

INTRODUCTION

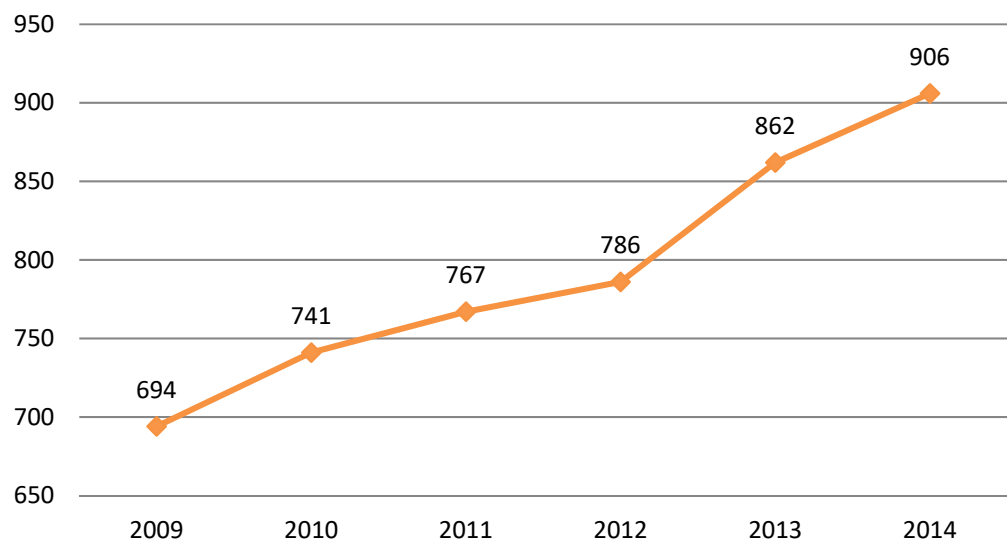
Currently, 1.9 million people are living with limb loss in the United States, with an average of 507 people continuing to lose a limb every day. This results in an estimated 185,000 amputations per year (1), and this number is expected to double by the year 2050 due to increasing rates of diabetes and vascular disease (1). Among those living with limb loss, the major causes of their amputations are vascular disease (54%) – including diabetes and peripheral arterial disease – trauma (45%) and cancer (less than 2%) (2). The most common causes of pediatric amputations, however, are lawn mower accidents (3). Non-whites comprise about 42% of the limb loss population in the U.S. (1). In 2008, the diabetes related amputation rate among African Americans was nearly four times that of whites (4).

A total of 906 amputations were performed in New Mexico hospitals in 2014. These amputations were performed for a variety of reasons, including diabetes and peripheral arterial disease complications. The following information details the trends and most current rates of amputation and diabetes in New Mexico.

1. AMPUTATION TRENDS OVER TIME

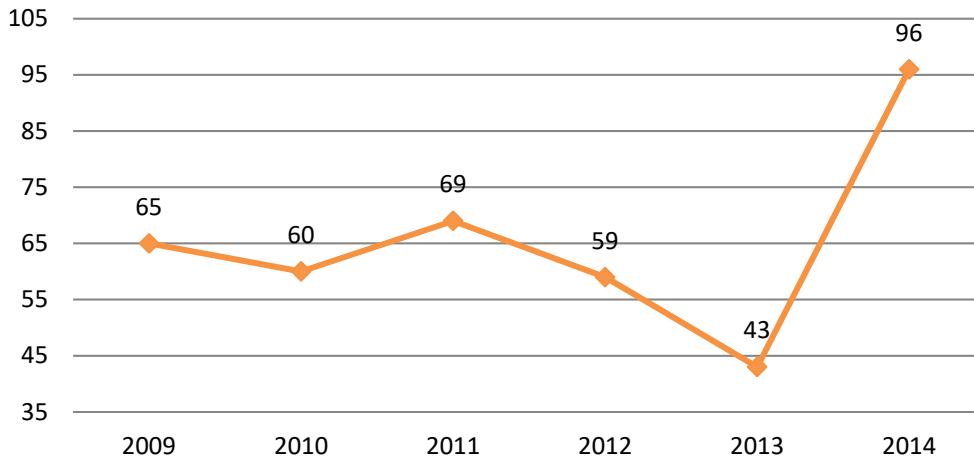
**1.1: Amputation Trends,
New Mexico (2009-2014)**

According to hospital discharge data, there was an overall 30.55% increase in total amputations performed in New Mexico from 2009-2014. A total of 4,756 amputations were performed in this time period. Amputations were at a low with 694 in 2009 and were at their highest at 906 in 2014. (See Graph 1.1)



Source: Healthcare Cost and Utilization Project HCUPnet database <http://hcupnet.ahrq.gov/>

1.2: Upper-Extremity Amputation Trends, New Mexico (2009-2014)

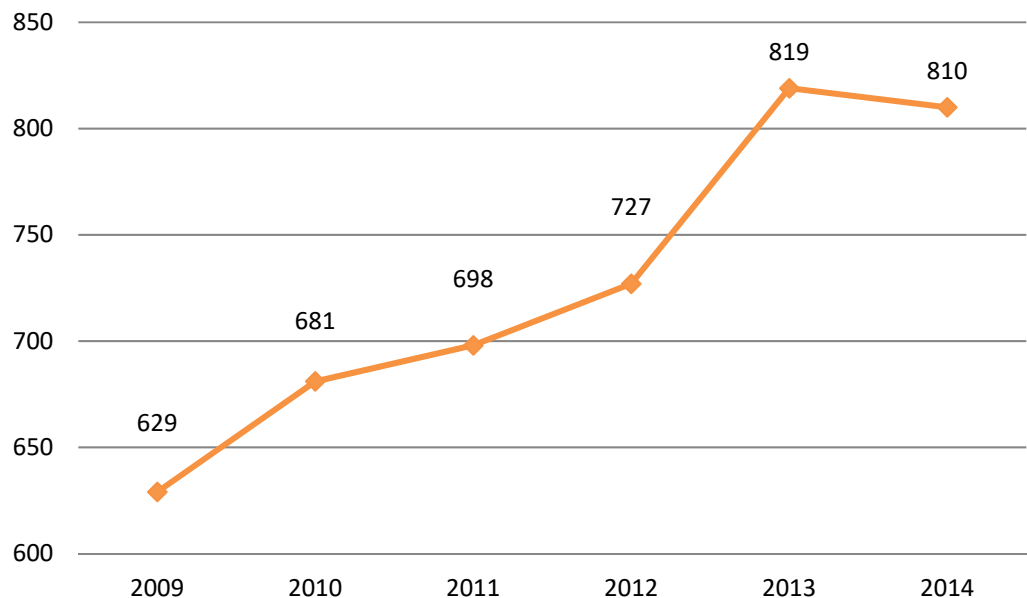


The number of upper-extremity amputations performed each year ultimately decreased 47.69% from 2009 to 2014. A total of 392 upper-extremity amputations were performed in this time period. The highest incidence of these amputations (96) occurred in 2014, while 2013 saw the least upper-extremity amputations (43) in this time period. (See Graph 1.2)

Source: Healthcare Cost and Utilization Project HCUPnet database <http://hcupnet.ahrq.gov/>

1.3: Lower-Extremity Amputation Trends, New Mexico (2009-2014)

The number of lower-extremity amputations performed each year ultimately increased 28.78% from 2009 to 2014. A total of 4,364 lower-extremity amputations were performed in this time period. The lowest of these occurred in 2009 (629) and the highest in 2013 (819). (See Graph 1.3)

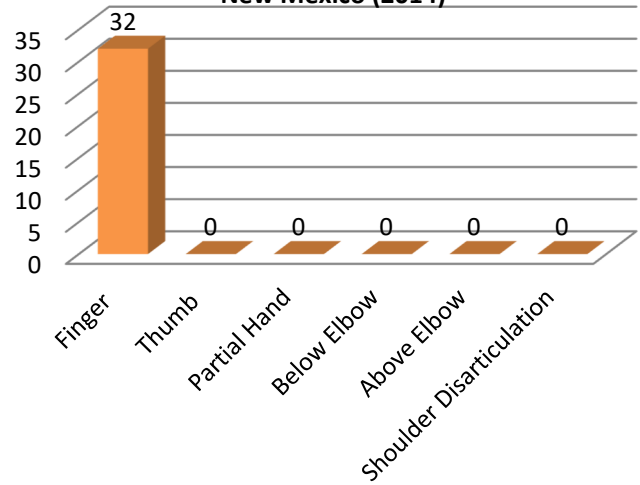


Source: Healthcare Cost and Utilization Project HCUPnet database <http://hcupnet.ahrq.gov/>

2. TYPES OF AMPUTATIONS PERFORMED

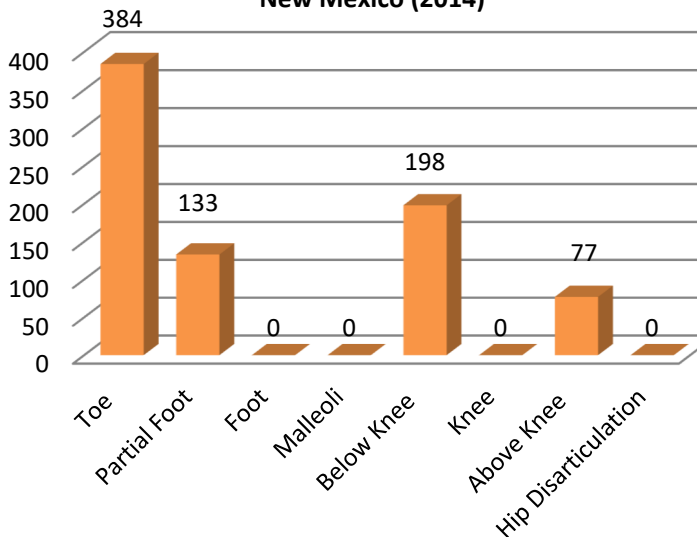
32 upper-extremity amputation types were recorded in 2014. The most common minor upper-extremity amputations were of the fingers (32) and records indicate that no major upper-extremity procedures were performed. (See Graph 2.1)

2.1: Upper-Extremity Amputations, New Mexico (2014)



Source: Healthcare Cost and Utilization Project HCUPnet database
<http://hcupnet.ahrq.gov/>

2.2: Lower-Extremity Amputations, New Mexico (2014)

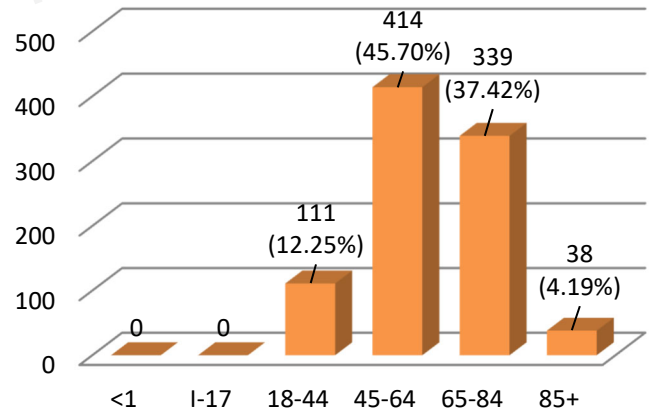


792 lower-extremity amputations were performed in 2014. In terms of minor lower-extremity amputations, toes (384) were amputated more often than part of the foot (133). For major lower-extremity amputations, below-knee (198) amputation was the most common procedure. (See Graph 2.2)

Source: Healthcare Cost and Utilization Project HCUPnet database
<http://hcupnet.ahrq.gov/>

3. WHO LOSES A LIMB?

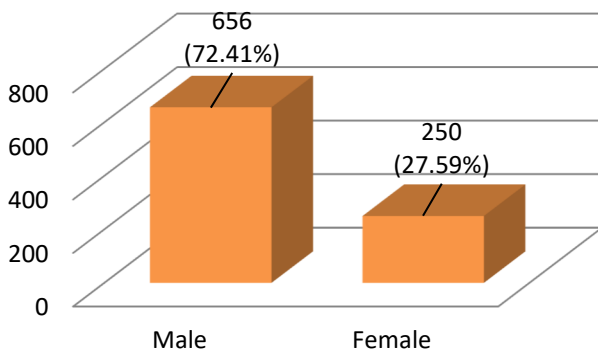
3.1: Amputations by Age Group, New Mexico (2014)



Source: Healthcare Cost and Utilization Project HCUPnet database
<http://hcupnet.ahrq.gov/>

In 2014, most amputations were performed on individuals aged 45-64 years old, followed closely by the age group of 65-84 year olds (See Graph 3.1).

3.2: Amputations by Sex, New Mexico (2014)

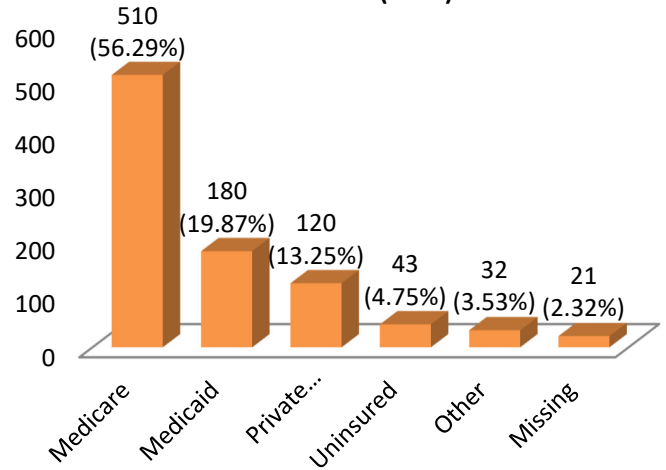


Source: Healthcare Cost and Utilization Project HCUPnet database
<http://hcupnet.ahrq.gov/>

There were over 2.5 times more amputations performed on male patients in New Mexico than on female patients (See Graph 3.2).

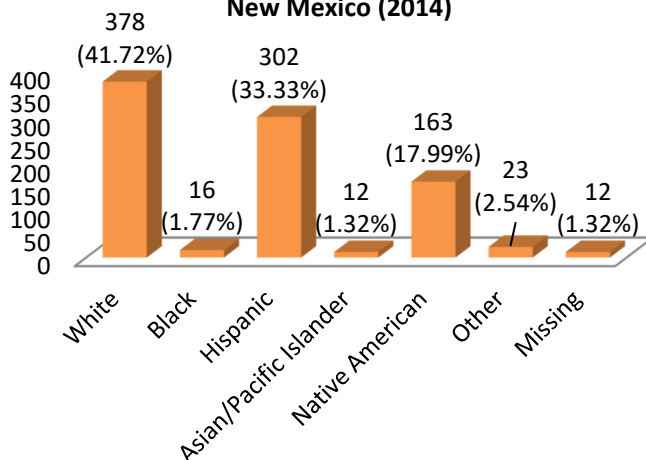
Medicare recipients (56.29%) ranked as the most common group to have an amputation procedure, followed by Medicaid (19.87%) (See Graph 3.3).

3.3: Amputations by Payer Type, New Mexico (2014)



Source: Healthcare Cost and Utilization Project HCUPnet database
<http://hcupnet.ahrq.gov/>

3.4: Amputations by Race/Ethnicity, New Mexico (2014)



We can see that the African American population of New Mexico bears the heaviest burden of amputation (0.037% of the African American population underwent amputations). This is evident when compared with the percentage of the white population that underwent amputations (0.024%), the Hispanic population (0.031%), and with amputations in the state's population as a whole (0.044%). (See Graph 3.4)

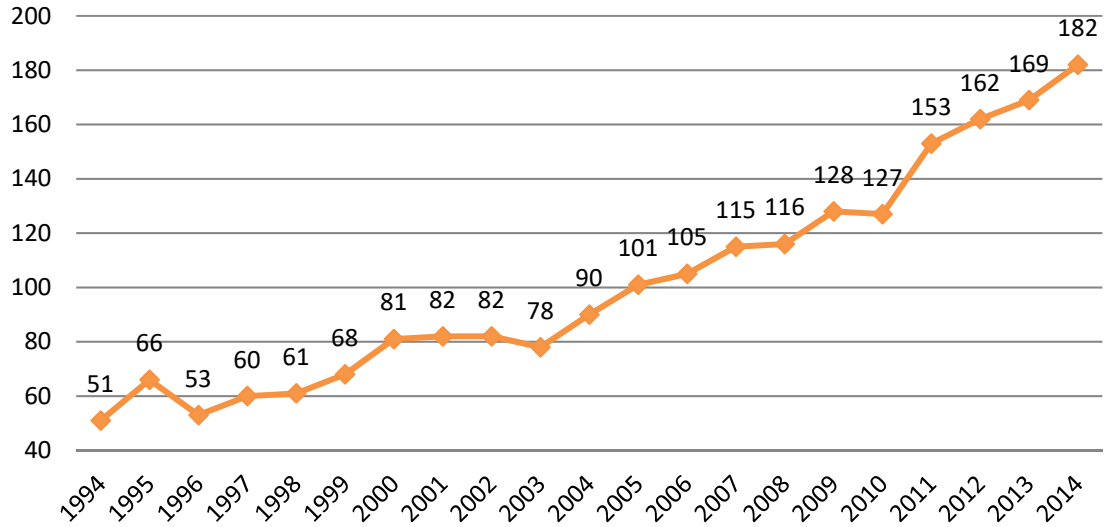
Source: Healthcare Cost and Utilization Project HCUPnet database
<http://hcupnet.ahrq.gov/>

* According to Census Bureau estimation data (http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?sr_c=bkmk) the population of New Mexico in 2014 had 2,080,085 citizens and consisted of 1,521,875 white residents, 42,515 African American residents, and 978,189 Hispanic residents.

4. DIABETES TRENDS

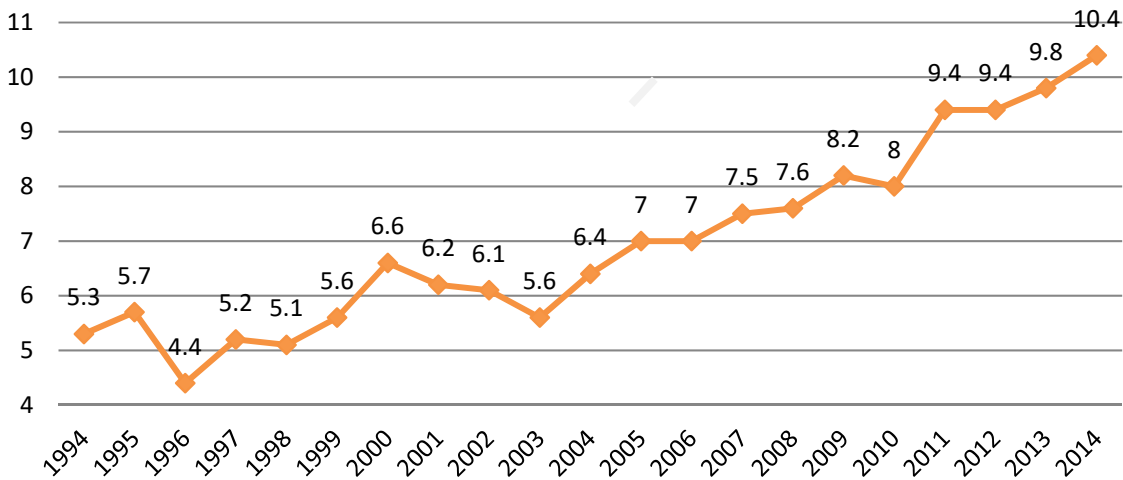
**4.1: Diabetes Cases (in thousands, 18+),
New Mexico (1994-2014)**

In 2014, a total of 182,120 New Mexico residents indicated that they had been diagnosed with diabetes at some point in their lives. The prevalence of diabetes in the population of New Mexico increased 256.9% from 1994 to 2014. (See Graph 4.1)



Source: CDC Behavioral Risk Factor Surveillance System <https://gis.cdc.gov/grasp/diabetes/DiabetesAtlas.html>

**4.2: Existing Diabetes Cases per 100 Adults (18+),
New Mexico (1994-2014)**



The annual rate of existing cases of diabetes among adults in New Mexico increased 96.23% from 1994 to 2014. (See Graph 4.2)

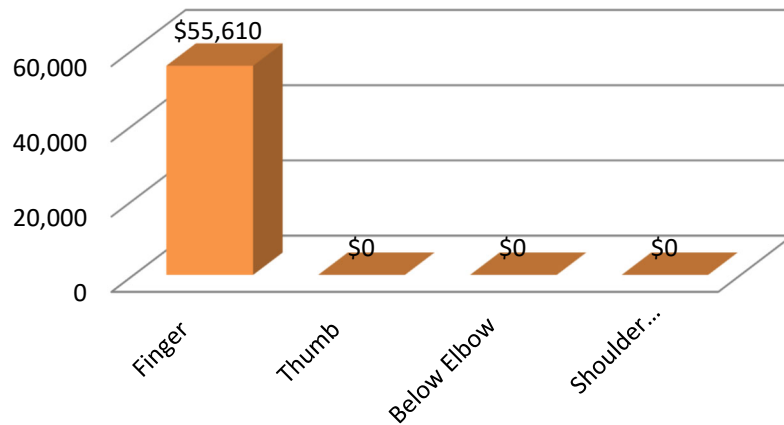
Source: CDC Behavioral Risk Factor Surveillance System <https://gis.cdc.gov/grasp/diabetes/DiabetesAtlas.html>

5. HEALTHCARE COSTS

For persons with a unilateral lower-extremity amputation, the two year healthcare costs, including initial hospitalization, inpatient rehabilitation, outpatient physical therapy, and purchase and maintenance of a prosthetic device, is estimated to be \$91,106. The lifetime healthcare cost for persons with a unilateral lower extremity amputation is estimated to be more than \$500,000 (5). It is anticipated that these healthcare costs would be higher for a person with a proximal amputation level and bilateral amputation status, due to higher prosthetic costs.

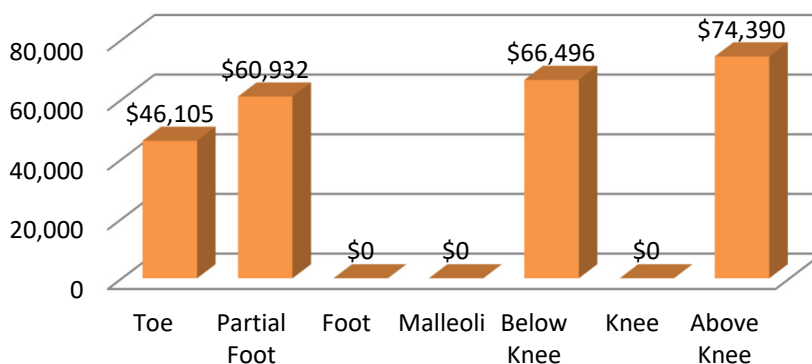
Charges represent what the hospital billed for the case, and may not represent all discharges for amputations. (See graph 5.1)

5.1: Overall Hospital Charges for Upper-Extremity Amputations, New Mexico (2014)



Source: Healthcare Cost and Utilization Project HCUPnet database <http://hcupnet.ahrq.gov/>

5.2: Overall Hospital Charges for Lower-Extremity Amputations, New Mexico (2014)



Charges represent what the hospital billed for the case, and may not represent all discharges for amputations. (See graph 5.2)

Source: Healthcare Cost and Utilization Project HCUPnet database <http://hcupnet.ahrq.gov/>

6. REFERENCES

1. Ziegler-Graham K, MacKenzie EJ, Ephraim PL, Travison TG, Brookmeyer R. Estimating the Prevalence of Limb Loss in the United States: 2005 to 2050. *Archives of Physical Medicine and Rehabilitation*2008;89(3):422-9.
2. Coalition LLTFA. Recommendations from the 2012 Limb Loss Task Force: Roadmap for Preventing Limb Loss in America. [White Paper]. 2012 February 9-12.
3. Bryant PR, Pandian G. Acquired limb deficiencies. 1. Acquired limb deficiencies in children and young adults. *Archives of Physical Medicine and Rehabilitation*2001;82(3B):00s3-s8.
4. Li Y, Burrows NR, Gregg EW, Albright A, Geiss LS. Declining Rates of Hospitalization for Nontraumatic Lower-Extremity Amputation in the Diabetic Population Aged 40 Years or Older: U.S., 1988-2008. *Diabetes Care*2012;35(2):273-7.
5. MacKenzie EJ. Health-Care Costs Associated with Amputation or Reconstruction of a Limb-Threatening Injury. *The Journal of Bone and Joint Surgery (American)*2007;89(8):1685.