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 4,317 amputations were performed in New Jersey hospitals in 2013. 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 Jersey.

1. AMPUTATION TRENDS OVER TIME

According to hospital discharge data, there was an overall 10.04% decrease in total amputations performed in New Jersey from 1997-2013. A total of 74,014 amputations were performed in this time period. Amputations per year dropped to 3,881 in 2011 and were at their highest at 4,827 in 1988. (See Graph 1.1)

Source: Healthcare Cost and Utilization Project HCUPnet database http://hcupnet.ahrq.gov/
The number of upper-extremity amputations performed each year ultimately decreased 16.49% from 1997 to 2013. A total of 4,395 upper-extremity amputations were performed in this time period. The highest incidence of these amputations (285) occurred in 1997, while 2012 saw the least upper-extremity amputations (220) in this time period. (See Graph 1.2)

The number of lower-extremity amputations performed each year ultimately decreased 9.64% from 1997 to 2013. A total of 69,620 lower-extremity amputations were performed in this time period. The lowest of these occurred in 2011 (3,631) and the highest in 1998 (4,573). (See Graph 1.3)
2. TYPES OF AMPUTATIONS PERFORMED

211 upper-extremity amputation types were recorded in 2013. The most common minor upper-extremity amputations were of the fingers (192) and records indicate that no major upper-extremity procedures were performed. (See Graph 2.1)

![Graph 2.1: Upper-Extremity Amputations, New Jersey (2013)](http://hcupnet.ahrq.gov/)

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

4,068 lower-extremity amputations were performed in 2013. In terms of minor lower-extremity amputations, toes (2,071) were amputated more often than part of the foot (577). For major lower-extremity amputations, below-knee (710) amputation was the most common procedure. (See Graph 2.2)

![Graph 2.2: Lower-Extremity Amputations, New Jersey (2013)](http://hcupnet.ahrq.gov/)

Source: Healthcare Cost and Utilization Project HCUPnet database
http://hcupnet.ahrq.gov/
3. WHO LOSES A LIMB?

In 2013, most amputations were performed on individuals aged 65-84 years old, followed closely by the age group of 45-64 year olds (See Graph 3.1).

3.1: Amputations by Age Group, New Jersey (2013)

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

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

3.2: Amputations by Sex, New Jersey (2013)
Medicare recipients (59.65%) ranked as the most common group to have an amputation procedure, followed by private insurance (22.68%) (See Graph 3.3).

We can see that the African American population of New Jersey bears the heaviest burden of amputation (0.094% of the African American population underwent amputations). This is evident when compared with the percentage of the white population that underwent amputations (0.041%), and with amputations in the state’s population as a whole (0.048%). (See Graph 3.4)
4. DIABETES TRENDS

In 2013, a total of 632,785 New Jersey residents indicated that they had been diagnosed with diabetes at some point in their lives. The prevalence of diabetes in the population of New Jersey increased 193.1% from 1994 to 2013. (See Graph 4.1)


The annual rate of existing cases of diabetes among adults in New Jersey increased 100% from 1994 to 2013. (See Graph 4.2)

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 Jersey (2013)

5.2: Overall Hospital Charges for Lower-Extremity Amputations, New Jersey (2013)

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


