

New Mexico
Prescription Monitoring
Program Data Report
2006-2013

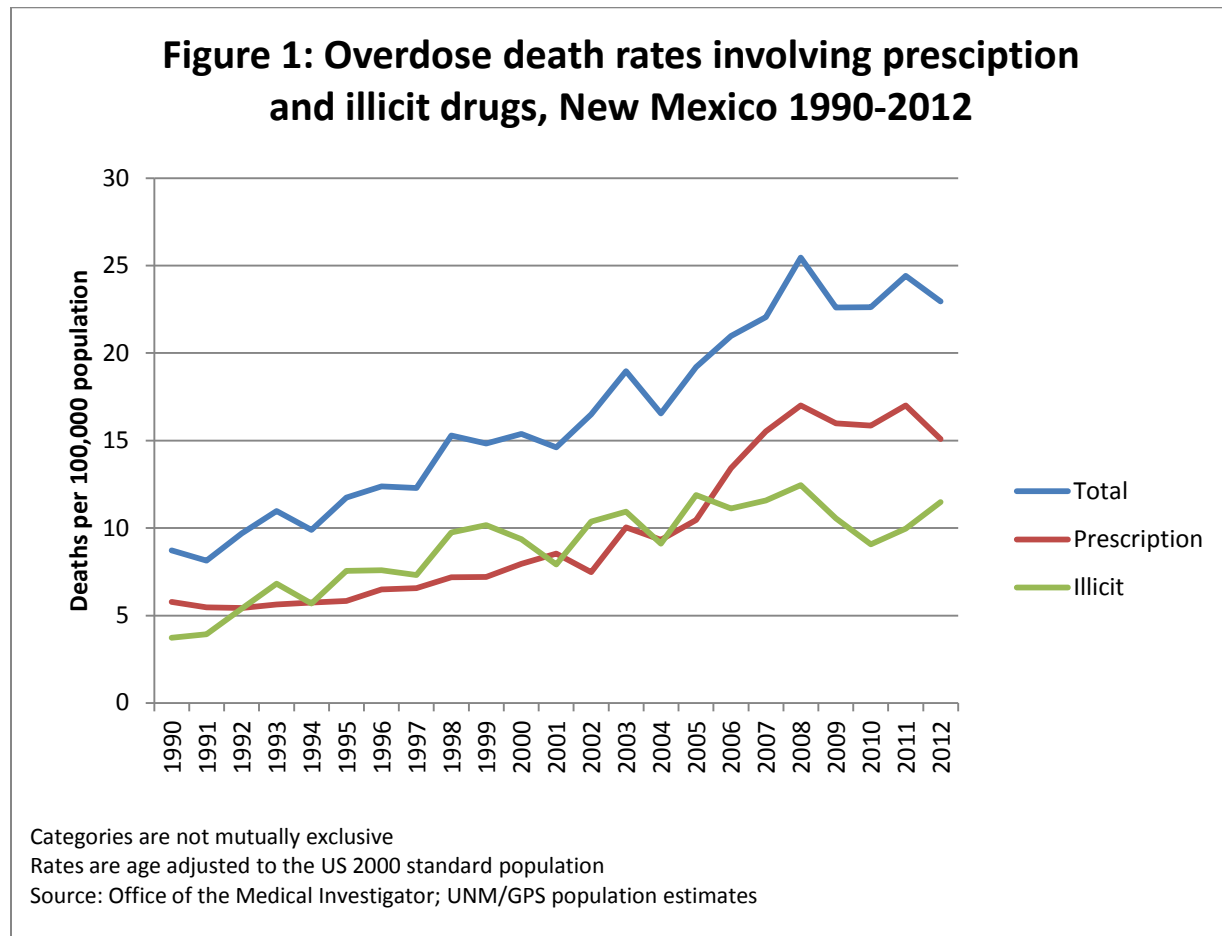


Table of Contents

Introduction	2
Methods.....	3
Results.....	4
Demographics	5
Opioids	5
Benzodiazepines	6
Stimulants	7
Trends over time.....	8
Opioids	8
Benzodiazepines	9
Stimulants	10
Geography.....	11
Opioids	11
Benzodiazepines	13
Stimulants	15
Prescribing patterns.....	17
High dose	19
Opioids plus benzodiazepines.....	19
Opioids, Benzodiazepines and Carisoprodol.....	20
Multiple practitioners	21
Summary	22

Introduction

Drug overdose death has become the leading cause of injury death in New Mexico and nationally over the past decade (New Mexico Substance Abuse Epidemiological Profile, 2013). New Mexico had the second-highest drug overdose death rate, after West Virginia, in 2010 (CDC Wonder). In the period from 2008-2012, there were an average of 483 drug overdose deaths in New Mexico each year, more than three times as many as there were in 1990-1994. Overdose deaths involving prescription drugs averaged 325 per year in 2008-2012 in New Mexico, compared to an average of 211 deaths per year involving illicit drugs (these two categories are not mutually exclusive). The number of overdose deaths involving prescription drugs exceeded the number involving illicit drugs in 2006, and now outnumber illicit drug overdose deaths by 60% (Figure 1).



In response to the increase in prescription drug overdose, the New Mexico Prescription Monitoring Program (PMP) was established in 2005. The PMP is operated by the New Mexico Board of Pharmacy

under the board's authority to regulate pharmacies and has been in place since July 2005. All controlled substance prescriptions filled by pharmacies are required to be reported to the PMP within seven days. The information collected by the PMP is similar to the information on a prescription label, and identify the prescriber, the patient, the pharmacy, the drug and details of the prescription such as quantity and number of days of supply.

More than 3 million prescriptions for controlled substances are reported to the NM PMP each year. Controlled substances are a special class of prescription drugs that are considered substantially more dangerous than other prescription drugs. Controlled substances were involved in 88% of the drug overdose deaths that involved prescription drugs in 2009-2013 in New Mexico.

Methods

PMP data for 2006-2013 were analyzed for this report. The data represent prescriptions filled (including refills) by patients in that period. Prescriptions written by veterinarians are excluded. Population estimates used for rates are from the Geospatial and Population Studies (GPS) program at the University of New Mexico.

There are a number of factors that should be taken into consideration when reviewing information from the PMP:

- Federal pharmacies (Military, Veterans Administration and Indian Health Service) cannot be required to report to the state system. However, some have begun reporting on a voluntary basis in the last year or two. In some counties Federal pharmacies account for a significant fraction of the prescriptions dispensed, and their addition may impact the apparent trends over time.
- Age and gender are captured by the PMP, but race/ethnicity is not.
- PMP data does not contain information about the diagnosis underlying the prescription. Prescriptions for cancer or hospice care cannot be excluded or analyzed separately.
- The PMP tracks prescriptions filled, not consumed. For example, a patient may fill a 30 day prescription for an opioid pain reliever but only use 3 days of medication.

The main classes of drugs analyzed in this report are:

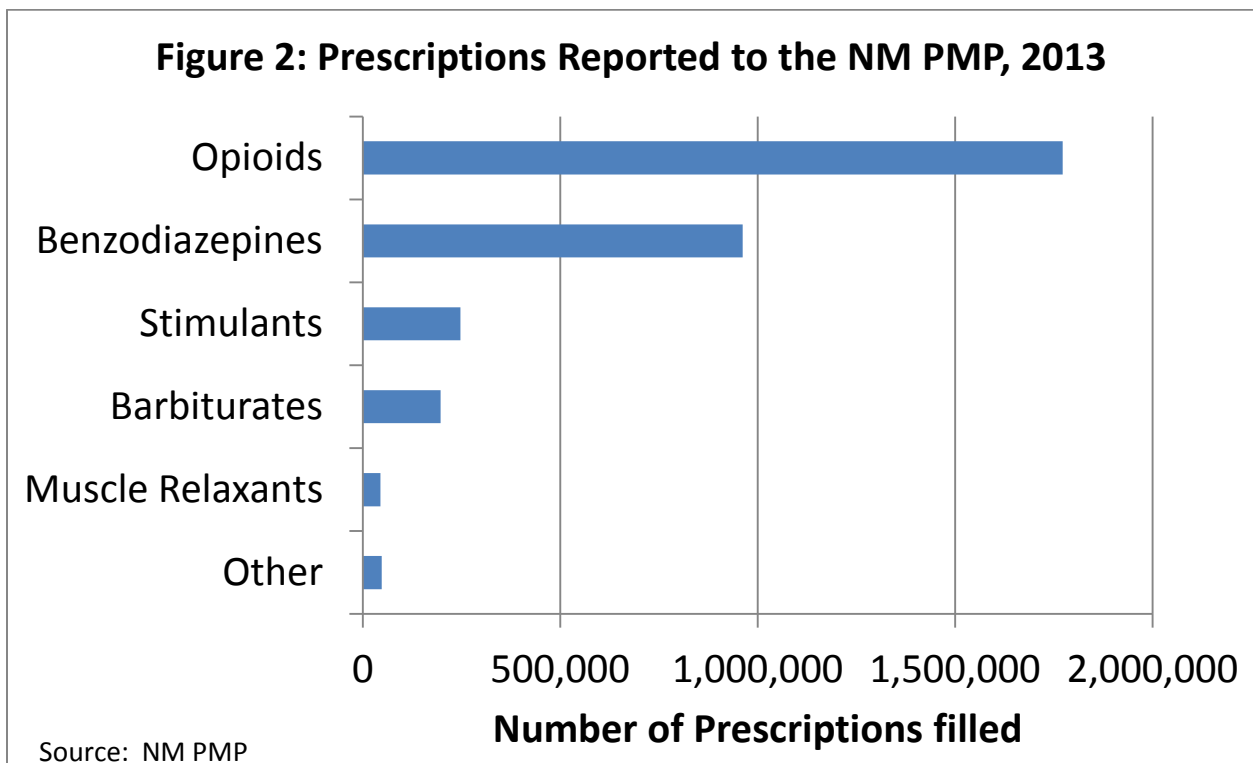
- Opioids, which are powerful pain relievers. Opioids have a significant risk of causing overdose death. Examples are morphine, oxycodone and hydrocodone. Because opioids vary widely in strength, a factor is applied to each opioid prescription to compute the morphine milligram equivalent (MME) quantity of that prescription. This allows computing a measure of the total amount of opioids dispensed taking into account the different strengths of the drugs.
- Benzodiazepines, which are anti-anxiety drugs. Benzodiazepines are frequently involved in overdose deaths, but they are very rarely the only drug involved. In these data, the

benzodiazepine-like drugs, which are insomnia drugs like Ambien, are included in the benzodiazepine category. Like opioids, benzodiazepines vary in strength, so a factor is applied to each prescription to compute the valium milligram equivalent (VME).

- Stimulants, which are often used to treat attention deficit hyperactivity disorder (ADHD) and related conditions. Total quantities are expressed in milligrams.

Results

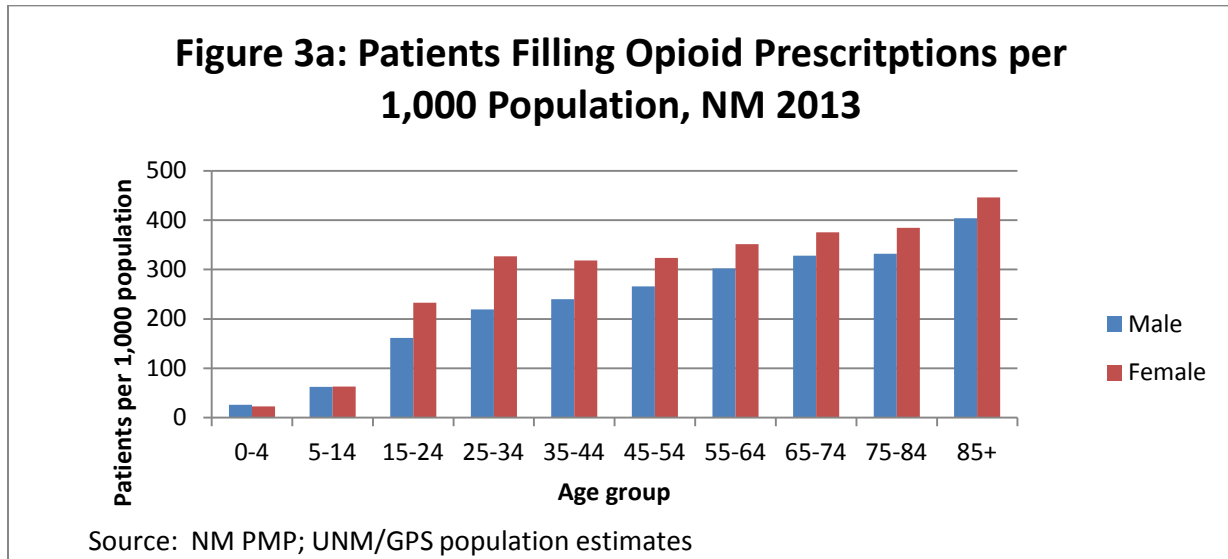
Opioids are by far the most commonly prescribed controlled substances. In 2013 opioids accounted for 54% of all controlled substance prescriptions filled, followed by benzodiazepines at 29% and stimulants at 8% (Figure 2). The only muscle relaxant on the controlled substance list is Carisoprodol (Soma®).



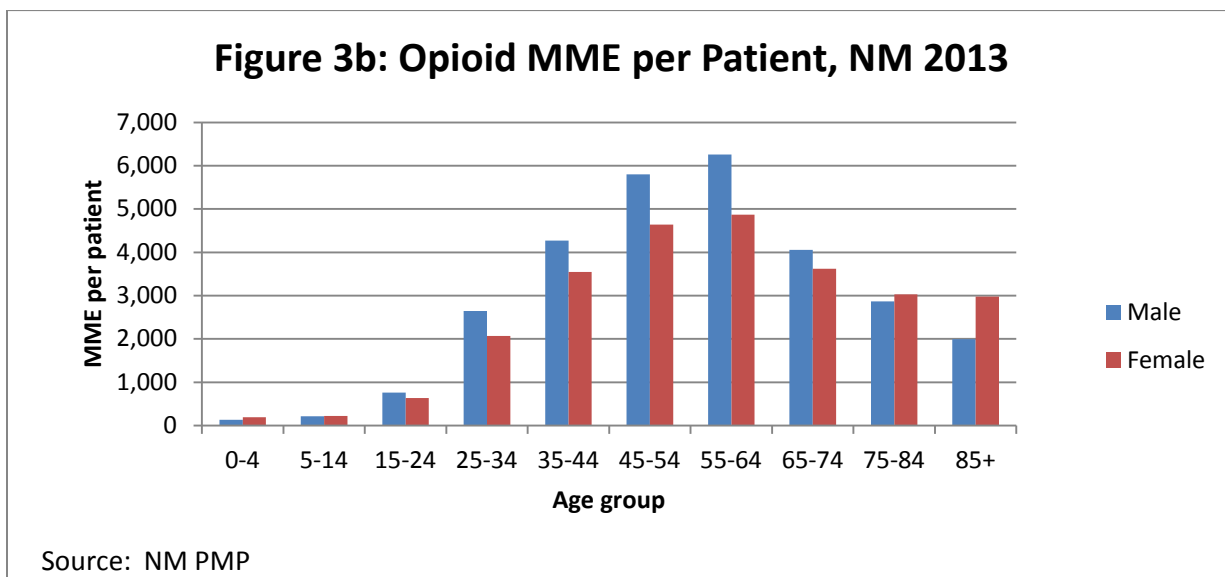
Note: These are number of prescriptions filled, not numbers of patients. Patients may receive multiple prescriptions in a year.

Demographics

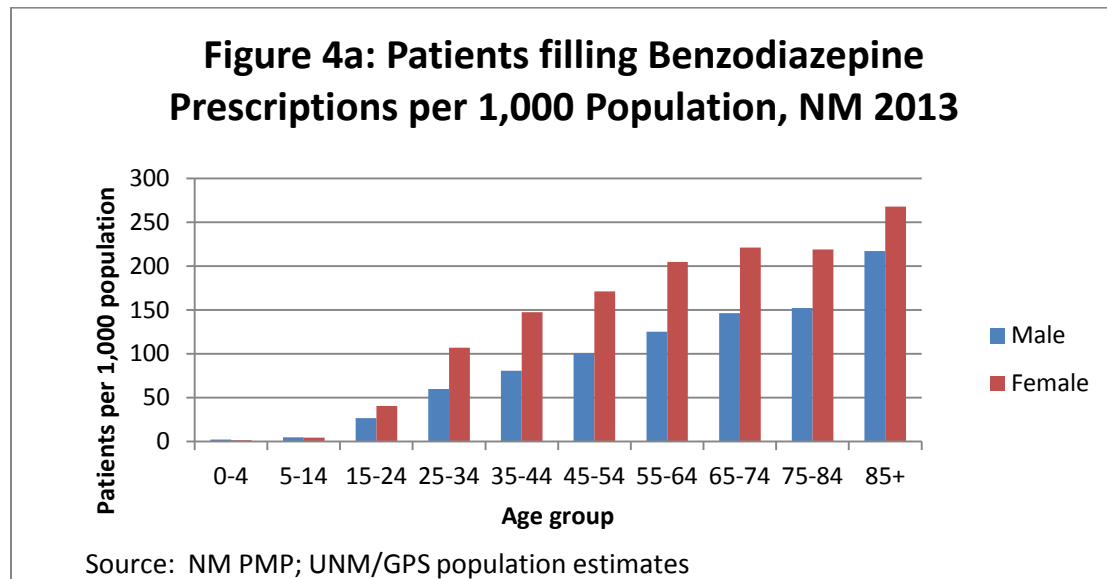
Opioids



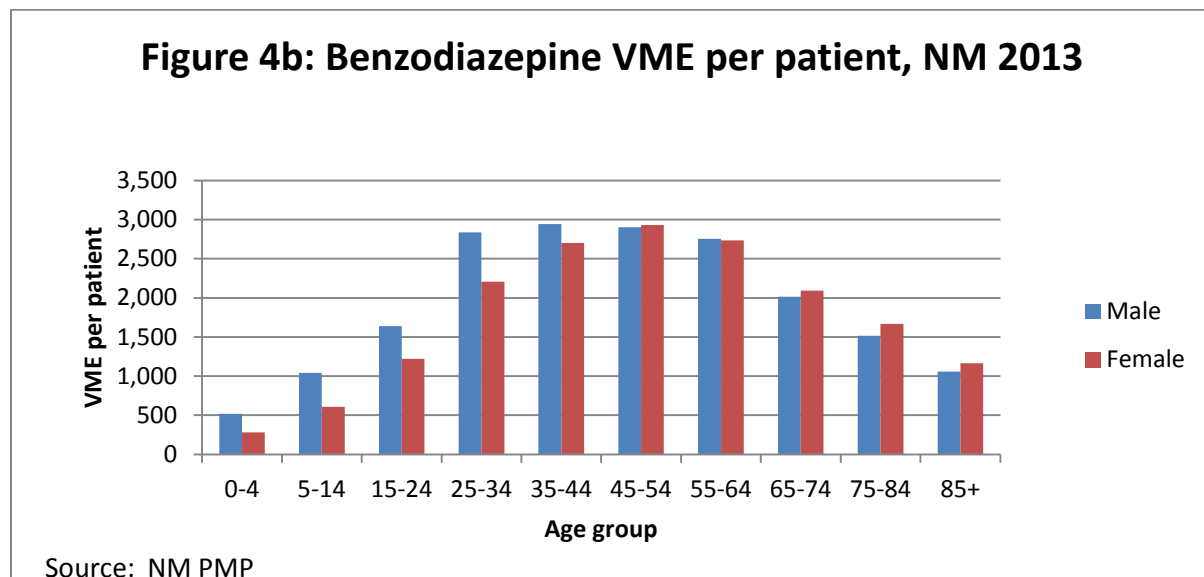
New Mexicans were more likely to fill opioid prescriptions as they aged (Figure 3a). Women were slightly more likely to fill opioid prescriptions than men. However, the amount of MME consumed is more likely to increase a person's risk of drug overdose and men fill prescriptions with higher MME than women, especially between 25-74 years of age (Figure 3b). This suggests that, although women filled more prescriptions, men filled stronger prescriptions. Middle aged patients, especially ages 55-64, are more likely to be filling high MME prescriptions (Figure 3b).



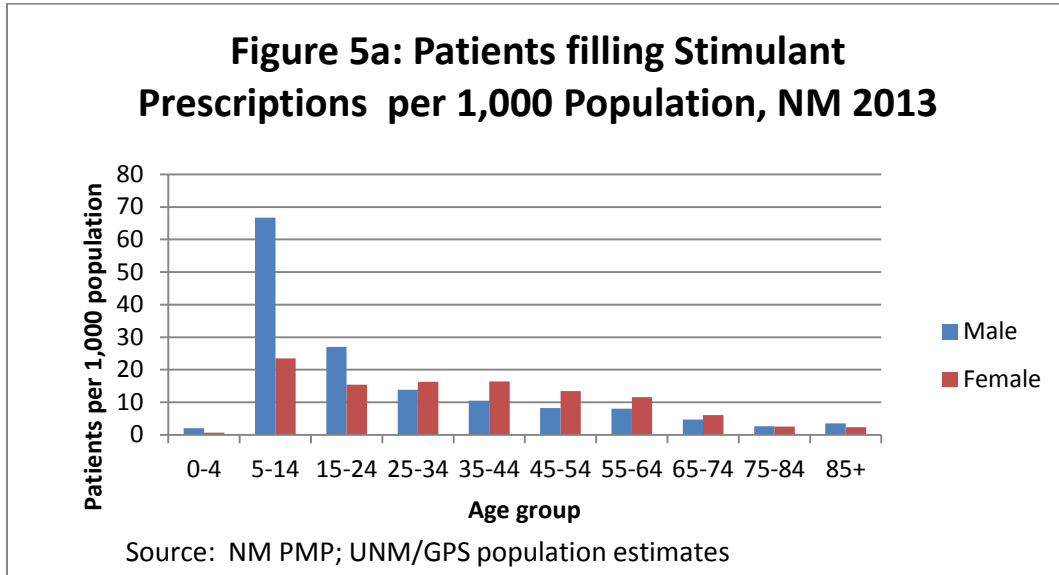
Benzodiazepines



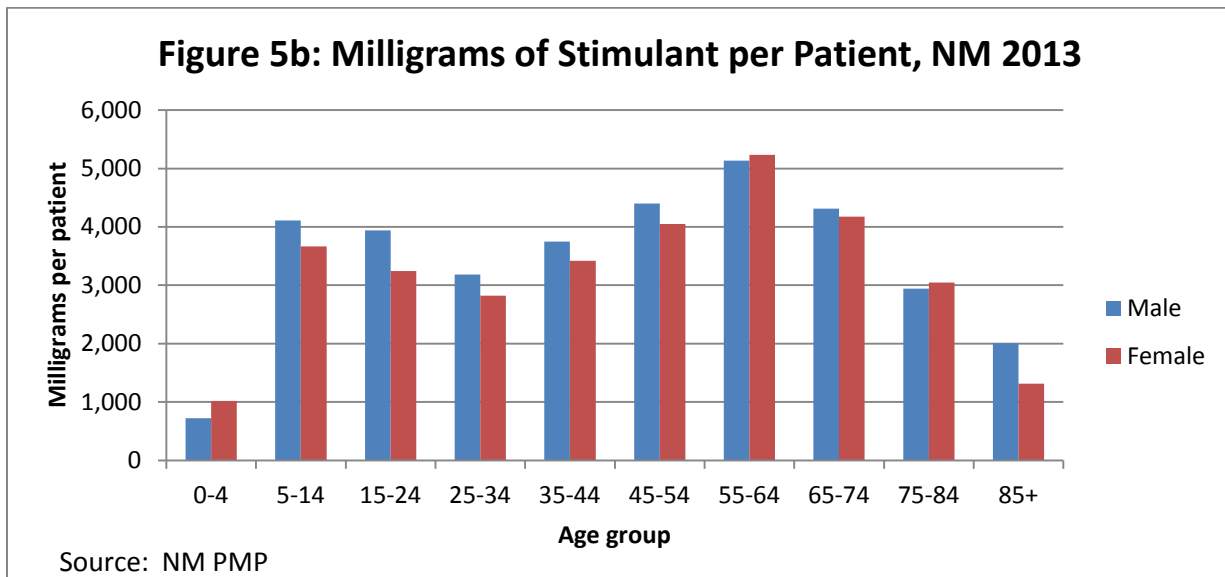
Older New Mexicans are more likely to fill benzodiazepine prescriptions than younger New Mexicans (Figure 4a). Women in all age groups are more likely to fill benzodiazepine prescriptions. Women in New Mexico are more likely to have a personal physician than men in New Mexico (NM Behavioral Risk Factor Surveillance System) and this may partially explain why women are more likely to fill prescriptions for opioids or benzodiazepines than men. VME per patient peaks at ages 45-54 years and men under the age of 45 are more likely to be receiving stronger benzodiazepine prescriptions than women (Figure 4b).



Stimulants



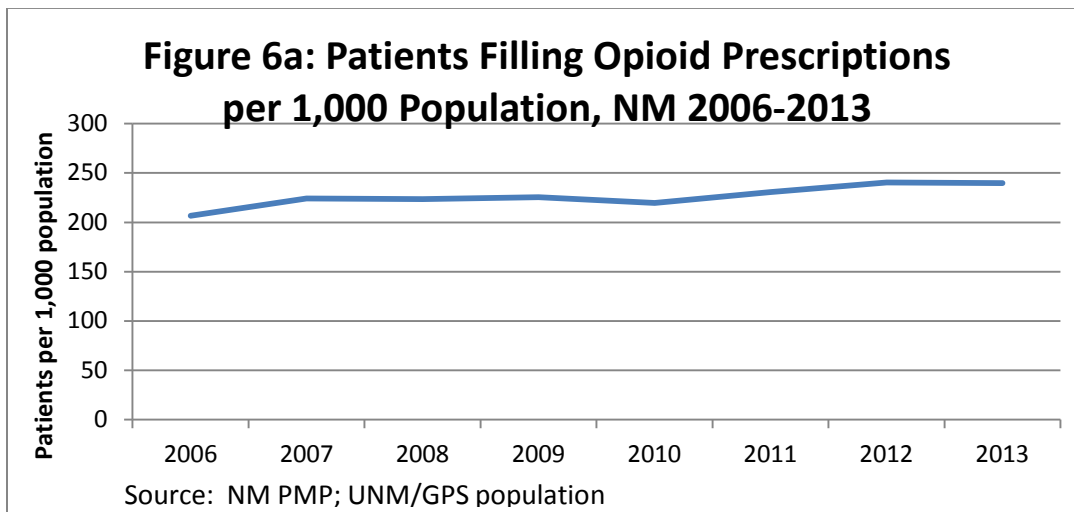
Stimulants, such as Adderall® and Ritalin®, are more likely to be prescribed to youth aged 5-14 years (Figure 5a). Among youth 5-14 and 15-24 years of age, boys and young men are more likely to fill a prescription for a stimulant, particularly among the 5-14 age group. This is not surprising as boys are more likely than girls to be diagnosed with conditions that are commonly treated with stimulants, such as attention-deficit/hyperactivity disorder (ADHD). Adults aged 55-64 years are dispensed the most milligrams per patient, although the amount of stimulant prescribed per patient is fairly similar between the ages of 5 and 84 years of age.



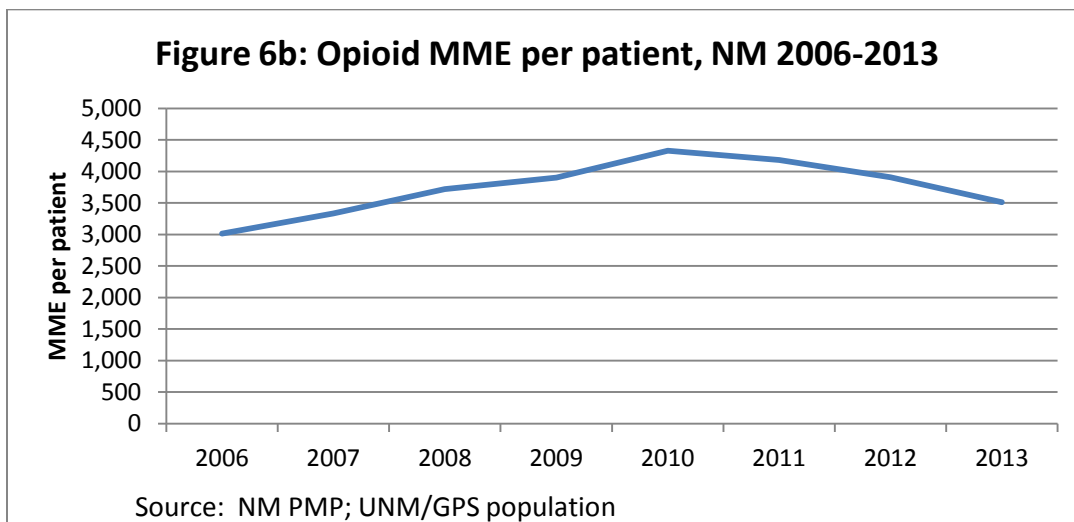
Trends over time

Trends in filled prescriptions are described in this report using two methods. The first graph shows the number of patients filling prescriptions per 100,000 population in each year. The second graph for each prescription category is prescription strength per patient, measured as the total amount of prescription filled in a year, over time.

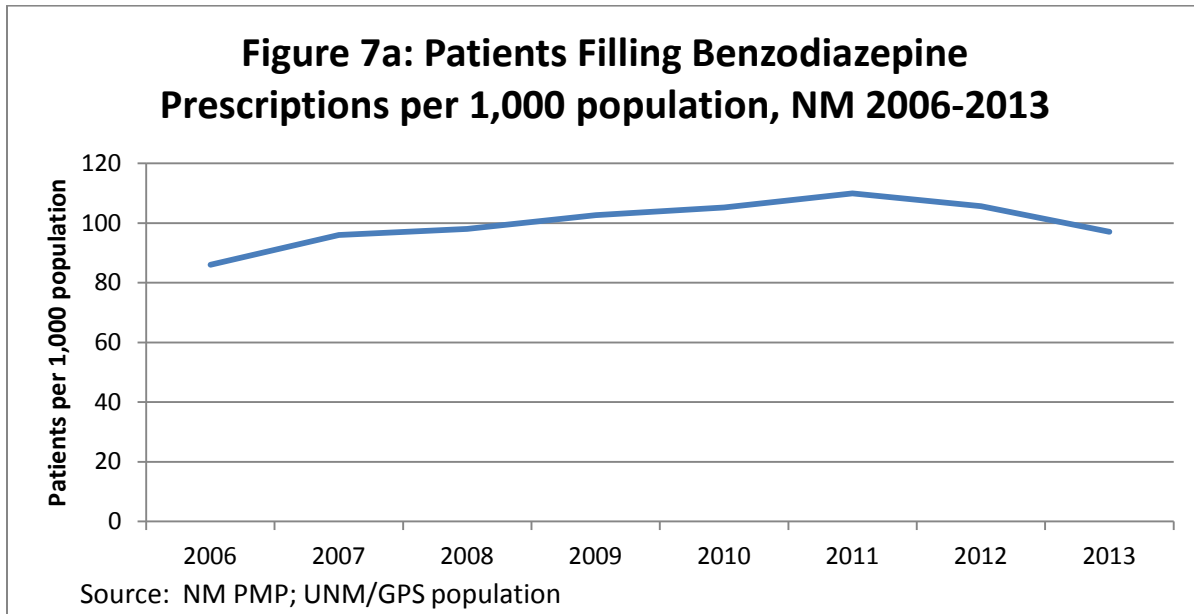
Opioids



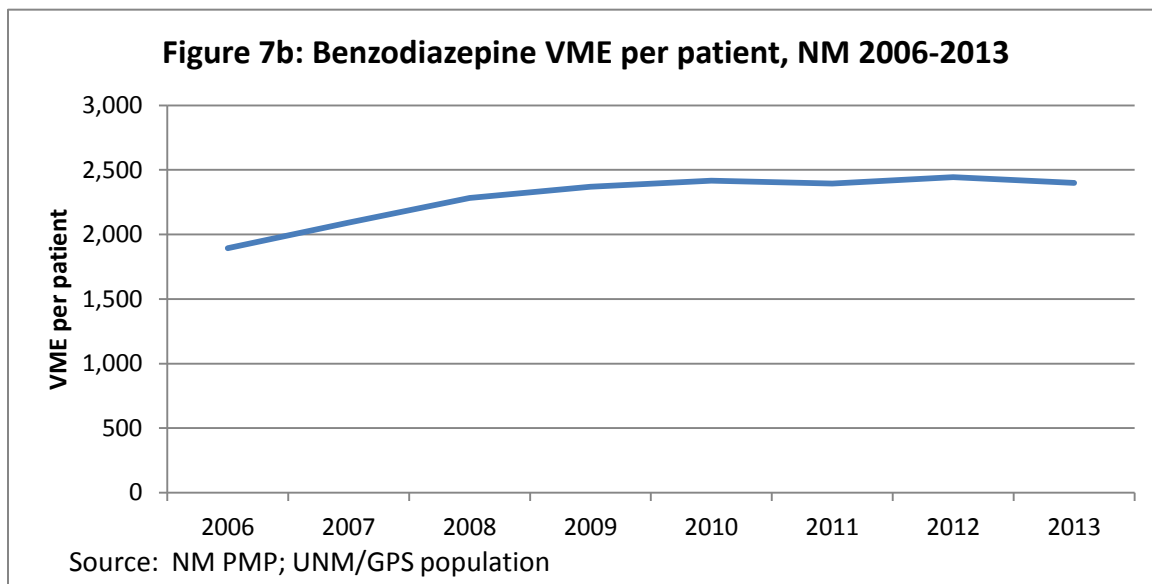
The number of patients filling opioid prescriptions per population increased 16% in the 2006-2013 time period (Figure 6a). The annual amount of opioid per prescription increased 44% between 2006 and 2010. However, the amount of opioid per patient decreased 19% after 2010 (Figure 6b). This suggests that prescribing practices are changing over time, reducing the amount of opioids prescribed to patients.



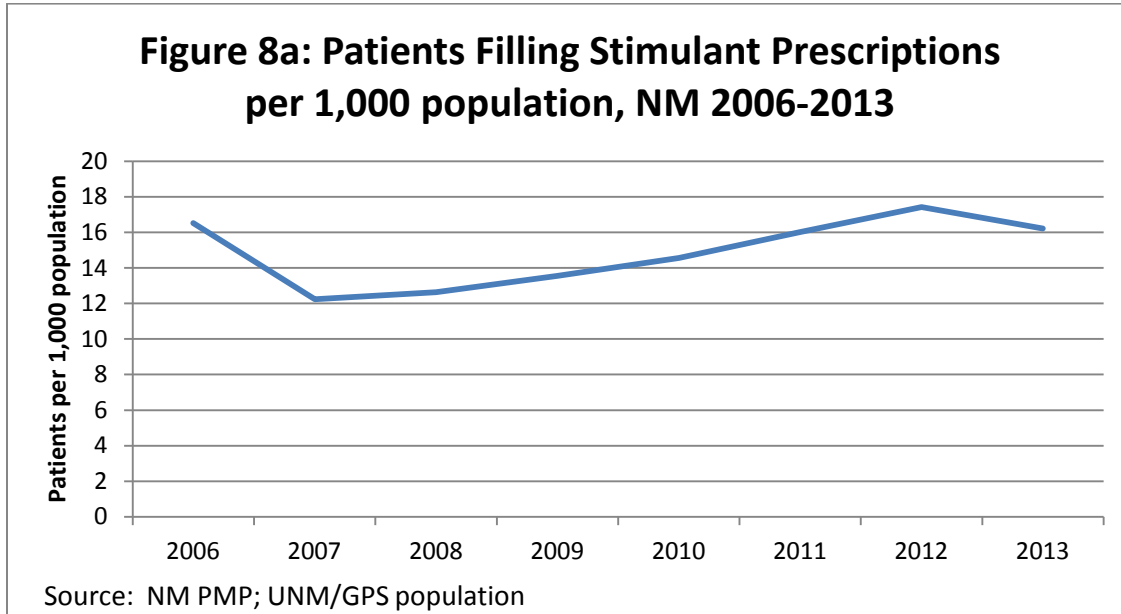
Benzodiazepines



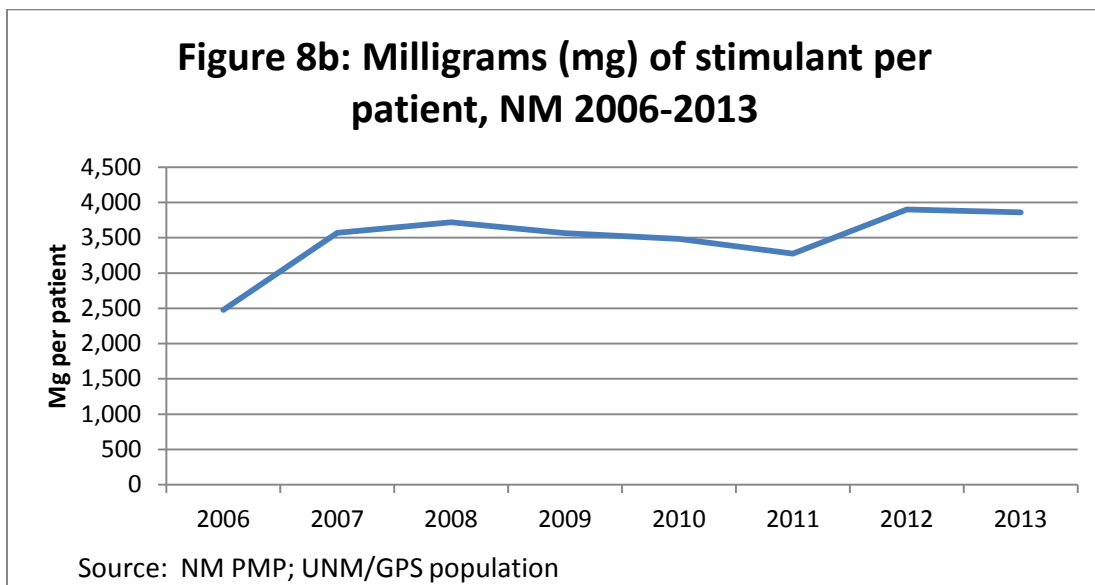
The rate of patients filling benzodiazepine prescriptions remained stable over the time period assessed, increasing by 13% (Figure 7a). Annual VME per patient increased from 2006 through 2013 (27% increase) but may have plateaued since 2010 (Figure 7b). Although benzodiazepines are commonly abused, their use alone does not pose as large of a risk for overdose death as opioids. However, in combination with opioids, benzodiazepines can be very dangerous



Stimulants



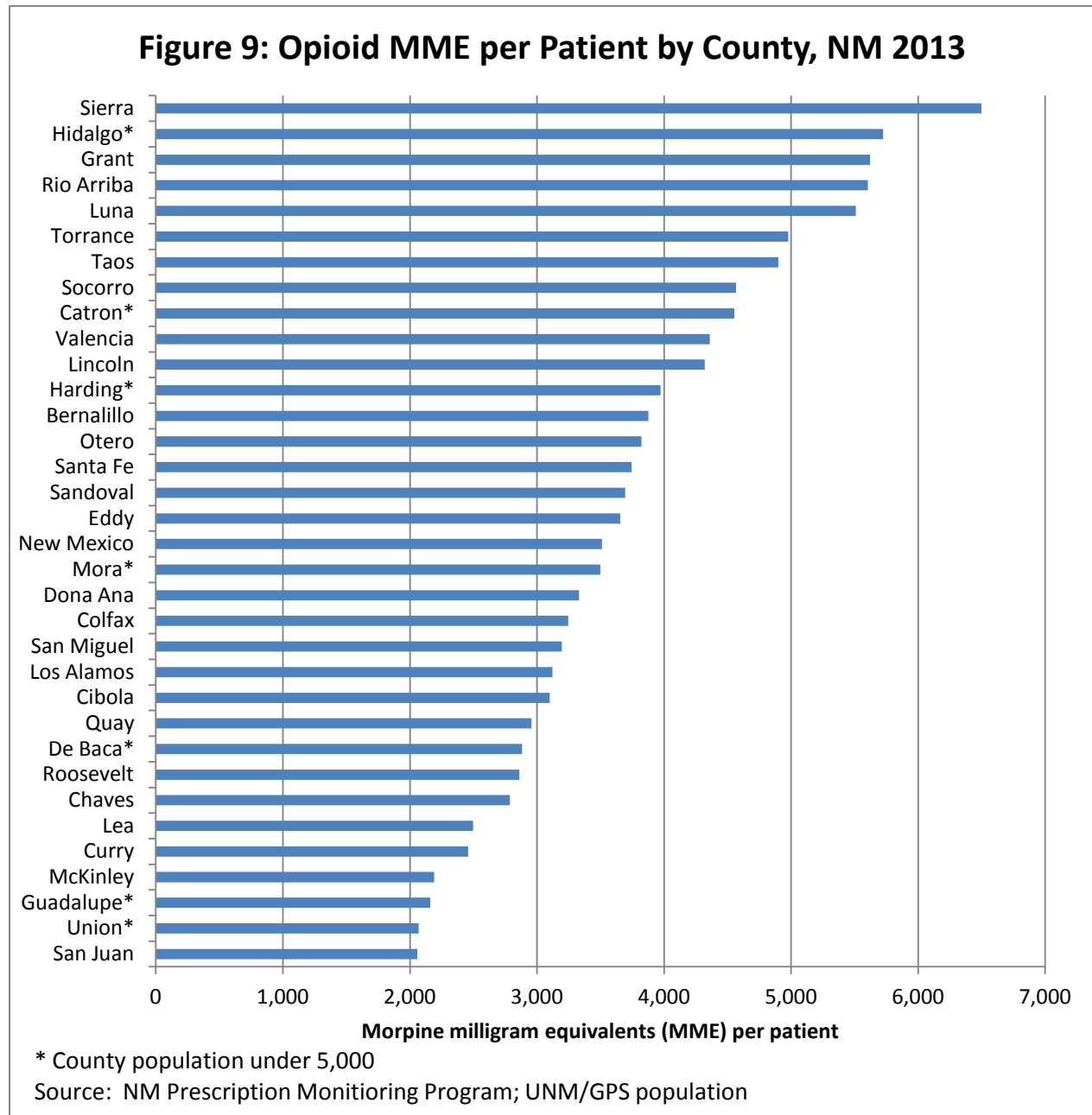
Rates of stimulant use are not as stable as rates of opioids and benzodiazepines because of smaller numbers of stimulant prescriptions. Stimulant use remained steady over the time period assessed, from 17 patients per 100,000 populations to 16 patients per 100,000 population (Figure 8a). The amount of stimulant prescribed per patient increased 56% from 2006 to 2013 (Figure 8b). Unlike opioids and benzodiazepines, stimulants are not standardized. The trend in milligrams may be influenced by changes in the mix of drugs in use.



Geography

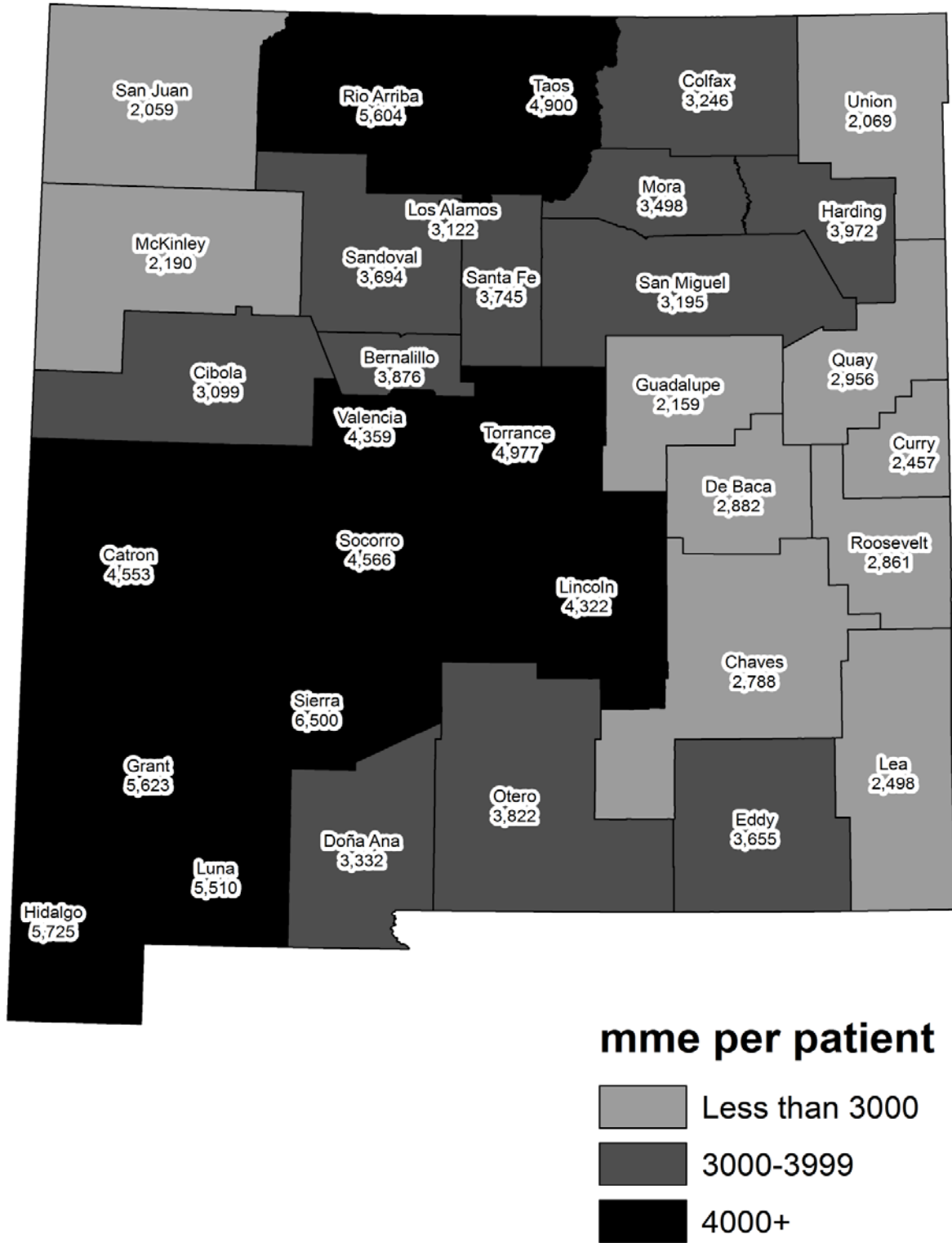
Annual prescription strength by county is presented by both in descending order as well as a map to assess geographic disparities.

Opioids



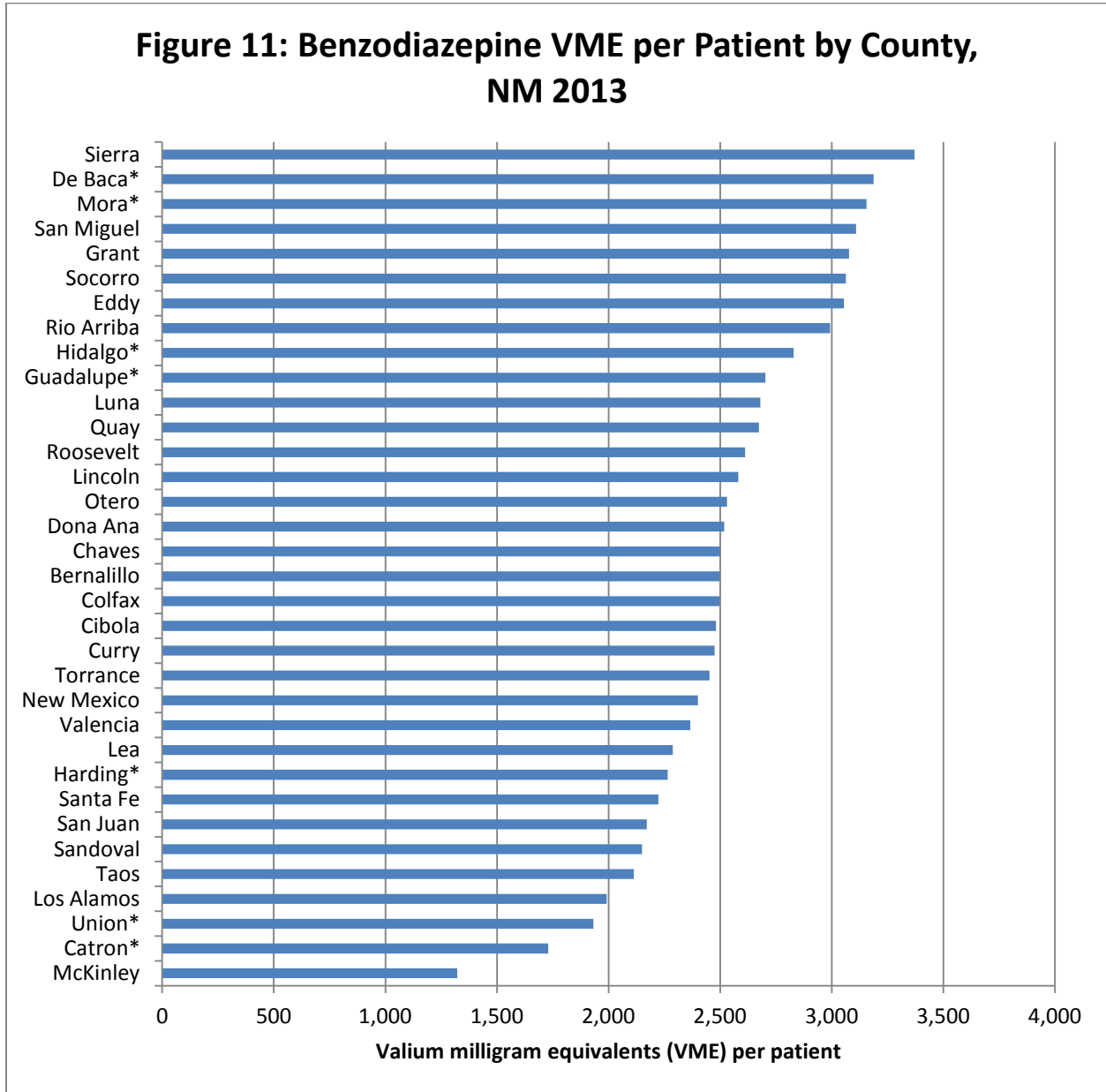
Sierra County has the highest MME per patient in the state. Rio Arriba County, which has the highest drug overdose mortality rate in the state ranks fourth after Sierra, Hidalgo, and Grant Counties (Figures 9 & 10).

Figure 10: Opioid morphine milligram equivalents per patient by county, NM 2013



Source: NM Prescription Monitoring Program

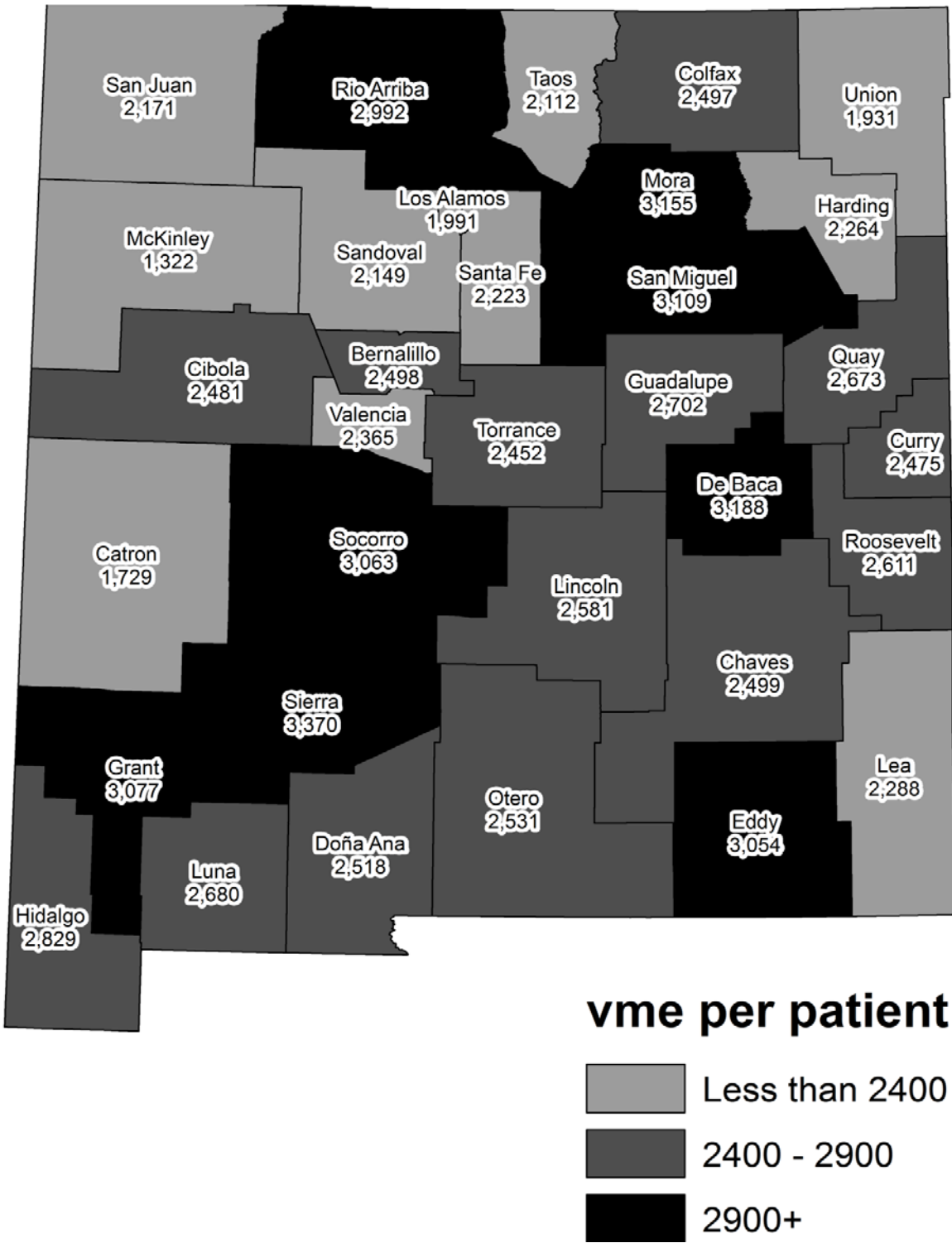
Benzodiazepines



Sierra County also has the highest VME per patient in the state. McKinley County has the lowest VME per patient (Figure 11 & 12). The Southwest portion of the state shows a pattern of strong prescriptions per patient for both opioids and benzodiazepines.

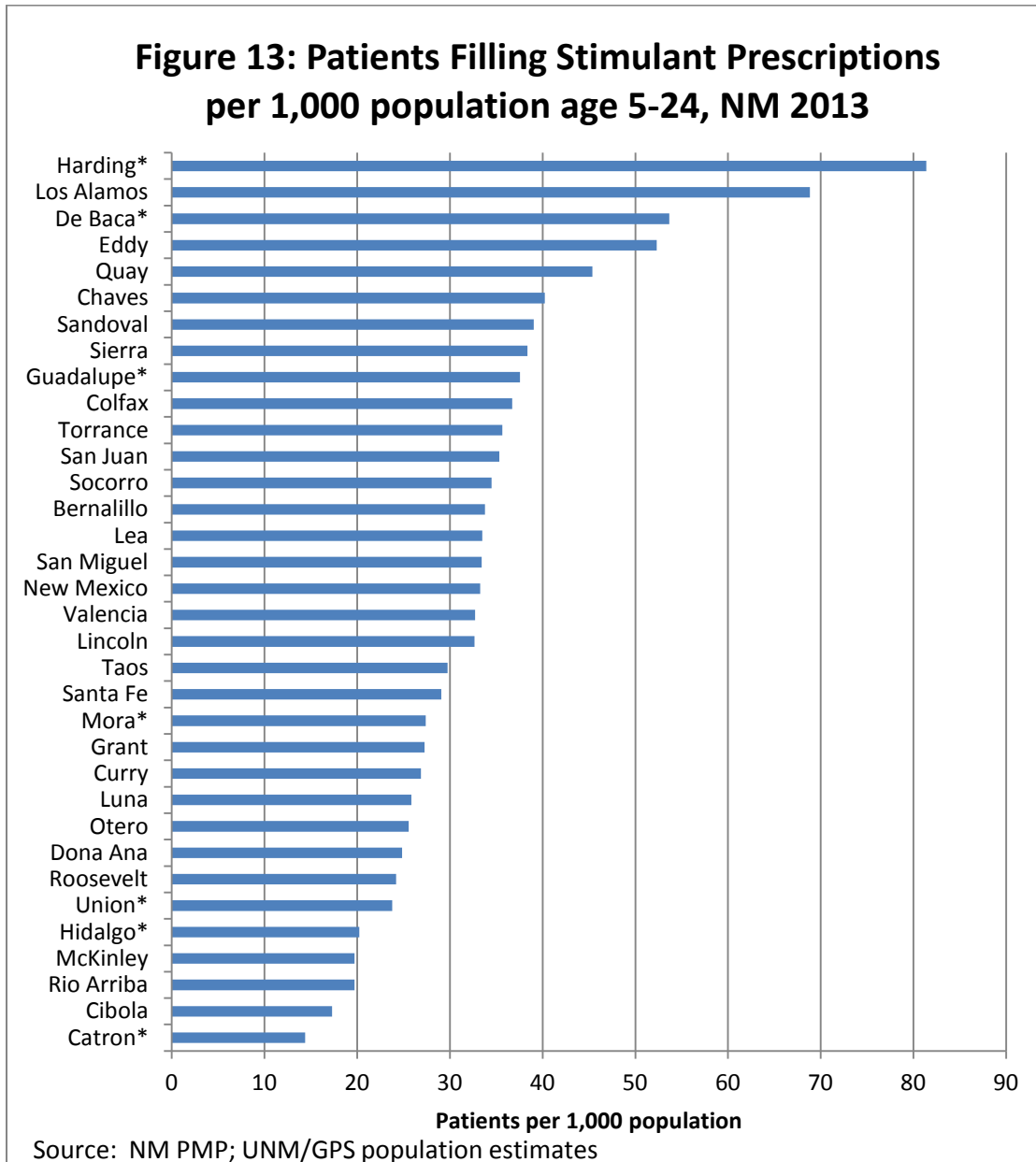
Figure 12: Benzodiazepine valium milligram equivalents per patient by county,

NM 2013



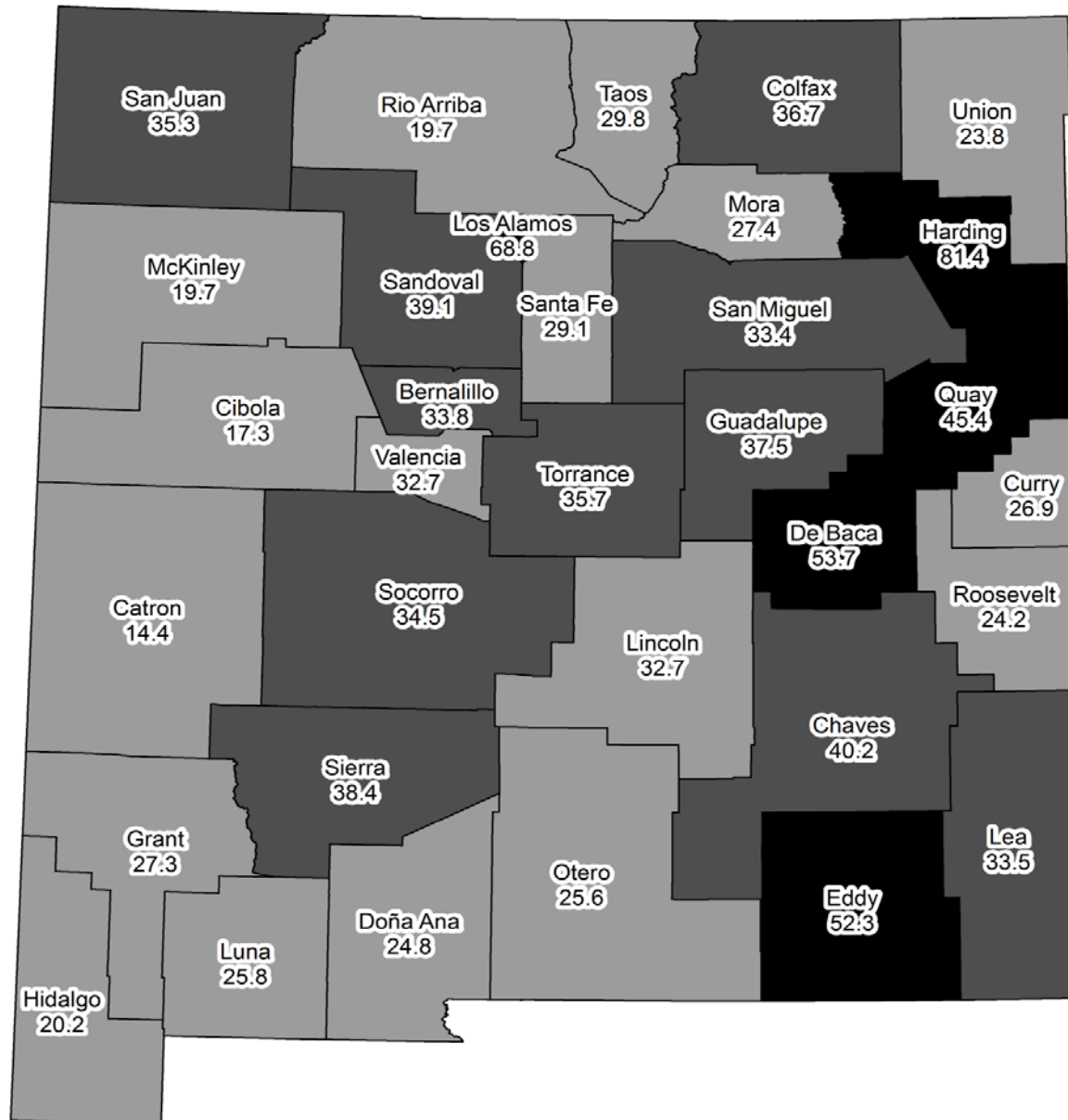
Source: NM Prescription Monitoring Program

Stimulants

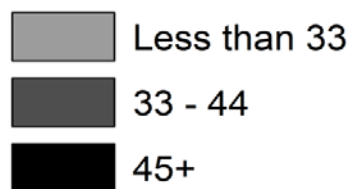


The rates of stimulant prescriptions per population by county follow a very different pattern than opioid and benzodiazepine prescriptions. Harding County had the highest rate, followed by Los Alamos County, which is the highest income county in the state. Other than Los Alamos, counties with high rates of stimulant prescription are largely congregated in the Eastern portion of the state (Figures 13 & 14).

**Figure 14: Patients age 5-24 Filling Stimulant Prescriptions per 1,000 population
by county, NM 2013**



patients per 1000 pop.

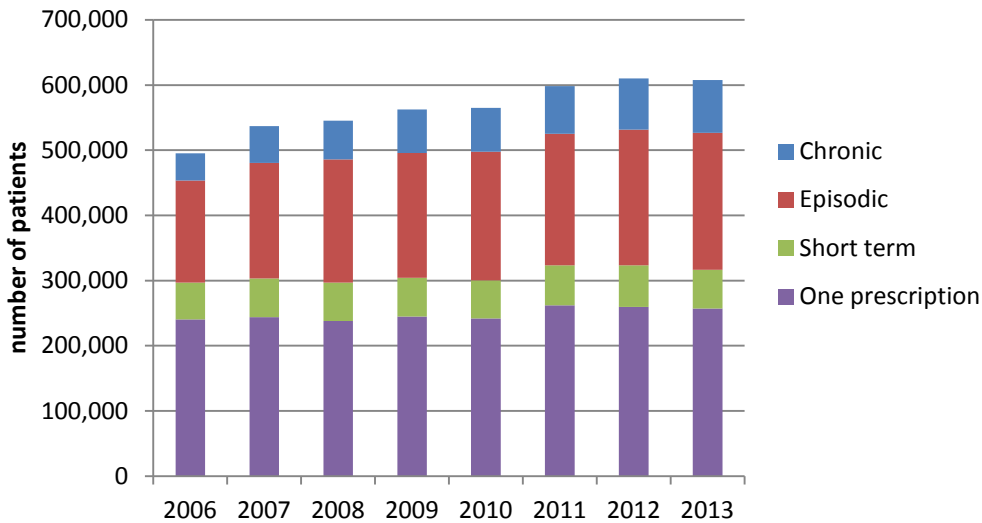


Source: NM Prescription Monitoring Program; UNM/GPS population

Prescribing patterns

There are several prescribing practices that have been associated with increased risk of overdose and are targeted by prevention efforts. These include chronic use of opioids, high dosage opioid prescriptions, and certain drug combinations (opioids plus benzodiazepines; and opioids, benzodiazepines and carisoprodol). Also at high risk for overdose are patients who receive prescriptions from multiple providers or fill prescription at multiple pharmacies in a small period of time (“doctor shopping”). The cut-offs for these high risk behaviors are still under development, but for the purposes of this report, chronic use of opioids is defined as over 90 day prescriptions and that prescriptions were filled in 90% or more of the months in a year (10.8 months of the year), and high dosage of opioid was defined as 120 MME/day per patient. Co-prescription of opioids and benzodiazepines (percent of opioid patients receiving any benzodiazepine prescription, and percent of opioid patients receiving a benzodiazepine prescription that was over 90 days) and co-prescription of opioids, benzodiazepines and carisoprodol (called the “trio” here for brevity) were assessed. Prescription of the “trio” was assessed as percent of opioid patients who received any prescriptions for benzodiazepines and carisoprodol in the same month. “Doctor shopping” was defined as receiving prescriptions from five or more providers or filling prescriptions from five or more pharmacies.

Figure 15: Patients by consumption pattern and year, NM 2006-2013

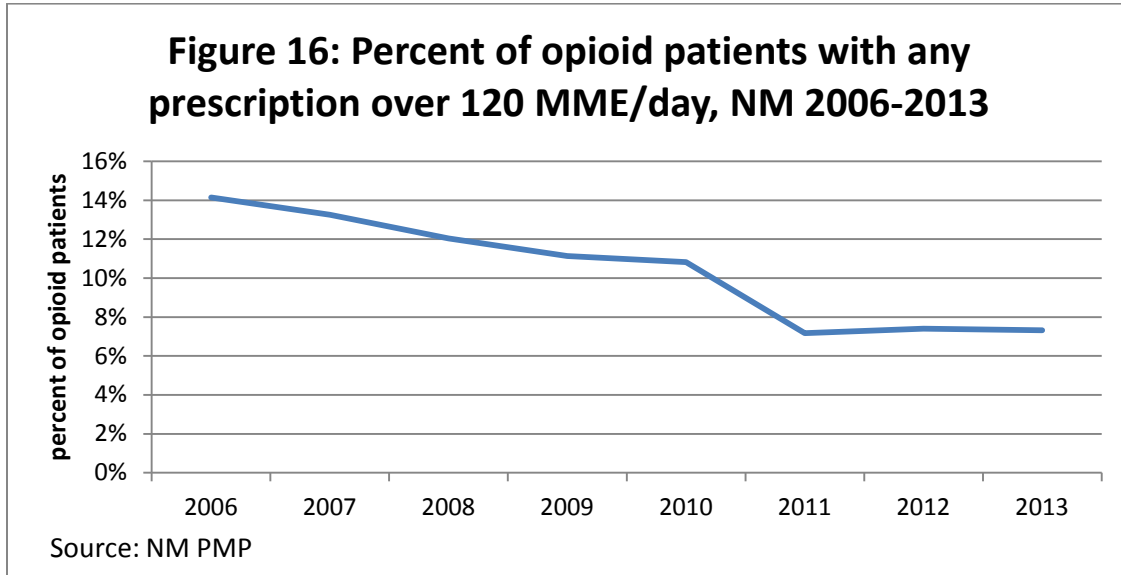


One prescription: Only one controlled substance prescription filled in the year
 Short term: More than one prescription filled, but less than 90 days use
 Episodic: 90+ days use, but prescriptions filled in fewer than 90% of the months
 Chronic: 90+ days use, prescriptions filled in 90% or more of months

Source: NM PMP

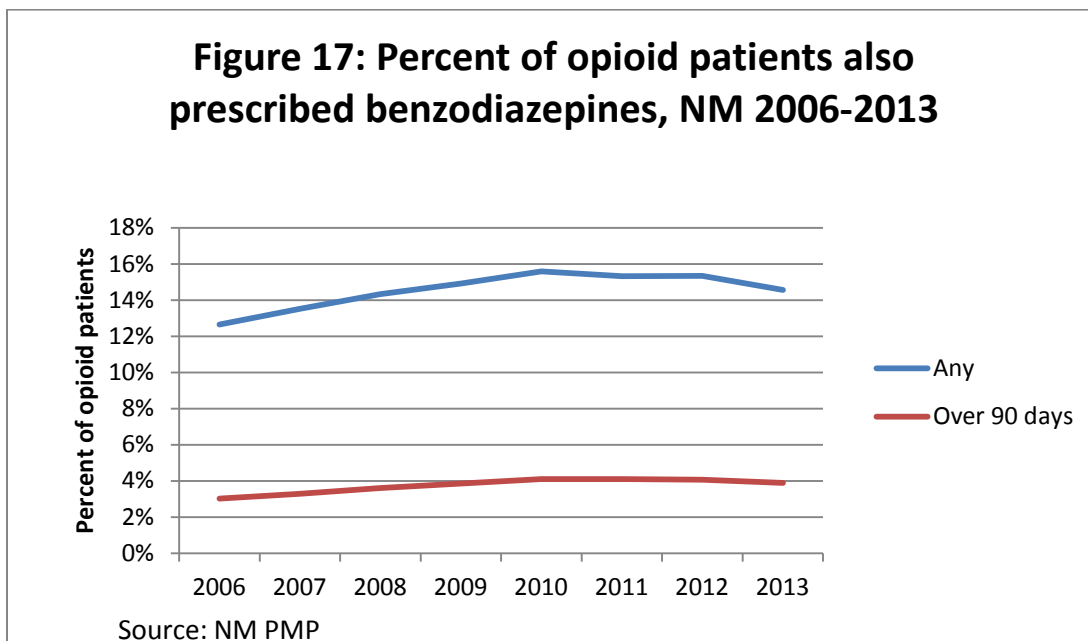
The number of patients categorized as chronic controlled substance users in New Mexico increased from 42,011 in 2006 to 80,849 in 2013 (Figure 15). In the same time period, patients filling one opioid prescription, patients with short term use (> 1 prescription, but < 90 days), and episodic use (90+ days use but prescriptions filled in < 90% of the months) were fairly stable over the time period. The percent of opioid patients who have filled a high dose of prescription opioids (120 MME/day) declined from 14.1% in 2006 to 7.3% in 2013 (Figure 16).

High dose



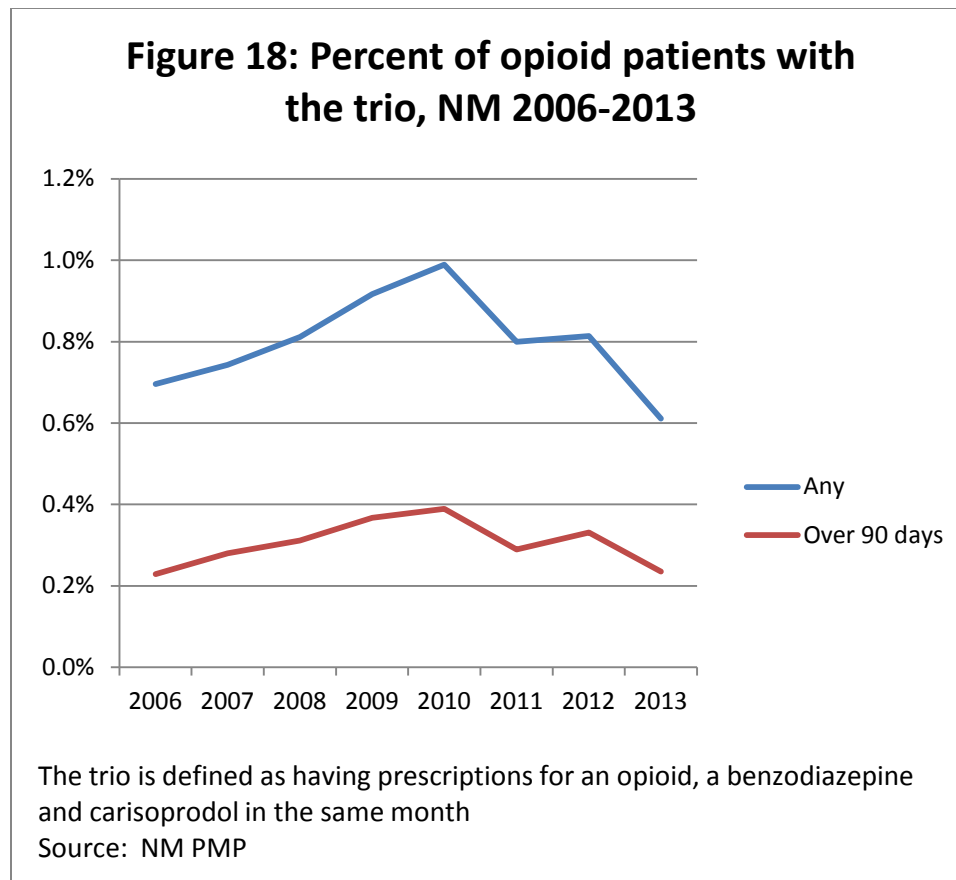
There has been a slight increase in the percent of opioid patients filling benzodiazepine prescriptions (Figure 17). In 2006, 12.7% of opioid patients filled any benzodiazepine prescription, whereas 14.6% did in 2013. The percent of opioid patients receiving over 90 days of benzodiazepines remained fairly steady over the time period, increasing from 3.0% to 3.9%.

Opioids plus benzodiazepines

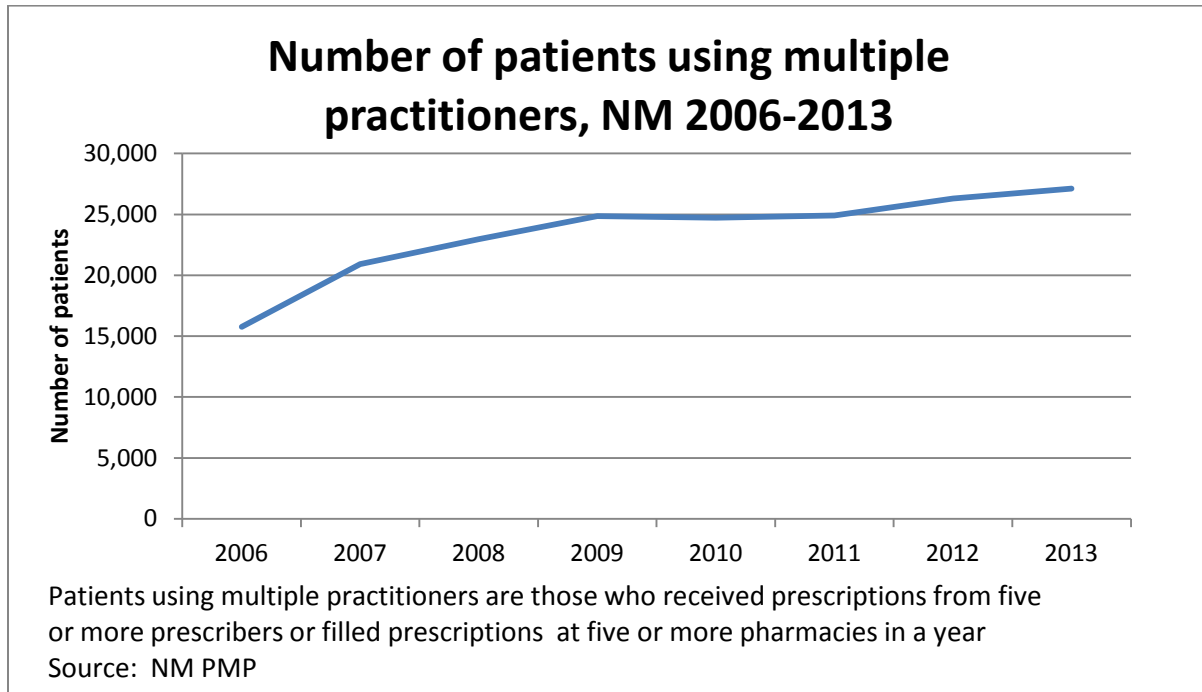


A small percent of opioid patients are filling prescription that would be categorized as a “trio”; at the peak in 2010, slightly less than 1% of opioid patients fit this description. “Trio” prescriptions increased sharply from 2006 to 2010 (Figure 18). Their use decreased after 2010. Any “trio” decreased from slightly less than 1% in 2010 to 0.6% in 2013. “Trio” prescriptions over 90 days also increased until 2010, and declined afterwards, peaking at approximately 0.4% of opioid patients.

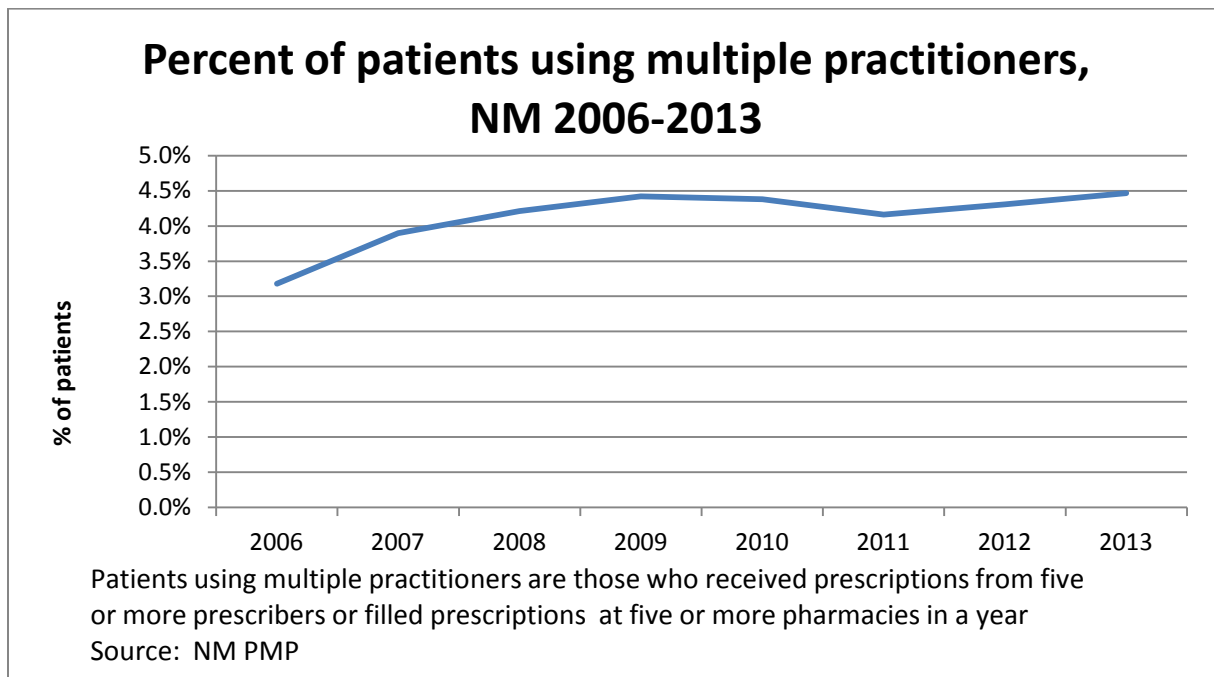
Opioids, Benzodiazepines and Carisoprodol



Multiple practitioners



The number of patients using five or more prescribers or five or more pharmacies for controlled substances rose in recent years, but overall was relatively stable between 4% and 4.5% of all patients since 2008. This practice (sometimes called “doctor shopping”) is more common among patients who are using prescription drugs non-medically.



Summary

- Drug overdose is the leading cause of injury death in New Mexico. The increase in overdose death over the past decade has been driven by an increase in prescription drug overdose death.
- Opioids are the most common class of controlled substances filled in New Mexico. Opioids and benzodiazepines account for 83% of controlled substance fills.
- The prevalence of opioid prescriptions rises with age, and women fill more opioid prescriptions than men. The highest doses are in ages 45-64, and men have higher doses than women.
- The rate of benzodiazepine prescriptions also rises with age and women are also more likely to fill benzodiazepine prescriptions.
- Stimulants are most commonly used among those age 5-24, and particularly 5-14. Males under 25 are more likely to use stimulants than females, a pattern which reverses over age 25.
- The number of patients filling opioid prescriptions increased by 16% between 2006 and 2013. The total amount of opioids per patient decreased by 19% from 2010 to 2013.
- The rate of patients filling benzodiazepine prescriptions and the quantity of benzodiazepines per patient have been relatively stable over the period, but the number of benzodiazepine patients per 1,000 population decreased slightly since 2010.
- While not as stable as the rates for opioid prescriptions because of smaller numbers, stimulant prescriptions and doses have remained fairly stable over the period.
- The southwestern quarter of New Mexico plus Taos and Rio Arriba counties have the highest rates of opioid morphine milligram equivalents per patient. Eastern and northwestern New Mexico tend to have the lowest rates.
- The geographic pattern for Benzodiazepines is less concentrated than that for opioids, but some of the same counties in the southwest and north have high rates of both opioid and benzodiazepine prescriptions.
- Stimulant prescriptions among those age 5-24 have a very different geographic pattern than opioids or benzodiazepines. Los Alamos County has one of the highest rates, as do counties in Eastern New Mexico.
- The number of patients using controlled substances grew by approximately 20% between 2006 and 2013. The fraction of all patients who are longer term (90 days or more) increased over the period.
- The fraction of users who have filled high-dose opioid prescriptions in a year declined by almost half from 2006 through 2013.
- The fraction of opioid patients who were also prescribed benzodiazepines in the same month peaked in 2010 and declined slightly through 2013.
- The fraction of opioid patients who also were prescribed benzodiazepines and carisoprodol in the same month also peaked in 2010 and declined sharply to 2013.
- The fraction of all patients who received prescriptions from five or more prescribers or filled prescriptions and five or more pharmacies in one year ranged between 4.0 and 4.5 percent of all patients from 2008 through 2013.