 25% decrease from 2001 when more extensive tobacco prevention programming began in the state (Figure 1). About 268,000 New Mexico adults were current cigarette smokers in 2009. Also, 4.2% of adults use chewing tobacco, either alone or in combination with cigarettes.

Among New Mexico high school youth, 24.0% are smokers, which is significantly higher than the national rate of 19.5%. Although youth cigarette smoking has decreased significantly in the past decade, the decline has been less pronounced in New Mexico than nationally. About 12% of youth in New Mexico use chewing tobacco or snuff, which is also higher than the national rate of 8.9% (Figure 2).

Some specific population groups have higher smoking rates than the general population, which may result from a variety of complex factors and require focused attention and resources to ensure that these smokers have adequate access to services. For example, adults who have lower education, lower income, are unemployed, or are uninsured are significantly more likely to smoke cigarettes than the general population (Table). Historically, adults living in southeastern New Mexico have also had elevated smoking rates as compared to the general population.

Among youth, those with poor grades (Ds, Fs) in school are more than twice as likely to smoke as youth with better grades (As, Bs, Cs) (46% vs 20%). American Indian youth have smoked at disproportionally high rates compared to the general population, although the 11-point spread in 2003 (41% vs. 30%) has narrowed to 3 percentage points in 2009 (27% vs. 24%). Also, youth from homes in which they sometimes or often don't have enough food to eat are more likely to smoke (37%) than youth from homes with sufficient food (21%).

Regarding smoking-related deaths, rates among males are about double those of females across all racial/ethnic groups.[3] Among both males and females, Whites have the highest rates, followed by African Americans. Counties in southeastern New Mexico such as Lea, Roosevelt, Quay, Eddy, and Curry have among the highest smoking-related death rates in the state.

Preventing Tobacco Use

Most smokers begin smoking before the age of 18, making tobacco prevention efforts an important priority. Preventing youth smoking can be accomplished through policy and education efforts. Policies that increase the price of tobacco products (excise taxes), prohibit the sale and access to tobacco products to minors, and create smoke-free environments have all been shown to decrease youth smoking. New Mexico successfully passed and implemented cigarette tax increases in 2003 ($0.70) and 2010 ($0.75). New Mexico also has a clerk-assisted tobacco sales law and

pact of Tobacco in NM

prohibits the sale of tobacco products to minors, which is monitored and enforced through the Synar Program. Work is also underway to ensure that school districts are properly implementing state-mandated policies prohibiting tobacco use on school property, including clear procedures for communicating and enforcing the policies.

School and community-based programs are funded across the state to focus on reaching, involving, and mobilizing youth to reshape their environment to one where tobacco-free is the norm. These efforts are coordinated with a statewide mass media campaign that uses TV, the internet, and cutting-edge social media and marketing.

Reducing Secondhand Smoke Exposure

The Dee Johnson Clean Indoor Air Act, which made most indoor workplaces and public places in the state smoke-free, has been in effect for three years. The law applies to all non-tribal bars, restaurants, workplaces, and public places in the state. About eight percent of people, those who live, work or visit tribal lands, remain unprotected from secondhand smoke.

Several American Indian tribes and organizations are funded to provide secondhand smoke education and technical assistance to tribes interested in assessing casino employee and patron attitudes and pursuing the development of smoke-free policies. Other groups are working with owners and managers of multi-unit housing (i.e., apartments) complexes in the adoption of voluntary smoke-free policies. About 85% of New Mexicans do not allow smoking anywhere in their home, however, people who live in apartments may still be exposed to their neighbors' secondhand smoke.

Supporting People in Quitting Tobacco

In 2009, about half of New Mexico adult and youth smokers tried quitting in the past year. The state funds media efforts, cessation services, and a telephone line to help smokers quit. Over 12,000 New Mexicans called 1-800-QUIT NOW, the state's free tobacco helpline, in fiscal year 2010. The helpline offers a personalized quitting plan, a trained quitting coach, multiple calls per enrollee, referral to local resources, and free nicotine patches or gum.

Health care providers, including doctors, nurses, pharmacists, and dentists, are being trained to screen patients for tobacco use and to provide brief interventions for those who smoke. In 2009, 79% of adult smokers who saw a health care provider in the past year were advised to quit smoking, compared to only 49% in 2001. The recent 75-cent increase in the cigarette excise tax may also motivate some smokers to quit.

Tobacco use in New Mexico and nationally continues to be a significant public health issue, as it remains the single most preventable cause of death and disease. The health, social, and economic effects of tobacco use and secondhand smoke exposure require comprehensive policy, educational and clinical approaches for preventing use, support for quitting tobacco, and changes to social norms. New Mexico has made significant strides in reducing adult tobacco use and exposure to secondhand smoke in the past decade. Further reducing youth tobacco use in the state should continue to be a priority to prevent youth from becoming addicted and suffering the negative health consequences of lifetime smoking.

What is Being Done

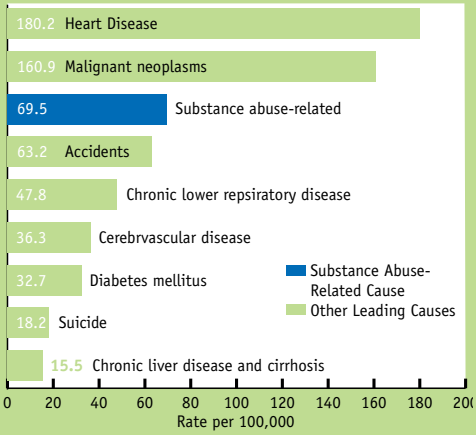
- New Mexico's free tobacco helpline, 1-800-QUIT NOW, is available to everyone, includes free nicotine patches or gum, and is primarily serving people in greatest need.
- Health care systems and health care providers have made significant progress in screening patients for tobacco use and offering quitting assistance.
- Youth are being reached with proven tobacco use prevention approaches including youth advocacy, media literacy, and cutting edge social media and marketing.

What Needs to Be Done

- Increasing the tax on other tobacco products, such as chew, snuff, and dip, to match the proportion of tax on cigarettes to encourage quitting instead of switching to lower-priced tobacco products.
- Protecting people living, working, and visiting tribal lands from exposure to secondhand smoke.
- Supporting policy interventions made possible by the new Family Smoking Prevention and Tobacco Control Act, such as protecting young people by regulating the time, place, and manner in which tobacco can be advertised and sold.

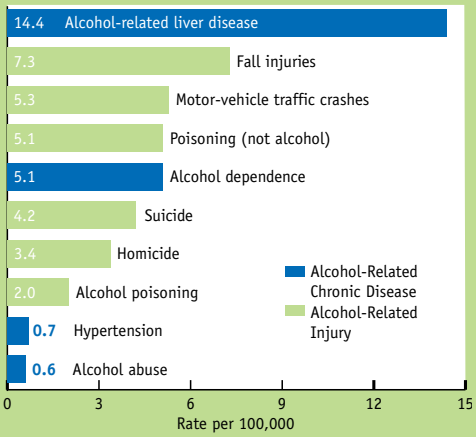
Substance Abuse Affects

Figure 1
Leading Causes of Death, Primary and Substance Abuse-Related, NM, 2003–2007



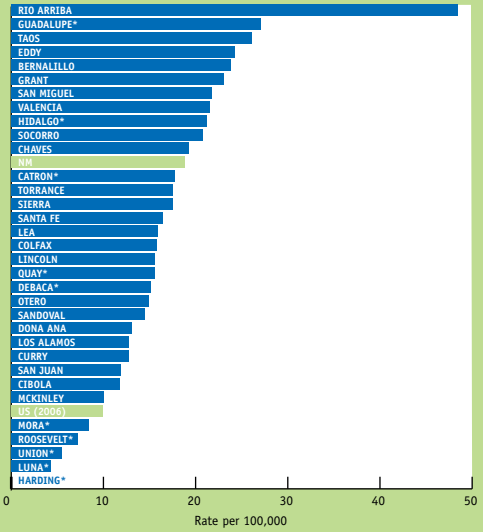
Source: NM Vital Records and Health Statistics; rates age-adjusted to the 2000 U.S. Standard Population

Figure 2
Top Ten Causes of Alcohol-Related Death, NM and U.S., 2007–2009



Source: NM Vital Records and Health Statistics; rates age-adjusted to the 2000 U.S. Standard Population

Figure 3
Unintentional/Undetermined Overdose Death Rates by County, NM, 2007–2009



Source: Vital Records and Health Statistics; rates age-adjusted to the 2000 U.S. Standard Population
* Less than five deaths per 100,000 over three years; there were no deaths in Harding County

The consequences of substance abuse are severe in New Mexico. Substance abuse is one of the state's leading causes of death (Figure 1), and New Mexico consistently ranks among the worst in the nation for death from drugs and alcohol. The devastation caused by substance abuse is also associated with domestic violence, crime, poverty, motor vehicle crashes, chronic liver disease, infectious diseases, mental illness, and other medical problems.

The cost of substance abuse in the U.S. is estimated in the hundreds of billions of dollars per year, and includes the costs of medical care, treatment services, criminal justice, and lost productivity.[1] In 2006, the estimated cost of alcohol abuse in New Mexico was more than $2.5 billion, or $1,250 per person.[2] This economic burden falls heavily on New Mexico, since it is one of the nation's poorest states—with the third highest percentage of people living in poverty in 2008–2009 (19.3%)[3]—and has among the highest rates of health problems associated with substance abuse. Vulnerable populations who experience considerable negative consequences from substance abuse include youth, pregnant women, injection drug users, and prison inmates.

Higher Rates of Substance Abuse among Youth in New Mexico Compared to U.S.

Substance abuse prevention among adolescents is critical considering the negative long-term consequences of early substance use.[4,5] In the 2009 New Mexico Youth Risk and Resiliency Survey, 41% of high school students reported that they had a drink of alcohol in the past month while 26% reported having at least five drinks on one occasion, similar to U.S. rates (42% and 24%, respectively). However, a larger proportion of students reported having their first drink before age 13 years (29%) compared to students nationwide (21%). Rates of illicit drug use among New Mexico youth are also relatively high. Marijuana use in the past month was reported by 28% of students, compared with 21% nationwide. New Mexico students also reported higher use of cocaine, heroin, methamphetamine and Ecstasy than students nationally. Prescription drug abuse among youth has emerged as a concern in New Mexico. In 2007, 12% of New Mexico high school students reported current nonmedical use of prescription painkillers, which rose slightly to 14% in 2009.

Alcohol-Related Death Rates Remain High Despite Decreases in DWI-Related Death

Alcohol-related health problems can result from either chronic or acute abuse of alcohol. Chronic heavy drinking, defined as drinking more than two drinks per day for men and more than one drink per day for women, is often associated with alcoholism or alcohol dependence, and can cause or contribute to a number of diseases, including alcohol-related chronic liver disease (Figure 2). For the past 15–20 years, New Mexico's death rate from these diseases has consistently been first or second in the nation, and 1.5 to 2 times the national rate. Furthermore, while the national death rate from alcohol-related chronic diseases fell during this period, New Mexico's rate increased.[6] Rio Arriba and McKinley counties have death rates for diseases associated with chronic alcohol abuse that are 4–5 times the national rate.

Acute or episodic heavy drinking, defined as having five drinks or more on an occasion for men and four drinks or more on an occasion for women, is sometimes called binge drinking, and is a high-risk behavior associated with numerous injury outcomes, including motor vehicle crash fatalities, homicide, and suicide (Figure 2). New Mexico's death rate for alcohol-related injury also has consistently been among the worst in the nation, ranging from 1.4 to 1.8 times the national rate over the past 15–20 years. While New Mexico's alcohol-impaired motor vehicle crash death rate has declined almost 70% during this period, death rates from other alcohol-related injuries have remained stable.

All New Mexicans

Overdose Death Rates from Illicit and Prescription Drugs Increase

In 2008, the most common drug types causing overdose death in New Mexico were prescription opioids (i.e., methadone, oxycodone), heroin, tranquilizers and muscle relaxants (i.e., benzodiazepines), cocaine and antidepressants. The overdose death rate from the combination of illicit and prescription drugs increased 150% in the past five years from 1.4 per 100,000 in 2004 to 3.6 in 2008. The New Mexico counties with the highest drug overdose death rates during 2007 to 2009 were Rio Arriba, Guadalupe and Taos (Figure 3).

How Do We Tackle the Problem of Substance Abuse?

Given the tremendous burden from substance abuse problems, prevention and treatment is of critical importance in New Mexico. Primary prevention attempts to stop a problem before it starts. In New Mexico, primary prevention of alcohol-related health problems has focused on regulating access to alcohol and altering the alcohol consumption behavior of high-risk populations. Regulatory efforts have included increasing the price of alcohol—which is effective in deterring alcohol abuse,[7] establishing a minimum legal drinking age, regulating the density of liquor outlets, and increasing penalties for buyers and servers of alcohol to minors. In addition, efforts to reduce drug overdose death include innovative drug legislation such as the 911 Good Samaritan Law and statewide programs to dispose of leftover medications.

DWI-related law enforcement (e.g., sobriety checkpoints) when accompanied by media activity can be an important form of primary prevention, increasing the perceived risk of arrest after drinking and driving among the general population. Media is also used to raise awareness about methamphetamine, and might be used to communicate the dangers of prescription medication abuse.

Secondary prevention efforts try to detect and treat emergent cases before they cause harm. In New Mexico, brief clinical interventions have targeted at-risk drinkers to address problem drinking before it causes serious harm. Evidence is mounting for the effectiveness of screening and brief intervention for drug abuse in the medical setting as well.

Tertiary prevention involves the treatment of individuals diagnosed with substance use disorders so they can recover to the highest health while minimizing the effects of the disease and preventing complications. There are 145 facilities in New Mexico that provide substance abuse treatment services, including eight facilities that offer substitution therapy such as methadone and buprenorphine.[8] Roughly 160,000 New Mexicans are estimated to have a substance abuse or dependence problem, while just one in ten people in need of treatment receives it.[9] Nationally, the most common reasons that people who need treatment do not receive it are because they are not ready to stop using, have no health insurance and can't afford the cost, or are concerned about the possible negative effect on their job.[10]

Proximity to Mexico and presence of two major interstate highways makes drug trafficking a significant contributor to the drug problem in New Mexico. Law enforcement efforts reduce the supply of drugs, but reducing the demand for drugs remains an important priority. Treatment is the primary approach to help drug-dependent persons, an estimated 33,000 New Mexicans age 12 or older,[9] overcome drug addiction thereby reducing demand.

Harm reduction is another important part of the substance abuse prevention model. Syringe exchange, which prevents the transmission of blood-borne pathogens among injection drug users, is one strategy that might be considered primary or secondary prevention. A harm reduction approach might also be used by practitioners treating addiction. Harm reduction programs in New Mexico deliver disease and overdose prevention education, acu-detox, health promotion, social service and treatment referral, and, in some locations, primary medical care to injection drug users.

What is Being Done

- A comprehensive driving while impaired (DWI) prevention program contributed to a 39% decrease in New Mexico's alcohol-impaired motor vehicle traffic crash fatality rate from 2004 to 2008.
- More than $15 million is spent each year to help fund local DWI programs.
- Roughly 15,000 people were enrolled in substance abuse treatment in 2009, including a mix of mental health services in outpatient, inpatient and residential settings.
- Harm reduction programs are providing education on disease and overdose prevention, referrals to treatment, and naloxone training to drug users and their family members and friends.
- Trainings on guidelines for effective and safe opioid prescribing among pain patients and those who are opioid dependent.

What Needs to Be Done

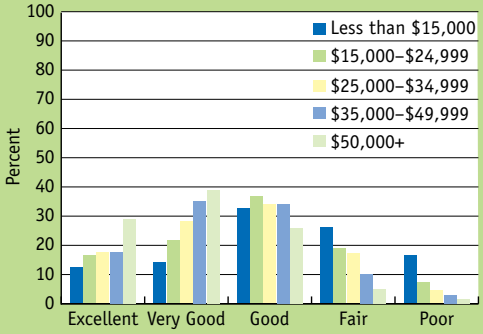
- Increase the price of alcoholic beverages, which decreases excessive alcohol consumption.
- Increase support in adult primary care settings for screening and brief interventions to address potential alcohol-related problems.
- Make medication-assisted treatment more widely available and ideally, "upon demand."
- Educate the general population about the importance of safe medication use, secure storage in the home and proper disposal of leftover medicine.
- Support ongoing and new evidence-based programs for substance abuse prevention, treatment and recovery, ensuring thorough program evaluation.

Table
Leading Causes of Death
NM and U.S., 2007

Cause of Death	Rank		Number of Deaths		Death Rates	
	NM	U.S.	NM	U.S.	NM	U.S.
Heart Disease*	1	1	3,305	616,067	159.2	190.9
Cancer*	2	2	3,238	562,875	157.3	178.4
Accidents	3	5	1,329	123,706	66.7	40.0
Chronic Lung Disease*	4	4	884	127,706	43.6	40.8
Stroke	5	3	804	135,952	39.2	42.2
Diabetes*	6	6	673	71,382	32.7	22.5

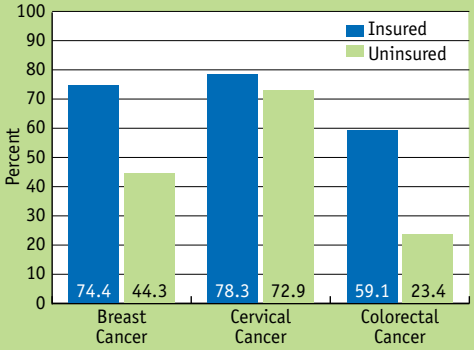
*Denotes a chronic disease
Source: National Center for Health Statistics, 2010. Rates per 100,000 population; rates age-adjusted to the 2000 U.S. Standard Population

Figure 1
Adult Health Status by Income, NM, 2009



Source: NM Behavioral Risk Factor Surveillance System

Figure 2
Percent of Adults Who Are Up-to-Date with Recommended Cancer Screenings by Health Insurance Status, NM, 2006–2008



Breast cancer data: Women age 40 and older who have had a mammogram in the past 2 years. Cervical cancer data: Women ages 18+ who have had a Pap test within the past 3 years. Colorectal cancer data: Women and men ages 50+ who have had a fecal occult blood test in the past year and/or endoscopy of the colon in the past 10 years

Source: NM Behavioral Risk Factor Surveillance System

Three Stages of Chronic

What is Chronic Disease?

Chronic disease refers to a group of illnesses that are not contagious, are prolonged in duration, and are rarely cured completely. Examples of chronic diseases include heart disease, cancer, stroke, emphysema, diabetes, obesity, asthma, and arthritis. Chronic diseases make up five of the six leading causes of death in the U.S. and NM (Table), and are responsible for over 60% of all deaths in our state.[1] Heart disease is the leading cause of death for both women and men, followed by cancer. Although chronic diseases are more common among older adults, they affect people of all ages. In addition to escalating medical costs, chronic diseases generate significant costs due to absenteeism and decreased productivity in the workplace. Arthritis is the top cause of disability for New Mexican adults, including those who are of working age. Many New Mexicans suffer from multiple chronic diseases, and as the population ages this trend is expected to increase.

Stage 1—Primary Prevention

Primary prevention means keeping healthy so that chronic diseases don't develop in the first place. Although some chronic diseases are unavoidable, it has been recognized for many years that the leading preventable behavioral causes of chronic disease include tobacco use, lack of adequate physical activity, and poor nutrition.[2,3] Given that most people are aware of these risks, why don't all New Mexicans lead a healthy lifestyle?

Because the choices we make are shaped by the choices we have.[4] Making healthy choices isn't just about awareness or self-discipline. Many factors affect an individual's ability to adopt healthy lifestyles, such as access to recreational areas, affordable healthy foods, clean air, and work, and educational opportunities. Some neighborhoods have easy access to fresh, affordable produce; others have only fast food, liquor outlets and convenience stores.[5] Some neighborhoods have clean parks and safe places to walk, jog, bike or play, while others don't. And it isn't easy to get exercise if you have to work multiple jobs just to get by, or if you can't easily get affordable day care for your kids. Adults have a myriad of responsibilities to balance and prioritize, and those with the fewest resources are most likely to put the needs and demands of family and jobs ahead of their own health.

In our society, wealth is the strongest predictor of health and longevity.[6] A recent study found that living at less than 200% of the federal poverty level imposes a greater societal health burden in the U.S. than either tobacco use or obesity.[7] However, it isn't just a question of "the rich" versus "the poor." On average, middle class Americans live shorter lives and are less likely to report good health than those who are wealthy.[6,8] Recent data for NM[9] confirm a strong association between income and self-reported health status for adults (Figure 1), much of which is driven by the presence or absence of chronic disease. Chronic stressors such as racism and discrimination impose additional health burdens that cannot be completely offset by higher income or education.[6]

Popular conceptions link health primarily to medical care, lifestyle, and genes. While these factors play a role, keeping people healthy will only happen on a large scale by improving the social conditions in which all New Mexicans are born, live, learn, work, and play. It's time we expand the way we think about health to include how to keep it, not just how to get it back.[10]

Stage 2—Secondary Prevention

The goal of secondary prevention is to detect chronic disease in its earliest stages, before noticeable symptoms develop, when it is most likely to be treated successfully. This generally takes the form of screening programs for persons who feel fine but are at-risk for a condition due to their age, sex, occupation, or other factors. Screening only makes sense for those diseases for which early detection and treatment have been shown to result in improved health outcomes. Examples of effective screening tests include Pap smears for early cervical cancer, routine mammography for early

Disease Prevention

breast cancer, and take-home fecal blood testing kits for early colorectal cancer.[11] If a screening test is abnormal, it is generally a "first step" that requires additional testing to confirm the diagnosis, followed by timely and appropriate treatment, when necessary. Early detection and treatment of these cancers leads to large improvements in survival. Five-year survival rates for breast, cervical and colorectal cancers are 88–98% if they are discovered at an early stage, but only 9–25% if diagnosed after spreading far from the original site.[12] In the cases of cervical and colorectal cancer screening, pre-cancerous conditions can also be detected which, when treated, can actually result in the prevention of these cancers developing. Unfortunately, many New Mexicans are not up-to-date with recommended cancer screenings. Lack of health insurance is a major barrier to accessing secondary preventive services for breast and colorectal cancer (Figure 2).[13] However, even many persons with health insurance are not being screened as recommended. The result is that too many New Mexicans are diagnosed with, and die from, later-stage cancers that might have been detected and treated earlier, or possibly prevented altogether.

Appropriate screening for cardiovascular disease risk factors, such as high blood pressure, cholesterol, obesity, and diabetes, is also important. This screening is best conducted at a person's medical home, where consideration of individual risk factors, meaningful follow-up of results, and timely re-screening are most likely.

Stage 3—Tertiary Prevention

Tertiary prevention means avoiding or postponing disease progression and complications once chronic disease symptoms are apparent and a diagnosis has been made. The same positive social factors that allow people to stay healthy become even more important for persons trying to manage heart disease, diabetes, and other chronic conditions. A person who is trying to control high blood sugar, high blood pressure, excess weight, and/or high cholesterol needs adequate time, income, and access to healthy foods and places to be physically active. This is often beyond the reach of persons with limited resources. Similarly, avoiding air pollution or second hand smoke that can trigger a heart attack is more challenging for a low income person with diabetes who lives in an industrialized neighborhood or whose best employment option is at a casino that permits smoking.

In addition to living and working in health-promoting environments, persons with chronic disease can benefit by learning skills to manage their symptoms, to communicate effectively with their health care team, and to manage their fear, anger and frustration.[14] Having access to chronic disease self-management programs that provide opportunities to learn and practice these skills help people lead lives that are less limited by their illness.

Despite the importance of healthy lifestyle and self-management skills, these are rarely sufficient for adequate treatment and control of a chronic disease over the long term. Chronic diseases are generally progressive by nature, and most will require ongoing medical management for the prevention or early detection of complications. Tertiary prevention relies on the ability to access and afford visits to healthcare providers, prescription and non-prescription drugs, medical supplies, and monitoring tests. Examples include routine screening for and management of early kidney, eye, and foot problems among people with diabetes, and preventing recurrence of heart attack with anti-clotting medications. As the provisions of the Patient Protection and Affordable Care Act of 2010 are implemented over the next several years, it is anticipated that increased coverage for affordable primary care and clinical preventive services will be realized for many more New Mexicans. Healthcare coverage does not guarantee health care access, however, and New Mexico's rural character and shortage of healthcare providers may continue to present barriers to care.

What is Being Done

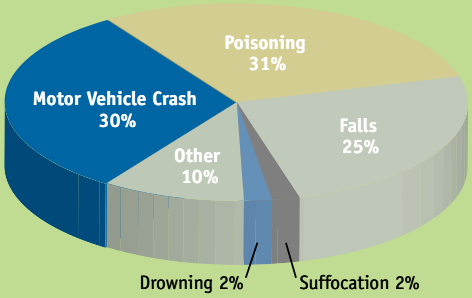
- Step Into Cuba is an example of a creative rural community effort which promotes walking through trail enhancement and walking groups.
- The DOH Breast & Cervical Cancer Early Detection Program and new Colorectal Cancer Program provide cancer screening for uninsured and underinsured low-income New Mexicans.
- New Mexico Area Health Education Centers and the City of Albuquerque's Department of Senior Affairs are delivering evidence-based Chronic Disease Self-Management Programs in their communities.
- The Southwest Tribal Tobacco Coalition is working with American Indian communities to raise awareness of the increased risk for heart attacks experienced by people with diabetes who are exposed to commercial secondhand tobacco smoke.

What Needs to Be Done

- Use community planning to designate zoning areas that encourage walking and biking in the course of everyday activities. Create economic incentives that encourage the development of retail grocery investments in low income communities.
- Provide resources and incentives to businesses, such as tax breaks, to encourage the development of healthy worksite environments and effective health promotion activities.
- Reduce the poverty rate, which will provide more New Mexicans with the time and income to purchase and prepare healthy foods and to be more physically active.

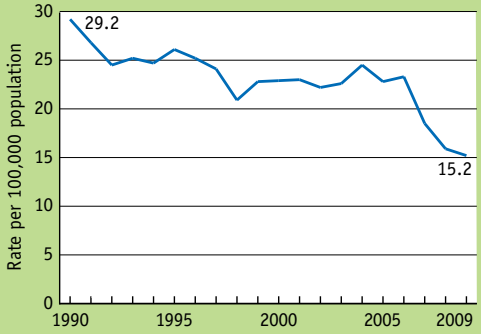
Injury Hurts

Figure 1
Leading Causes of Unintentional Injury Death, NM, 2005–2009



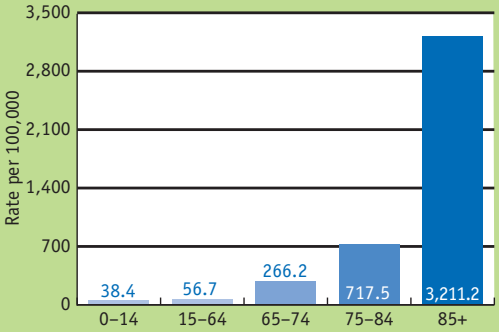
Source: NM Vital Records and Health Statistics

Figure 2
Motor Vehicle Crash Death Rates NM, 1990–2009



Source: NM Vital Records and Health Statistics; rates are age-adjusted to the 2000 U.S. Standard Population

Figure 3
Hospitalization Rates Due to Falls by Age, NM, 2005–2009



Source: Hospital Inpatient Discharge Database, NM Health Policy Commission

Unintentional injury is the leading cause of death among 1 to 44 year olds in New Mexico and in the United States. In New Mexico, unintentional injury is the third leading cause of death among the total population, accounting for two-thirds of all injury deaths. These are often called "accidents" although most are predictable and often preventable. New Mexico's unintentional injury death rate at 65.6 per 100,000 population in 2007 was 1.7 times higher than the national rate. Poisoning, largely drug overdose, was the leading cause of unintentional injury death in New Mexico from 2005 through 2009. The second and third leading causes of unintentional injury death were motor vehicle crashes and falls, respectively (Figure 1). From 2005 through 2009 these three causes accounted for 85.4% of all unintentional injury deaths. However, the leading causes of unintentional injury death varied by age group. Motor vehicle crashes and drowning led among children 0–4 years of age. Motor vehicle crashes were the main cause of death among the 5–24 year age group. Poisoning led among the 25–64 year age group. Falls were the leading cause among persons 65 years of age and older.

The unintentional injury death rate among males (86.2/100,000 population) was double the rate among females (43.5/100,000 population) from 2005 through 2009. Poisoning (1,347 deaths) was the leading cause of unintentional injury death among males during this 5-year period, followed by motor vehicle traffic crashes (1,296) and falls (731). For females, falls (807 deaths) were the leading cause of unintentional injury death, followed by motor vehicle traffic crashes (586) and poisoning (578).

American Indians had the highest unintentional injury death rate at 83.5/100,000 population, followed by Hispanics (65.5/100,000 population) and Whites (58.4/100,000 population). African-Americans and Asians had the lowest unintentional injury death rates (36.6/100,000 population and 26.7/100,000 population, respectively). The leading causes of unintentional injury death varied by race/ethnicity. Motor vehicle crashes were the leading cause of unintentional injury death among American Indians and Asian/Pacific Islanders. Poisoning was the leading cause of unintentional injury death among Hispanics and African Americans. The leading cause of unintentional injury death among Whites was falls.

Falls were the leading cause of unintentional injury hospitalizations in New Mexico from 2005 to 2009. Fall-related hospitalizations increased dramatically with age (Figure 2). Hip fracture is the most common type of injury experienced by older adults who fall and require hospitalization. In 2009, hip fracture was the primary diagnosis for 47 percent of fall-related hospitalizations for people ages 65 years or older in New Mexico.

Transportation

The big success story in unintentional injury prevention over the last 25 years has been the reduction in deaths and injuries from motor vehicle crashes. The state has invested in seat belt and child safety seat laws, enacted a child helmet use law, set tighter penalties against drinking while driving, and improved roadway design and safety features. From 1990 through 2009, the NM motor vehicle crash death rate declined 48% (Figure 2). The state's seat belt use rate has been at or over 90% since 2004. Still, motor vehicle crashes were the cause of 30.1% of all unintentional injury deaths from 2005 through 2009. In 2008, alcohol was involved in 39% of all fatal crashes.

Traumatic Brain Injury

Traumatic brain injuries (TBI) are among the most disabling of injuries, as they can lead to loss of independence and create the need for costly caregiver and support services. Death rates due to TBI vary by gender and age. In New Mexico, the TBI-related death rate from 2004 through 2008 was highest among persons 85 years of age and older with an average annual rate of 119.3 deaths/100,000 population. The average annual TBI-related death rate for males was 3.6 times higher than that for females. Males were more likely to die from TBI due to firearms, while women were more likely to die from a TBI due to a fall.

Poisoning

Poisoning deaths, largely due to drug overdose, became the leading cause of unintentional injury death in NM in 2006, with a rate of 17.9 deaths/100,000 population and have continued to rise to a rate of 19.2/100,000 population in 2009. Prior to 2006, motor vehicle crashes were the leading cause of unintentional injury death. The highest unintentional poisoning death rate occurred among people 45–54 years of age (37.1/100,000 population). Unintentional drug poisoning includes drug overdoses resulting from drug misuse, drug abuse and taking too much of a drug for medical reasons.

Falls

Fall injury is the third leading cause of unintentional injury death and the leading cause of injury hospitalization in New Mexico. These injuries particularly impact older adults (Figure 3). From 2005 through 2009, over 13,500 New Mexicans were hospitalized due to a fall. Of those hospitalized, approximately 70% were ages 65 years and older. During this same time period, 1,343 New Mexicans 65 years of age and older died due to a fall. For many older persons, injuries due to falls, such as a hip fracture or traumatic brain injury, are so disabling that they never return to independent living in the community. Falls also have psychological consequences. Many people who fall, even those who are not seriously injured, develop a fear of falling. This fear can result in depression, isolation and reduced mobility, which lead to a decline in physical function and an increased risk of falling. The most effective strategies for prevention of older adult falls include home safety, physical activity that focuses on maintenance of strength and balance, and medication safety.

Unintentional injuries, like intentional injuries, are very costly to the state and families. The harm caused by car crashes, drug overdose and falls is expensive when one considers the cost of hospitalization and emergency medical services, inability to work, support for those disabled, law enforcement and the judicial process, and loss of tax income from those no longer able to work. The emotional costs to families cannot be measured. Science-based prevention strategies provide the best hope for reducing the burden of injury and promoting an injury-free environment for all New Mexicans.

What is Being Done

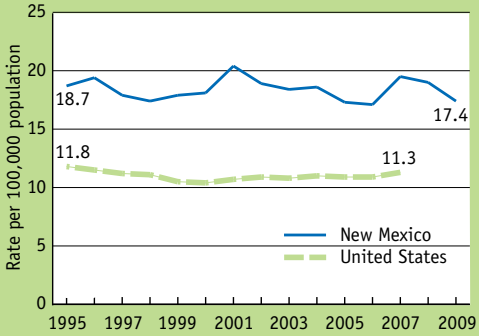
- Provision of home safety training to child daycare providers throughout New Mexico since 2001.
- Development of a web-based injury prevention curriculum covering core injury prevention approaches and injury prevention topics areas of concern to all New Mexicans.
- Implementation of a statewide capacity development project with regional and community-based partners to enhance community-level injury prevention programs and to initiate new ones.
- Initiation of statewide sexual assault and violence primary prevention training programs using evidence-based models.
- Training to prevent falls among older adults.

What's Needs to Be Done

- Incorporate older adult falls prevention into clinical settings.
- Increase appropriate use of helmets and infant and child safety seats.
- Establish a program to ensure that cribs are available for all NM infants and to educate parents to place their infants in cribs to sleep.
- Expand home visiting programs for new parents, continuing to improve and refine the injury prevention trainings for the home visitors.
- Distribute information statewide regarding the duty of the public to report suspected child abuse and neglect and how to do so.

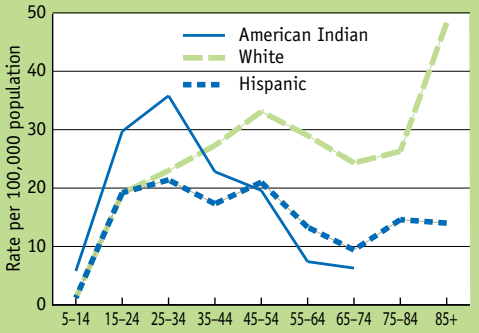
Burden of Violence in N

Figure 1
Suicide Rates by Year
NM and U.S., 1995–2009



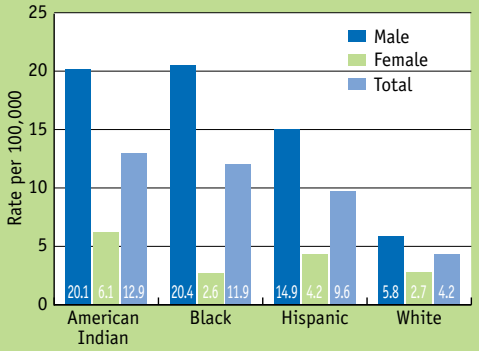
Sources: NM Vital Records and Health Statistics, CDC, National Center for Health Statistics; rates are age-adjusted to the 2000 U.S. Standard Population

Figure 2
Suicide Rates by Race/Ethnicity and Age, NM, 2005–2009



Sources: NM Vital Records and Health Statistics; rates are age-adjusted to the 2000 U.S. Standard Population

Figure 3
Homicide Rates by Sex and Race/Ethnicity, NM, 2007–2009



Sources: NM Vital Records and Health Statistics; rates are age-adjusted to the 2000 U.S. Standard Population

The World Health Organization defines violence as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment or deprivation."[1] Intentional, violent injuries include self-directed injuries due to suicidal behaviors, as well as interpersonal violence, such as intimate partner violence, child maltreatment, and sexual assault.

Violence is a significant public health problem in New Mexico. In 2007, the total violence-related death rate in NM was 29.1 per 100,000, 66% higher than the national rate of 17.5 per 100,000. New Mexico had the second highest violence-related death rate among states.[2] Suicide was the second leading cause of death for persons ages 10–44 years and homicide was the third leading cause of death for children, adolescents, and young adults ages 1–34 years.[3]

Mortality data are the most collected and available source of violence-related data; however, deaths represent only a fraction of the health and societal impact of violence. The health effects of violence may last for years following the initial injury, accounting for significant, permanent disabilities such as spinal cord and brain injuries, and limb loss. Victims of violence are also at an increased risk for psychological and behavioral problems, such as depression, anxiety, post-traumatic stress disorder, substance use disorders, and suicidal behaviors; and reproductive health problems, such as unwanted pregnancy and sexually transmitted infections.

According to a 2007 study, the annual estimated cost of violence in the U.S. was $70 billion; the vast majority of the costs were associated with lost productivity, followed by medical care expenditures.[4] Sixty-eight percent of the costs from assaults and 63% of the costs from self-inflicted injuries were incurred by young males ages 15–44 years.

Suicide

Suicide was the ninth leading cause of death in New Mexico, accounting for a total of 372 deaths in 2009. The suicide rate was 17.4 per 100,000. Over the past 15 years, the NM suicide rate has consistently been 1.5 to 2 times the U.S. rate (Figure 1).

Males have a higher risk of suicide than females. From 2007–2009, the suicide rate for NM males (29.9 per 100,000) was almost four times that for females (8.1 per 100,000). Male suicide rates ranged from 32.6 to 39.8 per 100,000 among men ages 15–74 years, increasing sharply in men 75 years and over. Female suicide rates peaked at 15.1 per 100,000 among women ages 45–54 years.

Overall suicide death rates were significantly higher among Whites (20.8 per 100,000) and American Indians (20.1 per 100,000) compared to Hispanics (14.9 per 100,000). However, suicide rates differed by racial/ethnic background and age group. Among persons less than 35 years of age from 2005–2009, American Indian youth 15–24 years (29.7 per 100,000) and young adults 25–34 years (35.8 per 100,000) had the highest suicide rates. In contrast, adult suicide rates in persons 35 years and older were highest among Whites, ranging from 27.3 per 100,000 among persons ages 35–44 years to 48.3 per 100,000 among adults 85 years and older (Figure 2).

According to results from the 2007 New Mexico Violent Death Reporting System, the majority of male suicide decedents died from a firearm injury (51%), whereas the majority of females died by poisoning (58%). The most common circumstance related to suicide deaths among males was a current depressed mood (40.2%); among females, it was a current mental health problem (50.7%).

Current suicidal thoughts and a previous suicide attempt are the best predictors of suicidal behavior.[5] According to the 2006 NM Behavioral Risk Factor Surveillance System (BRFSS), 5.8% of adults reported that they felt so low at times during the past

M Affects Everyone

year that they thought about committing suicide, and 5.2% reported ever attempting suicide in their lifetimes. New Mexico adults with major depression reported suicidal thoughts (29.0%) more often than adults without depression (3.3%). They were also more likely to report ever having attempted suicide (19.5%) compared to non-depressed adults (3.9%).

Suicidal behaviors were also common among NM high school and middle school youth. According to results from the 2009 NM Youth Risk and Resiliency Survey, 15.9% of NM high school youth reported that they seriously considered attempting suicide and 9.7% reported attempting suicide in the previous year. Females were more likely to report symptoms of depression (37.3%) and to seriously consider committing suicide (20.0%) than males (22.3% and 11.9%, respectively). American Indian youth (19.9%) reported attempting suicide more frequently than Hispanic (7.6%) and White youth (7.3%). Almost seven percent (6.8%) of middle school students reported ever trying to kill themselves; this behavior was more common among females (9.0%) than males (4.7%).

Assault

In 2009, there were 173 assault deaths in New Mexico, resulting in a homicide rate of 8.4 per 100,000. From 2007–2009, the male homicide rate (12.0 per 100,000) was more than 3 times that of females (3.8 per 100,000). African-American (20.4 per 100,000) and American Indian (20.1 per 100,000) males had the highest homicide rates (Figure 3). Homicide was more common among young adult males; males ages 25–34 years (20.5 per 100,000) had the highest rate.

A subcategory of homicide deaths includes deaths secondary to child maltreatment. In New Mexico, there were 80 homicide deaths among children 0–17 years from 2005–2009; among these, the underlying cause of death was listed specifically as neglect, abandonment, and other maltreatment syndromes for six (7.5%) decedents.

Firearms were the most common mechanism of injury for both male (47%) and female (46%) homicide decedents in 2007. The most common circumstance related to homicide death among males was an interpersonal conflict (41.1%), whereas among females, the circumstances were most likely to be related to intimate partner violence (35.9%).

According to results from the Survey of Violence Victimization in New Mexico, one in four females (24%) and one in twenty males (5%) aged 18 years and older reported being the victim of rape or attempted rape in their lifetimes, compared to national rates of 18% and 3%, respectively.[6] In 2005, the incidence rate of completed rape was 5.7 per 1,000 among adult women and 1.7 per 1,000 among adult men. More female victims of rape reported being physically attacked compared to males; and twice as many female rape victims reported that their attackers threatened to kill them or someone close to them. Both male and female rape victims were twice as likely as non-victims to suffer from a serious disabling injury in their lives, and more than 6 times more likely to suffer from one or more chronic mental health conditions.

The lifetime prevalence of domestic violence among NM adults 18 years and older was 24%[6]. On average, victims of domestic violence reported 5.5 victimizations each by their offender in the past year. In 2008, 72% of the victims identified by law enforcement were females; most of the victims were between the ages of 19 and 35 years (51%); half were Hispanic, and 15% were American Indian.[7]

Both self-directed and interpersonal violence affect many people in New Mexico. Comprehensive public health approaches to the prevention of suicidal behaviors and assault are necessary to have an impact on the health and well-being of New Mexicans.

What is Being Done

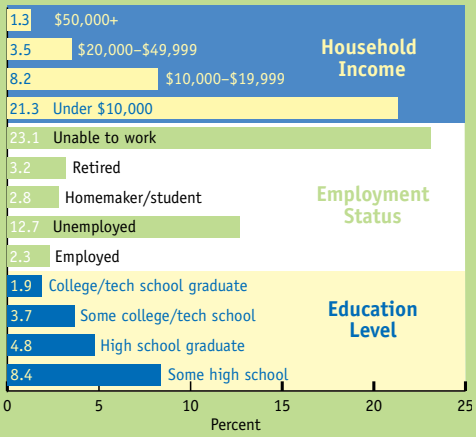
- The NM Injury Prevention Strategic Plan promotes collaboration, capacity-building, and resource sharing to reduce intentional injury.
- The NM Behavioral Health Collaborative established a workgroup to coordinate American Indian youth suicide prevention efforts among tribes, the state, the Indian Health Service and other partners.
- The NM Coalition Against Domestic Violence advocates for victims of domestic violence and their families by providing trainings, building alliances, securing resources, and developing policies to eliminate domestic violence.
- The NM Department of Health, the NM Coalition of Sexual Assault Programs, and the UNM Prevention Research Center developed a 3-year strategic plan for the primary prevention of sexual violence.

What Needs to Be Done

- Broadly implement the U.S. Preventive Services Task Force recommendations to screen adolescents 12–18 years and all adults for major depressive disorders in primary care, school-based, and other settings.
- Ensure systems are in place for accurate diagnosis, psychotherapy, and follow-up by forming partnerships between primary care settings and behavioral health core service agencies.
- Develop and evaluate effective, culturally-based initiatives for American Indian youth suicide prevention.
- Target suicide prevention programs to high risk adult populations, especially White men 45 years and older and veterans.

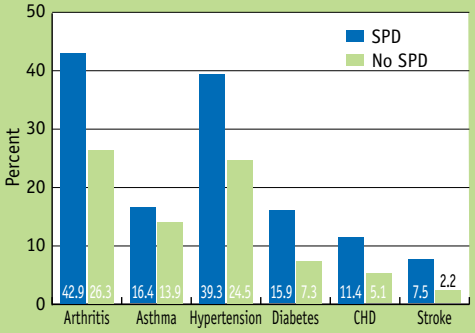
Mental Health Matters

Figure 1
Serious Psychological Distress by Socio-Demographic Characteristics, NM, 2007



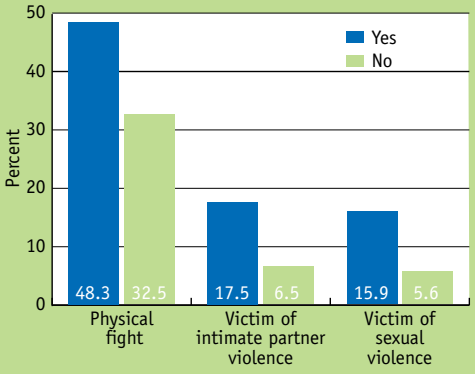
Source: NM Behavioral Risk Factor Surveillance System

Figure 2
Chronic Conditions by Serious Psychological Distress Status, NM, 2009



Source: NM Behavioral Risk Factor Surveillance System; prevalence rates age-adjusted to the 2000 U.S. Standard Population

Figure 3
High School Youth Violence Behavior by Symptoms of Depression, NM, 2009



Source: NM Youth Risk and Resiliency Survey

Mental illness, a term referring to all diagnosable mental disorders, is common around the world and in the United States. According to the U.S. Surgeon General, mental disorders are health conditions characterized by "alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning."[1]

Approximately one out of every 4 adults in the U.S. has a mental disorder in a given year; 13 million or 5.8% suffer from serious, debilitating disorders that are associated with suicide attempts, significant role impairment, or lost work productivity.[2] Mental disorders are common in childhood and adolescence too; approximately one out of every five children have a mental health diagnosis associated with some impairment.[1] Adult mental illness is commonly preceded by psychiatric conditions that begin during childhood.

Mental illness affects not only the mental and physical health and well-being of individuals, but also has a tremendous impact on families and societies. According to the 2004 update of the Global Burden of Disease report, unipolar depression was the third leading cause of disease burden globally, and the number one cause of years of healthy life lost as a result of disability (YLD).[3] In addition, depression accounted for 65.5 million disability-adjusted life years (DALYs), or 4.3% of the total DALYs. The DALY is a summary measure of population health that combines years of life lost from premature death and years of life lived in less than optimal health due to disease and injury.

Although depression was the leading cause of YLD for males and females, the burden among females was 50% higher than males.[3] Other psychiatric conditions contributing to a higher burden in females were anxiety disorders and senile dementias. In contrast, one quarter of the male burden was due to alcohol and drug use disorders, six times higher than the burden of these conditions among females.

Individuals with serious mental illness have higher mortality rates than the general population. They also tend to die earlier than persons without a mental disorder. Treatment of mental illness can reduce morbidity and improve quality of life. However, only 41.1% of U.S. adults with a 12-month Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) disorder used mental health services in the prior year.[4] According to the National Survey on Drug Use and Health (NSDUH), 4.7% of NM adults perceived an unmet need for treatment or counseling for mental health problems in the past year.[5] Barriers to receiving treatment for mental health problems include cost and insurance issues, not feeling a need for treatment or thinking that it could be handled without treatment, and stigma associated with mental illness.

According to results from the 2007 NM Behavioral Risk Factor Surveillance System (BRFSS), about two-thirds (66.2%) of adults agreed strongly with the statement, "Treatment can help people with mental illness lead normal lives." Another quarter (25.4%) of adults agreed slightly. However, only about a quarter of adults (26.7%) agreed strongly that "People are generally caring and sympathetic to people with mental illness." Another third of adults (32.9%) agreed slightly with this statement.

Mental Health

Physicians and researchers often use a 14-day minimum to define clinical depression and anxiety; thus a BRFSS measure of frequent mental distress (FMD) was defined using this time period.[6] In 2008, 11.5% of adults reported FMD, i.e. that their mental health was not good for 14 or more days during the past 30 days. Conversely, most NM adults (88.5%) reported less than 14 days of poor mental health, including "stress, depression, and problems with emotions." Although the number of days of poor mental health during the past 30 days ranged from 0 to 30 days, the average number reported was 3.8 days.

Mental Disorders

Estimates of the prevalence of mental disorders in the general population come from both national and state surveys that

use both screening and diagnostic measures to quantify mental illness. According to results from the 2006–2007 NSDUH, 9.1% of NM youth 12–17 years had at least one major depressive episode (MDE) in the past 12 months; 9.3% of young adults 18–25 years and 7.4% of adults 26 years and older also met the DSM-IV criteria for MDE in the past year.[7] The prevalence of serious psychological distress in the past 12 months among adults 18–25 years was 9.3% compared to 7.4% for adults 26 years and older.[7] Serious psychological distress (SPD) is a population-based measure used to identify adults that have a high likelihood of a mental illness and associated functional limitations.

Results from the 2007 BRFSS showed no significant differences in the frequency of past month SPD by gender, age group, or race/ethnicity. However, the frequency of SPD was significantly and inversely related to household income (Figure 1). Twenty-one percent of adults with annual household incomes <$10,000 had SPD compared to only 1% of adults with household incomes of $50,000 or more. In addition, the prevalence of SPD was higher among adults who were unable to work (23.1%) or unemployed (12.7%) than among employed (2.3%) or retired (3.2%) adults. Higher rates of SPD were also associated with having less than a high school education (8.4%) compared to having some higher education (3.7%) or a college/technical school degree (1.9%).

Adults with one or more chronic medical conditions, including arthritis, hypertension, diabetes, coronary heart disease, and stroke, were more than twice as likely as adults without any of these conditions to have SPD, after adjusting for sociodemographic characteristics. Chronic medical conditions were also more common among adults with psychological distress. Rates of health care provider diagnoses of arthritis (42.9%), hypertension (39.3), diabetes (15.9%), coronary heart disease (11.4%), and stroke (7.5%) were significantly higher among adults with SPD (Figure 2). In addition, adults with SPD were more likely to screen positive for alcohol abuse or dependence (23.6%) and alcohol dependence (11.2%) compared to adults without severe psychological distress.

Results from the 2009 NM Youth Risk and Resiliency Survey (YRRS) indicated that 29.7% of high school students reported feeling sad or hopeless every day for two weeks or more in the previous year. This was slightly higher than the national rate of 26.1%. NM female students (37.3%) were more likely to report persistent feelings of sadness and hopelessness than male students (22.3%).

Persistent feelings of sadness and hopelessness were also associated with other risky behaviors. High school students who reported sadness and hopelessness were more likely to report substance use, including cigarette smoking, current alcohol use, binge drinking or consuming five or more drinks of alcohol in a row, and illicit drug use. They also reported involvement in physical fights and being victims of both intimate partner violence and sexual violence more often than students without these feelings (Figure 3).

In conclusion, mental health problems are common in New Mexico. They affect individuals of all ages and racial/ethnic backgrounds. Serious psychological distress was frequent among adults with lower socioeconomic status; these health disparities, along with higher rates of cardiovascular disease, lack of emotional and social support, and substance use, contribute to worse health outcomes among adults with mental health conditions. Population-based surveillance of mental disorders is necessary to describe the burden and risk factors associated with mental illness. These data may be used to estimate the need for mental health services and for targeting of services to high risk groups.

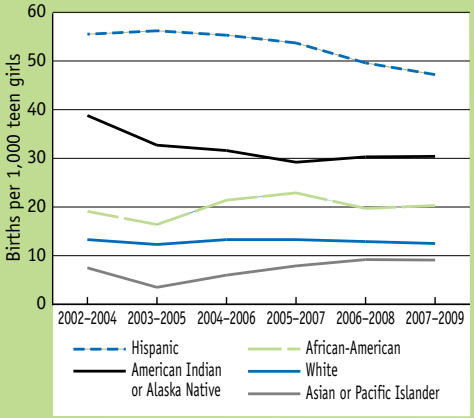
What is Being Done

- The NM Health Care Reform Leadership Team is aligning with national health care reform legislation to include behavioral health services in essential benefits packages provided through health insurance exchanges.
- Behavioral health services for middle and high school students are offered at 59 school-based health centers throughout NM.
- Core service agencies in local collaborative areas coordinate the continuum of mental health and substance abuse treatment for people with serious mental health needs.
- The NM Behavioral Health Collaborative implemented "Talk About It," an anti-stigma and wellness campaign to raise public awareness about prejudices surrounding mental illness and its treatment.

What Needs to Be Done

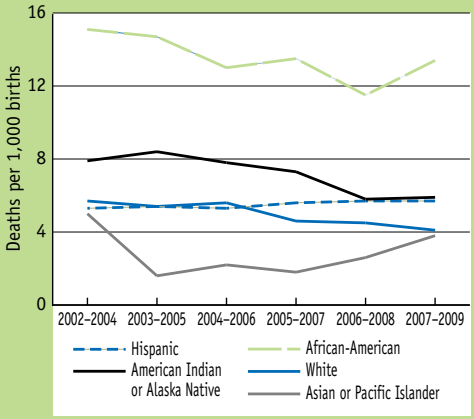
- Continue to improve youth and adult access to services through braided funding strategies.
- Accelerate the integration of behavioral health screening and early intervention programs into primary care settings.
- Increase the capacity to provide mental health and substance abuse assessment, crisis intervention, and early intervention services at school-based health centers.
- Expand early recognition and intervention programs for young people with early signs of serious mental illness.
- Expand the continuum of the behavioral health workforce and provide incentives for providers to work in rural, frontier, and tribal areas.

Figure 1
Teen Birth Rates, Age 15–17, by Mother's Race/Ethnicity, NM, 2002–2009



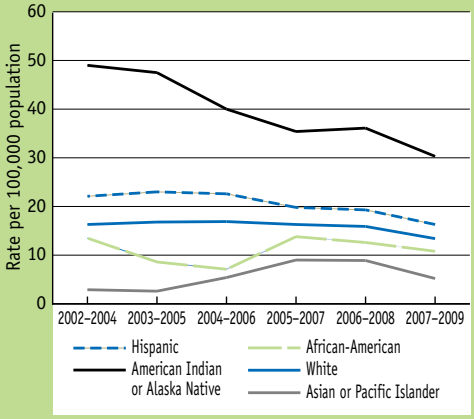
Sources: NM Vital Records and Health Statistics, National Center for Health Statistics

Figure 2
Infant Mortality Rates by Race/Ethnicity NM, 2002–2009



Sources: NM Vital Records and Health Statistics, National Center for Health Statistics

Figure 3
Motor Vehicle Crash Death Rates by Race/Ethnicity, NM, 2002–2009



Sources: NM Vital Records and Health Statistics, National Center for Health Statistics; rates age-adjusted to 2000 U.S. Standard Population

Reducing the Burden of

Population groups defined by race or ethnicity, gender, sexual orientation, geographic area, country of origin or socioeconomic characteristic may have poorer or better health than other population groups. These differences are called health disparities and have been defined in various ways: "differences in the incidence, prevalence, mortality and burden of disease and other adverse health conditions between specific population groups" or more succinctly as "population-specific differences in the presence of disease, health outcomes or access to health care." Although health disparities exist across gender, socioeconomic and other strata, some of the most visible differences in health are between racial and ethnic groups.

Many factors contribute to health disparities including access to health care, behavioral choices, the ability to understand and use health information (health literacy), poverty, environmental conditions, language barriers and other social and cultural factors. As health disparities result from many factors, reducing health disparities will involve multi-faceted approaches involving multiple sectors.

New Mexico's Population and Health Disparities

New Mexico is considered a "majority-minority" state where minority groups constitute a majority of the population. According to the New Mexico Quickfacts, in 2009 Hispanics constituted 45.6% of the population. Whites were the second largest group at 40.9% of the population followed by American Indian and Alaska Natives at 9.7%, African-Americans at 3.1% and Asians/Pacific Islanders at 1.7%. Although small in comparison to the three larger populations, the number of African-Americans and Asian/Pacific Islanders is growing in New Mexico.

Given New Mexico's racial and ethnic diversity, it should not be a surprise to learn that these populations exhibit differences in the burden of disease. Since 2003 the Department of Health has documented various health disparities, and in 2006 began producing an annual report, the Racial and Ethnic Health Disparities Report Card, to present information on the differences in the health of the different racial and ethnic groups in New Mexico. Of the 20 indicators in the Report Card, there were eight in the 2010 report card for which one population group had rates at least three times higher than that of the group with the lowest rate (the disparity ratio). Three of these rates with large disparities relate to infectious disease (hepatitis B, chlamydia and HIV/AIDS), two to maternal and child health (teen birth and infant mortality), two to substance abuse (alcohol-related death, drug-induced death), and one to chronic disease (diabetes death).

Reducing Health Disparities in New Mexico

It is important to remember that disparity means difference and is comparative. To indicate that health disparities exist in New Mexico does not mean that the health of New Mexicans is not improving. A disparity may persist or even increase despite improvements in health if there are differences between populations in the rate of improvement. Unfortunately as the Racial and Ethnic Health Disparities Report Card demonstrates, health disparities in New Mexico are persisting and even increasing despite improving rates in some cases.

Three health status indicators affecting a considerable proportion of the population for which New Mexico continues to experience large disparities are teen birth, diabetes death and alcohol-related death. Teen birth rates are an example of improving rates but continuing disparity. Although the overall teen birth rate in New Mexico has decreased from being 60% higher than the national rate to being 45% higher, the disparity between populations in NM remains striking. The Hispanic teen birth rate was almost four times the White rate and was five times greater than the Asian/Pacific Islander teen birth rate (Figure 1). The rates translate to the following comparison: out of every thousand Hispanic girls ages 15 to 17 years in New Mexico, 47 gave birth compared to 9 out of a thousand Asian/Pacific Islander females and 12 out of a thousand White girls. During the

Health Disparities in NM

2007–2009 time period out of the approximately 4,600 births to females ages 15–17 years, 69% were to Hispanic girls.

Deaths due to diabetes serve as an example of a persisting disparity with worsening rates. All populations in New Mexico showed an increase in rates during 2007–2009 and all non-White populations exhibited higher rates than Whites. American Indians had the highest rate of deaths due to diabetes, which was three times higher than that of Whites. For every 100,000 American Indians there were 73 deaths due to diabetes compared to 22 deaths due to diabetes for every 100,000 Whites.

Alcohol-related deaths remain a serious problem in New Mexico and another example of increasing rates and persisting disparity. The New Mexico rate was 88% higher than the national rate. Alcohol-related death rates increased in all racial and ethnic groups except for African-Americans, who had the lowest rate. American Indians had the highest rate for alcohol-related deaths, three times that of African-Americans, twice that of Whites and 1.7 times that of Hispanics. Nearly 200 deaths per year among American Indians were classified as alcohol-related.

Infant mortality is an indicator which involves a smaller number of cases and exhibits the paradox of improving rates but increasing disparities,. There are less than 200 total infant deaths each year in New Mexico. New Mexico's infant mortality rate improved so that it was lower than the national rate. However the disparity between African-Americans and Whites increased since the White rate declined more rapidly than the African-American rate. For every 1,000 births to White mothers there were only 4 deaths while for African-Americans there were 13 deaths for every 1,000 births or three times as many (Figure 2). Since 2003, White infant mortality has decreased 24% compared to an 8% decrease for African-American infant mortality.

The motor vehicle crash death rate is an indicator for which the rates have improved and the disparity has decreased. The overall death rate from motor vehicle crashes has declined such that the New Mexico rate has improved since 2003 from 45% higher than the national rate to 15% higher. In addition, the rates for American Indians, Hispanics and Whites have all improved with American Indians having improved the most, decreasing from 47.5 deaths per 100,000 to 30.3 deaths per 100,000 (Figure 3). Although this is a significant improvement, the American Indian death rate from motor vehicle crashes remained 1.8 times that of Hispanics and 2.3 times that of Whites.

Reducing or eliminating health disparities involves focusing on specific health disparities and assessing the contributions of multiple factors including cultural, economic and environmental influences to the disparity. Resources and interventions need to be targeted toward the population group at the wrong end of the disparity. The decline in motor vehicle deaths required a multi-faceted approach suggesting that reducing disparities requires efforts in many arenas. Coordinated efforts involving resources and strategies from multiple public and private agencies need to be developed to address the multiple influences contributing to disparities.

What is Being Done

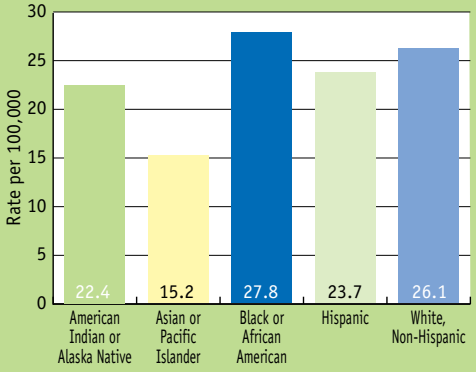
- Improved reporting and dissemination of health data by race and ethnicity to aid in informed decisionmaking.
- Improving the capacity of public and private health care agencies to provide culturally appropriate services including trained medical interpretation, programs, and materials to clients with limited English proficiency.
- Development of innovative outreach strategies including culturally appropriate media strategies such as fotonovelas and films to reach underserved populations.
- In 2010, a report on health data and disparities among the lesbian, gay, bisexual and transgender community in NM was published.

What Needs to Be Done

- Developing more integrated cross-agency approaches including public-private partnerships to address the multiple factors contributing to specific disparities.
- Increased efforts by both public and private health agencies to reach underserved communities through the use of allied health professionals outside of the clinical setting.
- Development of patient information materials for low-literacy populations in order to better disseminate information to the public on both the prevention and optimal management of adverse health conditions.
- Targeting resources and interventions toward population groups with higher rates of death and disease.

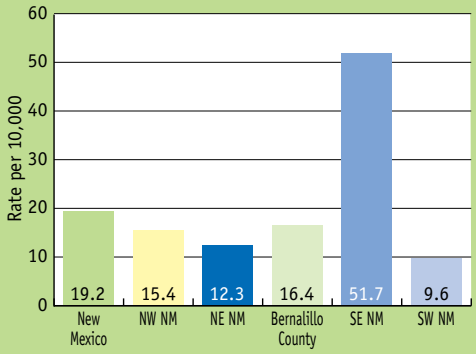
A Healthy Environment i

Figure 1
Heart Attack Death Rates by Race/Ethnicity, NM, 2006–2009



Source: NM Vital Records and Health Statistics; rates age-adjusted to 2000 U.S. Standard Population

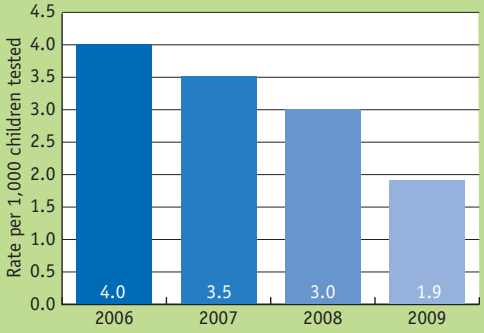
Figure 2
Asthma Hospitalization Rates Among Children 1–14 Years, NM, 2008



Source: Hospital Inpatient Discharge Database, NM Health Policy Commission

These data are hospital inpatient discharges where asthma is the first-listed diagnosis. They include state residents who were discharged from NM non-federal hospitals. Because many American Indians are admitted to federal IHS hospitals, they are not included in these rates.

Figure 3
Elevated Blood Lead Rates Among Children Under 6 Years, NM, 2006–2009



Source: NM Lead Poisoning Surveillance and Prevention Program

A healthy environment is essential to the health of New Mexicans. Environmental health addresses the interaction between human health and the chemical, physical, and biological agents found in both our natural and human-made surroundings. The environment can include the indoor and outdoor air we breathe; water we use for drinking, cooking, and bathing; food we eat; products we use; buildings we live and work in; designs of our cities and towns; and recreational areas we use.

How Air Quality Can Affect Health

The air we breathe contributes to our respiratory and cardiovascular health. Particle pollution, or particulate matter, consists of particles that are in the air, such as dust, dirt, soot and smoke, and little drops of liquid. Some particles are large or dark enough and can be seen, like soot or smoke. Other particles are too small to be seen. Short-term exposure to elevated particle pollution significantly contributes to increased mortality as a result of cardiovascular events and also can result in increased hospital admissions for several cardiovascular and pulmonary diseases. Regional differences in heart attack death rates, therefore, may be influenced by particle pollution. In New Mexico, the heart attack death rate is greatest in the northwestern and southeastern regions of the state and particle pollution may play a role. Long-term exposure to high levels of particle pollution can reduce overall life expectancy by a few years.[1] Research also indicates that exposure to air pollution can increase the risk of infant mortality.[2] Known risk factors for heart disease, such as race/ethnicity, also play a role in New Mexico (Figure 1). Air quality for the state is generally good, but some areas (e.g., parts of southern New Mexico and San Juan County) have relatively high levels of air pollutants. Industries that adversely affect air quality include power plants, oil and gas development, aggregate crushing operations, and confined animal feeding operations. Because there are few air quality monitors in the state, methods are being developed to forecast episodes of poor air quality including high ozone and dust concentrations. Air quality health advisories can then be developed for potentially affected communities.

How Water Quality Can Affect Health

Clean water is essential to a healthy population. Unclean and unhealthy water can contribute to gastrointestinal diseases, various cancers, birth defects, and developmental problems in children. Routine sampling and analysis of the state's water reveals that the quality is generally good, but problems can occur.

One such problem arises from bacteriological contamination, which may lead to boil-water advisories. When a boil-water advisory is issued, the Department of Health provides educational materials for the public and advises regional public health officials to be on alert for cases of gastrointestinal illness. Nitrates from fertilizers, animal waste, or improperly maintained septic tanks can also contaminate drinking water sources.

New Mexico has relatively high levels of uranium in groundwater from naturally occurring deposits as well as from mining and milling of uranium ore. Arsenic is another naturally-occurring contaminant of New Mexico groundwater. Exposure to relatively high arsenic levels in drinking water is associated with bladder cancer. Compliance with the new Environmental Protection Agency (EPA) drinking water standard for arsenic of 10 ug/L has been a challenge for nearly 100 water systems serving about 40% of the state population. This standard requires that water systems modify their source water supplies and/or install arsenic-removal treatment technology, such as reverse osmosis. In addition, many New Mexicans get their water from untested private wells. Exposure control measures such as removal of uranium and arsenic from sources of drinking water continue to be promoted by creating and disseminating fact sheets and other educational materials among potentially exposed New Mexicans.

s Essential to NM

Asthma

It is estimated that about 125,000 adults and 39,000 children in New Mexico had asthma in 2008. Work being done to reduce the burden of asthma includes collecting and analyzing health surveillance data and working with partners throughout New Mexico to develop effective and sustainable interventions. One primary goal of state and local agencies, physician groups, and non-profit organizations is to reduce the rates of asthma emergency room visits, asthma hospitalization, and asthma deaths in southeastern New Mexico where the rates are highest. In 2008, the state asthma hospitalization rate for those under age 15 was 19.2 per 10,000 population, while the rate in the southeastern region was 51.7 (Figure 2). Three additional areas of focus include: 1) increasing health care provider training on the latest National Heart, Lung, and Blood Institute asthma guidelines, 2) increasing asthma education in elementary schools, and 3) promoting indoor air quality assessments in public schools with the goal of reducing asthma triggers on school campuses.

Assessing Environmental Exposure

Exposure to many toxic substances can be determined through testing of biological samples, such as blood, hair, or urine. As part of New Mexico's notifiable disease surveillance, laboratory results that indicate exposure to mercury, arsenic, uranium, lead, pesticides, and nitrates are collected and investigated. Lead exposure, for example, can be determined through blood testing. Lead comes from a variety of sources in the environment, including older lead-based paints, ceramics with lead-based glazes, some imported toys and jewelry, fishing weights and bullets. In recent years, the percent of children tested for lead has increased while the proportion of children found to have high blood lead levels has fallen (Figure 3). In 2006, four of every 1,000 children tested under the age of 6 years had elevated lead levels, but in 2009, only two of every 1,000 children had elevated lead levels. The northwestern and southeastern regions of the state had the highest rates of elevated lead levels in young children. Even small amounts of lead can affect brain development in fetuses, infants, and children. The central focus of health efforts includes the collection and analysis of lead-testing data combined with case management for lead-poisoned children, and educational outreach to prevent excessive lead exposure.

Exposure to mercury also is an ongoing concern. Mercury can affect the nervous system, especially in fetuses, infants, and children. According to the EPA, coal-fired power plants are the largest single source of U.S. mercury emissions. Because mercury concentrates in the bodies of certain fish, fish consumption guidelines for selected rivers and lakes are issued periodically.

Tracking Environmentally-Related Disease

Linking environmental hazard or human exposure data with health data is needed to determine how the environment may affect health. Examples of this type of analysis include the connections between air quality and asthma emergency room visits, or between arsenic levels in drinking water and bladder cancer. The Environmental Public Health Tracking website has been developed to disseminate this type of information to New Mexicans. This information can help residents avoid potentially harmful exposures and become informed about environmental health.

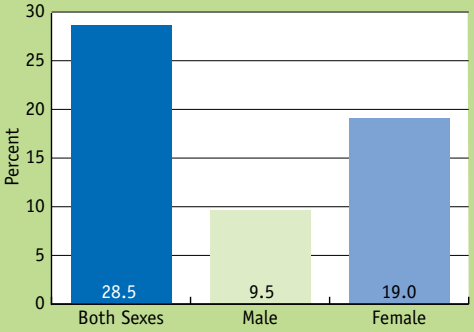
What is Being Done

- Asthma education for patients and health care provider training are being focused in the southeast where rates are highest.
- A web data query system available to the public has been developed to provide New Mexico environmental and health data.
- Lead exposure is being assessed, and individuals with high blood lead levels receive site visits with the goal of eliminating the source of exposure.

What Needs to Be Done

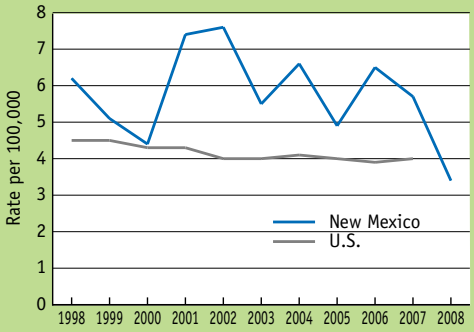
- Increase appropriate asthma self-management education in order to reduce hospital admissions.
- Educate communities at risk for adverse environmental exposures so that they can protect themselves.
- Develop additional environmental health advisories, such as when increased ozone concentrations occur.

Figure 1
Adults Who Have Changed or Quit a Job Because Chemicals, Smoke, Fumes or Dust Caused Their Asthma or Made It Worse NM, 2007–2008



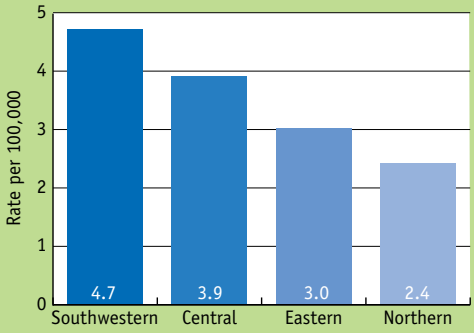
Source: New Mexico Poison & Drug Information Center

Figure 2
Occupational Injury Death Rates NM and U.S., 1998–2008



Source: BLS Census of Fatal Occupational Injury

Figure 3
Work-related Pesticide-Associated Calls to NMPDIC by Region, NM, 2001–2006



Source: NM Poison and Drug Information Center (NMPDIC)

Healthy Workplaces Are

Injuries and illnesses due to work are costly to workers, employers and society, both economically and in terms of human suffering. In New Mexico almost $272 million or $354 for each covered worker was paid out in benefits for workers' compensation insurance in 2008.[1] This likely represents a fraction of the costs of work-related illness and injury as costs are shifted to insurance systems other than workers' compensation. Furthermore, not all employees are covered by Workers' Compensation. Laws in New Mexico exclude employers with fewer than three employees, domestic workers, farm and ranch laborers, and real estate salespersons from mandatory workers' compensation coverage.

How the Workplace Can Affect Health

Work can expose people to many factors that affect their health. In 1970 the United States Congress passed the Occupational Safety and Health Act (OSH Act) "to assure so far as possible every working man and woman in the Nation safe and healthful working conditions and to preserve our human resources."[2] Many toxic substances such as lead and other heavy metals, cancer-causing substances such as benzene and asbestos, and physical hazards in the workplace such as noise and vibration from machinery are required to be monitored under the OSH Act.

As the epidemiology of occupational illness and injury progresses, a broadening range of effects due to hazardous exposures are being observed at ever lower doses. For instance, recent associations have been made between chronic, low-dose exposures to lead and neurological effects in workers that may lead to memory loss.[3] For this reason, New Mexico now reports adult blood lead levels between 10 and 24 µg/dl to the National Institute for Occupational Safety and Health (NIOSH).

Aside from physical and pathological effects, there is evidence linking occupational injury to psychological distress. Analysis of the National Health Interview Survey found that workers with psychological distress had a significantly higher risk of being injured on the job than workers without distress.[4] Another study of workers with work-related injuries found impacts of the injury on mental health.[5] The Whitehall studies from Great Britain have provided evidence for the association between holding a job that has low reward for high effort and elevated risks for coronary heart disease, psychiatric disorders, fatigue, musculoskeletal and gastrointestinal symptoms, and sleep disturbances.[6]

Work-related asthma is an under-recognized and under-diagnosed condition. NM adult survey data from 2007–2008 indicated that, while up to 70% of people with asthma felt that their asthma was either caused or made worse by their workplace, only 8% had ever discussed an association between work and asthma with their doctors. Work-related asthma can permanently affect career paths if a worker becomes sensitized to substances that can be inhaled at the workplace. Almost 29% of New Mexicans who had asthma in their lifetime stated that they had changed or quit a job because chemicals, smoke, fumes or dust caused their asthma or made their asthma worse (Figure 1). Although New Mexico does not have many of the heavy manufacturing industries frequently associated with asthma aggravating or inducing agents, workers may still be exposed to substances such as wood dust or welding fumes in construction, disinfectants used in health care, animal dander and grain dust in agriculture, or cleaning agents used in service industries. These are but a few agents on the extensive list of known workplace asthmagens.

New Mexico has consistently had higher rates of work-related injury fatalities than the nation as a whole (Figure 2) and is home to several high-hazard industries for work-related injury fatality, such as transportation, mining, agriculture and construction. Other contributing risk factors for occupational injury fatality in our state include being a non-United States citizen, age 65 years and older,

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injury occurrence in rural counties, and self-employment.[7]

New Mexico also has consistently high rates of acute work-related pesticide-associated illnesses and injuries reported to poison control centers.[8] The southwestern region of NM had the highest rate of calls per 100,000 workers (Figure 3). Insecticides, dominated by organophosphates, are the most frequently reported pesticides with 63% of all calls being insecticide-related.[9] This prompted further study of agricultural exposures in the southwestern NM. A survey of farmworkers in 2008 showed that training was effective at increasing their knowledge about pesticides and at increasing certain self-reported behaviors that are protective against pesticide exposures. However, only half of workers had ever had any kind of training, much less the Environmental Protection Agency's mandated Worker Protection Standard (WPS) training, and women had significantly less training than men.[10] Training gaps were addressed in 2010 by compiling an inventory of pesticide exposure prevention training providers in southwestern NM and surveying employers on factors around training. The inventory is distributed to employers and farmworker advocate groups.

Workplace Investigations

The NM Department of Health and the NM Environment Department respond to reports of occupational illness and injury. One recent investigation was in response to reported cases of *Mycobacterium avium* Complex (MAC) infection in spa maintenance workers. Workers had symptoms indicative of "hot-tub lung", a hypersensitivity pneumonitis-like lung disease that can arise from exposure to MAC-containing aerosols during the use or cleaning of spa tubs. The investigation required coordination of several programs within DOH, the NM Environment Department, as well as experts within NIOSH and the Centers for Disease Control and Prevention Laboratories.

Ranking 4th for marketed natural gas production and 7th for crude oil production, oil and gas extraction is an important industry for the State.[11] Based on occupational injury and illness data, the New Mexico Occupational Health and Safety Bureau (NM-OSHA) has made both oil and gas drilling and petroleum refining priorities in both their enforcement and cooperative initiatives. Local emphasis programs (LEPs) have been established by NM-OSHA to address health and safety hazards in these industries. Additionally, the NM "Oil and Gas Safe Site" program has been established to help companies objectively evaluate their health and safety programs, and to acknowledge those companies who have met or exceeded established criteria for implementing those programs.

Another area of concern for NM-OSHA is the increasing rate of ergonomic-related injuries in health care and social assistance industries. Much of the associated injuries are attributable to tasks involving lifting and repositioning patients.

The effect of work exposures on injury and disease has been recognized for centuries. As the nature of work grows more complex in our society, our understanding of the interactions between health and the workplace also increases in complexity. In order to implement effective occupational illness and injury prevention strategies, everyone including workers, employers, physicians and regulators need to be aware of both the positive and detrimental effects of work on health.

What is Being Done

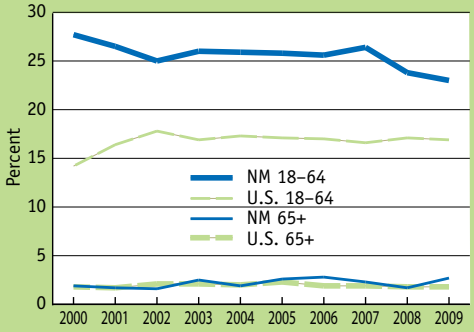
- Increasing reporting of occupational illnesses and injuries by health care providers.
- Promoting pesticide exposure prevention training for farmworkers.
- Providing information and education on current occupational health concerns to health care providers throughout the state through Project ECHO's Occupational Telemedicine program.

What Needs to Be Done

- Focus surveillance in industries that national and state data indicate to be high hazard, such as oil and gas extraction and health care.
- Improve awareness and recognition of occupationally related conditions among non-occupational health care providers.
- Find ways to collect data on underserved worker populations, such as workers on tribal lands, migrant workers and the self employed.
- Collect respondents' occupation and industry in New Mexico adult survey data to shed light on associations between occupation, risk behaviors and adverse health outcomes.

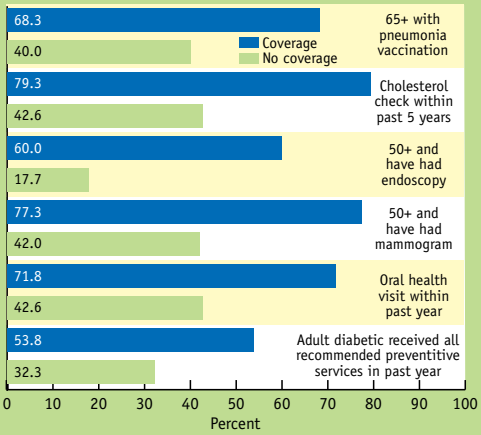
Coverage Improves; Barr

Figure 1
Lack of Adult Health Care Coverage
NM and U.S., 2000–2009



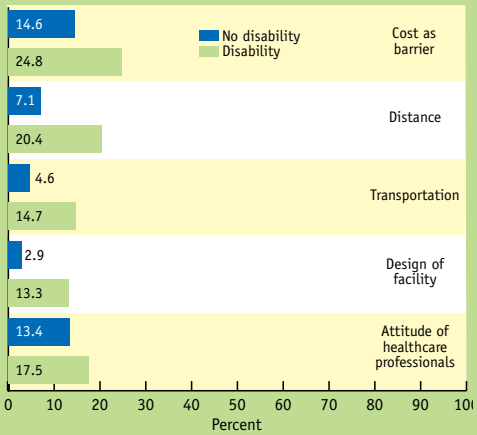
Source: NM Behavioral Risk Factor Surveillance System

Figure 2
Adults Receiving Health Screening or Prevention by Health Care Coverage
NM, 2008–2009



Source: NM Behavioral Risk Factor Surveillance System

Figure 3
Adults Experiencing Barriers to Healthcare by Disability Status, NM, 2008



Source: NM Behavioral Risk Factor Surveillance System

In 1978, nearly all nations of the world signed the World Health Organization Declaration of Alma Ata,[1] proclaiming the right of all people to primary care. Primary care is defined as basic or general health care focused on the point at which a patient ideally first seeks assistance from the medical care system. In 2007, 36% of the total New Mexico population resided in designated primary care Health Professional Shortage Areas (HPSA). All or part of thirty-one of the thirty-three counties were designated a primary medical HPSA.

The ability to access health care is central to maintaining one's health. Important health maintenance information and tools, such as mammograms, PAP tests, measurements of blood pressure and blood cholesterol, and many others, are only available through health care providers. For most individuals and families, the high cost associated with accessing health care can only be managed through some form of health care plan, be it private health insurance, employer-provided insurance, or some form of public sponsored coverage.

Lack of health care coverage has been associated with delayed access to health care and increased risk of late stage diagnosis of chronic disease and mortality.[2] Individuals without health care coverage are much less likely than those with coverage to receive recommended preventive services, are less likely to have access to regular care by a personal physician, and are less able to obtain needed medication or health care services. Consequently, the uninsured are more likely to succumb to preventable illnesses, more likely to suffer complications from those illnesses, and are more likely to die prematurely.[2,3]

The New Mexico Department of Health routinely monitors health care coverage as an important measure of the ability of the state's population to obtain important health information and medical care. Throughout the past decade, New Mexicans were less likely than those living in the rest of the country to have any form of health care coverage. However, while lack of coverage has remained stable across the country it has declined in New Mexico in recent years, with more individuals possessing some form of coverage (Figure 1). Adults 65 years of age or older qualify for federally sponsored Medicare. Nearly all adults in this age group have access to health care. According to the American Community Survey, coverage of New Mexico children under the age of 19 years was lower than the national percentage but improved from 86.2% in 2008 to 87.7% in 2009.[4]

Health care coverage impacts an individual's ability to access recommended health screening tools and preventive health care. For each preventive measure or health screen, Figure 2 presents the percentage of adults who have received the given service by health care coverage status. For example, nearly 68.3% of adults age 65 or older who have coverage have received the recommended pneumococcal vaccination while only 40.0% of those without coverage have received the vaccination. Adults who are covered by a health plan are significantly more likely to have received these potentially life-saving services by the recommended age and within the recommended timeframe.

In 2009, 46.5% of adults without coverage experienced a time in the previous 12 months in which they needed medical care but could not get it because of the cost, while cost prevented 9.5% of adults with coverage from obtaining needed medical care.

Barriers to Accessing Health Care

The 2008 New Mexico BRFSS Survey included a set of supplemental questions about barriers to health care. Among adults who did not have any form of coverage, 60% reported that the cost of premiums was the primary reason for not having coverage, and an additional 22% percent lost coverage when they lost or changed their job. Other reasons for lack of coverage included aging out of eligibility for Medicaid, rejection by a health insurance company, or lack of U.S. residency status.

iers to Access Persist

In addition to lack of health care coverage, there are other barriers to accessing health care. Distance to health care providers, transportation issues, the design of the provider's office, and for some, the attitude of the health care provider or their staff, may serve as barriers to care (Figure 3). In New Mexico, many communities have few health care providers and distances to neighboring communities are great for those living in rural areas. In 2008, adults residing in rural areas were more likely than those living in metropolitan areas to report that distance and transportation were sometimes, often, or always a problem in seeking care.

Disability and Access to Care

Disability is also an important factor regarding access to care. In 2008, adults with a disability were five times more likely than adults without disability to report office design as a barrier, nearly four times more likely to report transportation as a barrier, three times more likely to report distance as a barrier, and over one and a half times more likely to report negative attitude of medical or office staff as a barrier.

Community-Based Primary Care

For more than 20 years, there has been an effort to build a system of community-based primary care centers for New Mexico's underserved. This has been a collaborative effort, linking federal, state, and local programs with community groups and non-profit agencies. The impact has been considerable; there are primary care centers in 95 communities serving more than 300,000 patients through more than 1 million visits each year. Roughly 88% of these patients have annual incomes below 200% of the Federal Poverty Level and 43% are without any form of health care coverage.

Improving Access

Primary care centers are serving a significant portion of the unmet need in New Mexico, making clear the necessity of continuing to build the primary care center sector. Under the Federal Primary Care Cooperative Agreement, NMDOH will continue its work facilitating the expansion of primary care centers.

While the focus of these centers is on medical services, there is an increased emphasis on expansion of dental services in the primary care setting. Fewer than half of primary care clinic sites have dental service capacity. But even with this limited capacity, primary care centers provide more than 20% of all Medicaid dental services in New Mexico.

The community-based primary care sector in New Mexico is a major public health success story. Few other states have as widespread a system caring for such a large percentage of the state's underserved population. The sector has been built upon local initiative, community governance, federal, state, and local financial support, and staffing by government health professional programs.

What is Being Done

- Preparations are underway for the initiation of the new federal Health Care Reform.
- Health insurance has been made available to qualified families with children.
- Low-interest loans are being granted for community-based primary care center facilities and equipment.
- Planning assistance is being given to community groups and agencies developing or expanding community-based primary care centers.
- Tax incentives and education loan repayment programs encourage medical professionals to settle and work in under-served areas.

What Needs to Be Done

- Careful study of and integration with federal Health Care Reform of New Mexico primary care and other medical resources.
- Expansion of primary care centers to meet the needs of more underserved people.
- Expansion of dental services for primary care center clients.
- Expansion of basic behavioral health services within the primary care setting.
- Expansion of health promotion and disease prevention services and chronic disease management capacity in the primary care centers.

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