



Diabetes Analysis

SFY2010-SFY2015

Submitted by:

The Reporting and Statistics unit of the Oklahoma Health Care Authority

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SoonerCare Diabetes Analysis SFY2015

Method

Data was pulled using diagnosis codes identified as applicable in the Oklahoma Health Care Authority's (OHCA) Medicaid Management Information System (MMIS) to obtain a list of eligible members for this analysis. All data listed is for state fiscal year (SFY) 2015 unless otherwise specified. Unless stated otherwise, child is defined as an individual who is 20 years of age or younger, and an adult is an individual defined as 21 years of age and older.

Diagnosis codes were matched to previously conducted diabetes analysis for accuracy and consistency. The diagnosis codes for this analysis are 249-25093 and 3572, 5881, 6480, 64800, 64801, 64802, 64803, 64804, 7551, V180, and V771. These diagnosis codes included two types of diabetes: type I and type II.

The completed list for the SFY2015 analysis had 60,543 unduplicated SoonerCare members, which is approximately 5.9% of the total SoonerCare population. Total reimbursement for these members in SFY2015 was \$823,847,232. This reimbursement amount includes all claims for diabetic members and not just claims regarding diabetes. Additionally 2,494 SoonerCare members received state therapeutic code 58 (diabetic therapy) who did not have a diagnosis of diabetes, and therefore, not included in the diabetes total for this analysis.

| Number of SoonerCare Adults with Prediabetes | |
|--|--------|
| CY2013 | 39,730 |
| CY2014 | 41,414 |
| CY2015 | 41,735 |

This total reflects adult SoonerCare members only (18 year and older) for paid claims based on dates of service for diagnosis codes: 27801, 27800, 27803, 27802, and 79029.

Nationally, diabetes has decreased slightly from 22.3 million people with diabetes to 22.0 million in 2014.¹ Although there was a decrease, there is still much improvement and preventative care that is needed. It is estimated that there are 86 million people in the US (age 20 and older) who have prediabetes, which increased from previous years. American Indians and African Americans continue to be a population with a higher prevalence of diabetes nationally and on the majority of state and Medicaid levels. Older males also continue to be one of the highest risk groups for diabetes.² However, according to the CDC, the number of black females with diabetes continue to rise. In fact, from 1997 to 2014, the prevalence of diabetes in black females increased 30%.³

The national decrease in the number of people with diabetes was not experienced in every state. In Oklahoma, diabetes continues to be a growing concern. Even though Oklahoma has a much higher prevalence rate than the overall national rate, it could be even higher due to an estimate that one-third of diabetes may go undiagnosed.² Oklahoma follows the national trends for diabetes according to race, sex and age demographics.

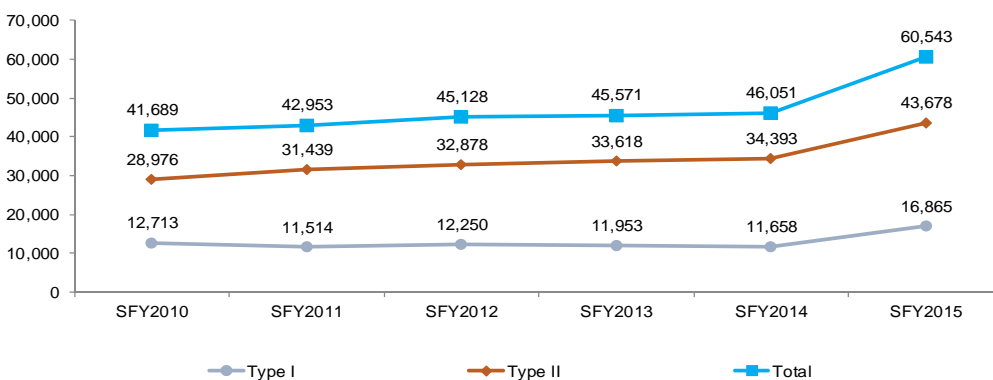
SoonerCare seems to have a very low representation of members with diabetes compared to the national and state's rate. This could be due to lack of appropriately identifying members as diabetic. Additionally, SoonerCare does not follow the majority of the nation and Oklahoma's demographic trends. Men represent a smaller percentage in the diabetic population than they do in the total SoonerCare population. African Americans do have a slightly larger representation in the diabetic population than in the total SoonerCare population with the majority of the race being composed of women (68%). However, American Indians do not have a larger representation in the diabetic population compared to their overall representation. The lower representation of men with diabetes in the SoonerCare population could be due to the fact that men seek preventive and medical care far less often than women. It should be noted that some of the diagnosis codes are female specific, but the number of women who received that diagnosis code accounts for less than 1% of the total diabetes population.

| | |
|---|--|
| In SFY2015, SoonerCare had 60,543 members diagnosed with diabetes (5.9% prevalence rate) with a reimbursement of \$823,847,232 | Oklahoma continued to exceed the national prevalence of diabetes with a prevalence rate of 10.9% among adults in 2014 according to the CDC. ¹ |
| Nationally, diabetes was estimated by the CDC to affect 22 million people in 2014, which is approximately 6.9% of the total US population. ¹ | |

| SoonerCare Members with Diabetes by Eligibility Type and Age Group for SFY2015 | | | |
|--|---------------|----------------------|-----------------|
| Child | | | |
| Category | # of Members | Total Cost | Cost per Member |
| Dual | 18 | \$12,830 | \$713 |
| Non-Dual | 4,745 | \$40,416,692 | \$8,518 |
| Total | 4,763 | \$40,429,522 | |
| Adult | | | |
| Category | # of Members | Total Cost | Cost per Member |
| Dual | 31,620 | \$53,181,317 | \$1,682 |
| Non-Dual | 24,160 | \$730,236,392.53 | \$30,225 |
| Total | 55,780 | \$783,417,710 | |

Dual members are members who are both Medicaid and Medicare, and are identified by using crossover claims. All reimbursement amounts are based on paid claims for dates of service within SFY2015, and includes all claims, not just claim regarding diabetes.

Count of SoonerCare Members with Diabetes by Type



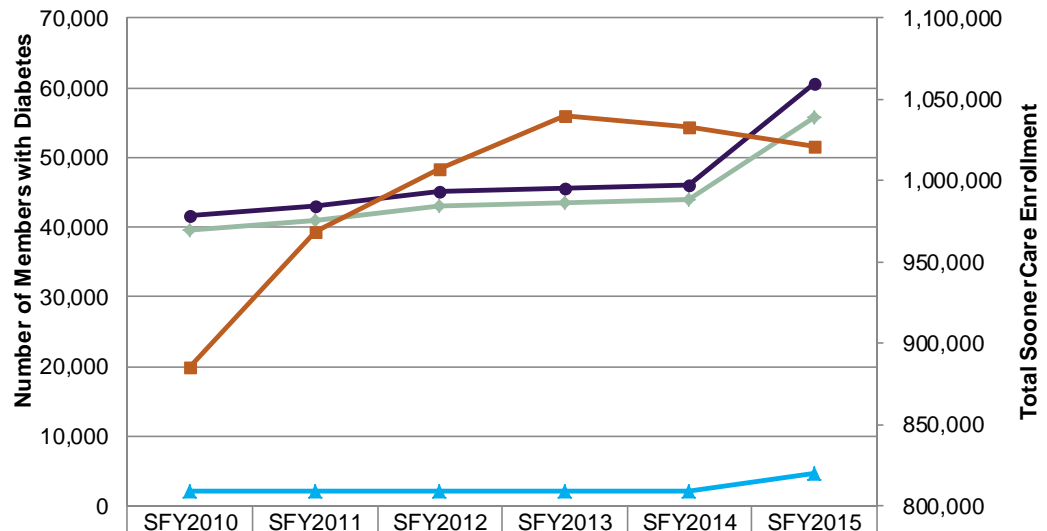
The increase in diagnosis of diabetes in SoonerCare members from SFY2014 to SFY2015 is partly due to multiple agency efforts to increase A1C testing, provider education, member outreach and increasing the number of health coaches in the SoonerCare community.

¹Data and Statistics." Centers for Disease Control and Prevention. 2015. Accessed March 25, 2016. <http://www.cdc.gov/diabetes/data/index.html>.

²Statistics About Diabetes." American Diabetes Association. May 18, 2015. Accessed March 25, 2016. <http://www.diabetes.org/diabetes-basics/statistics/>.

³"Age-Adjusted Rates of Diagnosed Diabetes per 100 Civilian, Non-institutionalized Population, by Race and Sex, United States, 1980–2014." Centers for Disease Control and Prevention. 2015. Accessed March 29, 2016. <http://www.cdc.gov/diabetes/statistics/prev/national/figraceethsex.htm>.

SoonerCare Members with Diabetes vs. Total SoonerCare Enrollment SFY2015



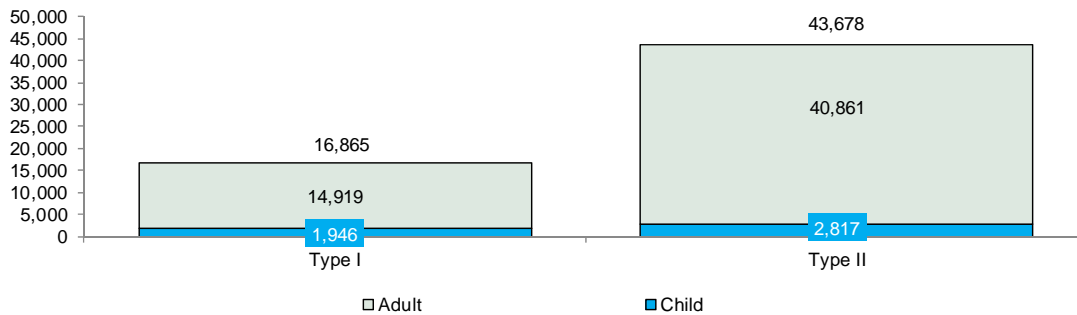
| | SFY2010 | SFY2011 | SFY2012 | SFY2013 | SFY2014 | SFY2015 |
|-----------------------------|---------|---------|-----------|-----------|-----------|-----------|
| Children with Diabetes | 1,999 | 2,061 | 2,071 | 2,110 | 2,049 | 4,763 |
| Adults with Diabetes | 39,690 | 40,892 | 43,057 | 43,461 | 44,002 | 55,780 |
| Total Members with Diabetes | 41,689 | 42,953 | 45,128 | 45,571 | 46,051 | 60,543 |
| Total SoonerCare Enrollment | 885,238 | 968,296 | 1,007,356 | 1,040,332 | 1,033,114 | 1,021,359 |

The increase in diagnosis of diabetes in SoonerCare members from SFY2014 to SFY2015 is partly due to multiple agency efforts to increase A1C testing, provider education, member outreach and increasing the number of health coaches in the SoonerCare community.

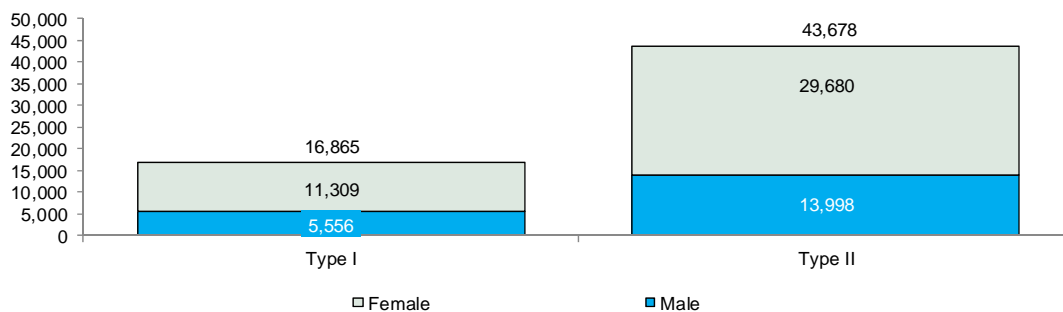
When looking at national and state trends, males normally have a higher prevalence of diabetes. Males represent only 32% of SoonerCare members with diabetes, but they represent 43% of the total SoonerCare population. As mentioned previously, one reason for this low representation of men with diabetes could be that males are three times less likely to seek medical care.⁴ However, because of the increase of African American females in the diabetetic population, the number of women with diabetes is starting to rival men’s prevalence. SoonerCare members’ with diabetes matches national and state age trends with older individuals being most at risk for diabetes.

| Breakdown of SoonerCare Members with Diabetes by Age Group | | | | | |
|--|--------------|---------------|---------------|---------------|---------------|
| | 0 - 20 | 21 - 45 | 46 - 65 | Over 65 | Total |
| Type I | 1,946 | 3,683 | 6,619 | 4,617 | 16,865 |
| Type II | 2,817 | 9,996 | 17,008 | 13,857 | 43,678 |
| Total | 4,763 | 13,679 | 23,627 | 18,474 | 60,543 |

SoonerCare Members with Diabetes by Age



SoonerCare Members with Diabetes by Gender



⁴National Survey Finds Women More Likely to See Doctor on Regular Basis than Men." News-Medical.net. 2011. Accessed March 25, 2016. <http://www.news-medical.net/news/20110609/National-survey-finds-women-more-likely-to-see-doctor-on-regular-basis-than-men.aspx>.

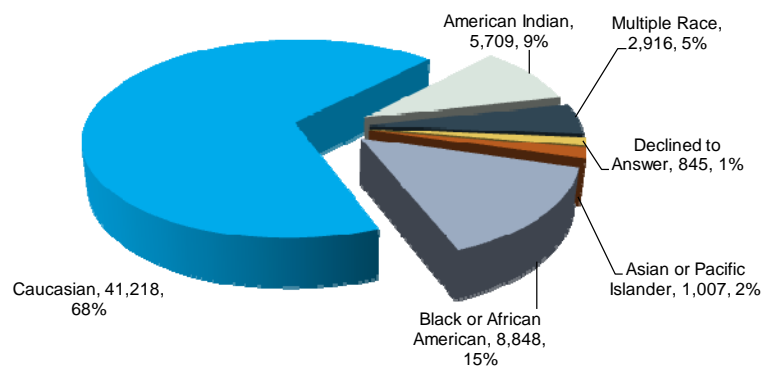
SoonerCare follows national and state trends with the Black or African Americans community having a higher representation of diabetes than they do in the overall SoonerCare population. Fifteen percent of Black or African Americans are identified as having diabetes, but Black or African Americans represent only 12% of the SoonerCare population. Females compose 68% of the Black or African American diabetes population. In all of the diabetic race categories, female representation for diabetes is higher than their comparable representation in the SoonerCare population.

American Indians have been recognized as a population that struggles with diabetes outside of SoonerCare; however, this population does not show that tendency with SoonerCare data. American Indians account for 10% of the total SoonerCare population, and account for 9% of SoonerCare population with diabetes. One possible explanation of the low representation of American Indians could be due to the flexible structure of how American Indian health care providers submit their claims. American Indians with diabetes could be under represented in this report.

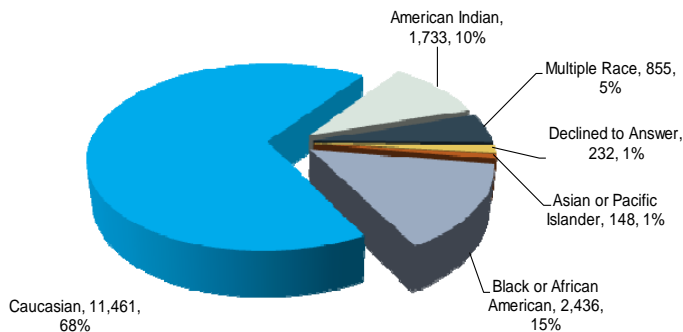
| SOONERCARE MEMBERS | Female | % of Total Females | % of Total Race | Male | % of Total Males | % of Total Race | Total |
|---------------------------|----------------|--------------------|-----------------|----------------|------------------|-----------------|------------------|
| Black or African American | 69,202 | 12% | 57% | 52,684 | 12% | 43% | 121,886 |
| American Indians | 58,830 | 10% | 56% | 46,125 | 10% | 44% | 104,955 |
| Asian or Pacific Islander | 10,684 | 2% | 57% | 8,173 | 2% | 43% | 18,857 |
| Caucasian | 376,719 | 65% | 57% | 279,860 | 64% | 43% | 656,579 |
| Declined to Answer | 23,363 | 4% | 57% | 17,300 | 4% | 43% | 40,663 |
| Multiple Races | 43,025 | 7% | 55% | 35,394 | 8% | 45% | 78,419 |
| Total | 581,823 | 100% | 57% | 439,536 | 100% | 43% | 1,021,359 |

| SOONERCARE MEMBERS WITH DIABETES | Female | % of Total Females | % of Total Race | Male | % of Total Males | % of Total Race | Total |
|----------------------------------|---------------|--------------------|-----------------|---------------|------------------|-----------------|---------------|
| Black or African American | 6,054 | 15% | 68% | 2,794 | 14% | 32% | 8,848 |
| American Indians | 3,809 | 9% | 67% | 1,900 | 10% | 33% | 5,709 |
| Asian or Pacific Islander | 629 | 2% | 62% | 378 | 2% | 38% | 1,007 |
| Caucasian | 27,898 | 68% | 68% | 13,320 | 68% | 32% | 41,218 |
| Declined to Answer | 638 | 2% | 76% | 207 | 1% | 24% | 845 |
| Multiple Races | 1,961 | 5% | 67% | 955 | 5% | 33% | 2,916 |
| Total | 40,989 | 100% | 68% | 19,554 | 100% | 32% | 60,543 |

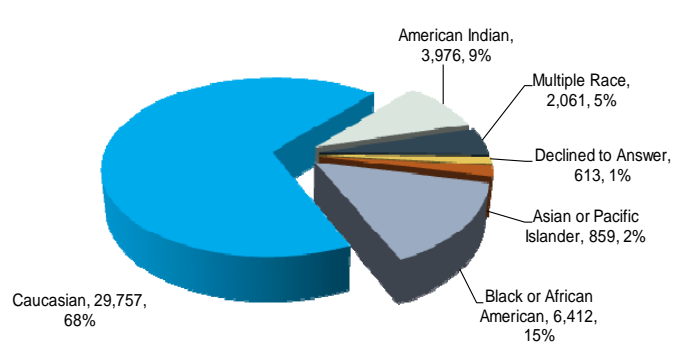
Race Breakdown for SoonerCare Members with Diabetes



Race Breakdown for SoonerCare Members with Diabetes Type I



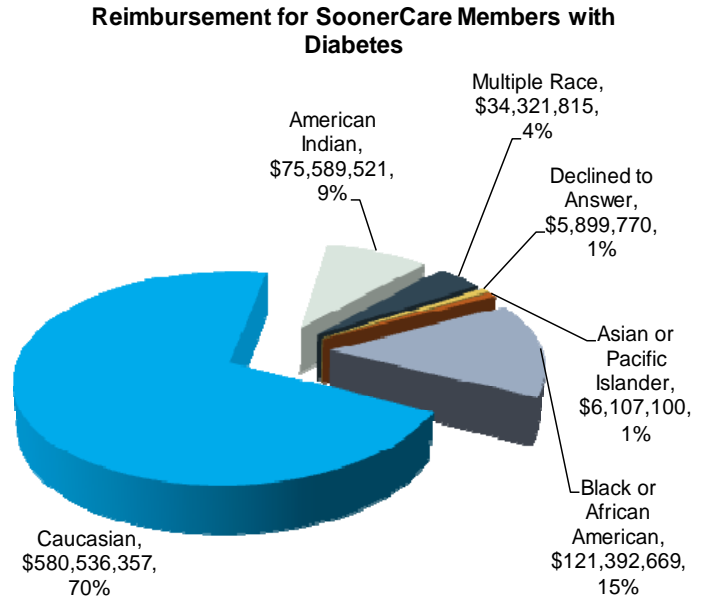
Race Breakdown for SoonerCare Members with Diabetes Type II



Race is self-reported by members at the time of enrollment. The multiple race members have selected two or more races.

Reimbursement for SoonerCare Members with Diabetes by Race

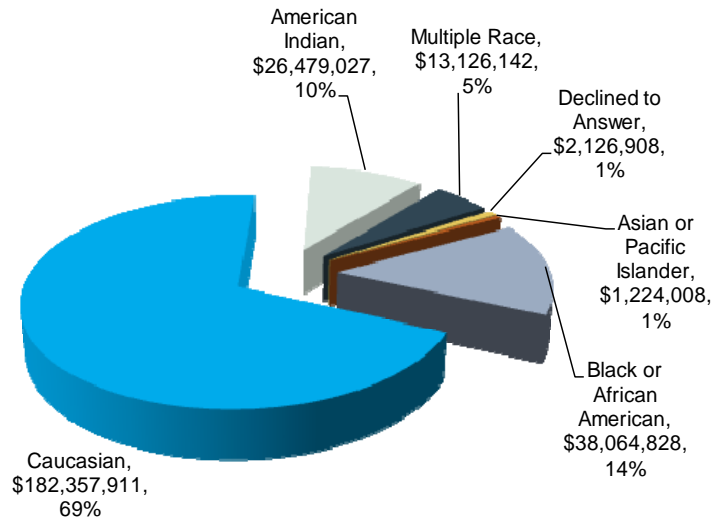
| | Member Count | Total Reimbursement | Cost per Member |
|---------------------------|---------------|----------------------|-----------------|
| Asian or Pacific Islander | 1,007 | \$6,107,100 | \$6,065 |
| Black or African American | 8,848 | \$121,392,669 | \$13,720 |
| Caucasian | 41,218 | \$580,536,357 | \$14,085 |
| American Indian | 5,709 | \$75,589,521 | \$13,240 |
| Multiple Race | 2,916 | \$34,321,815 | \$11,770 |
| Declined to Answer | 845 | \$5,899,770 | \$6,982 |
| Total | 60,543 | \$823,847,232 | |



Reimbursement for SoonerCare Members with Diabetes Type I

Reimbursement for SoonerCare Members with Diabetes Type I by Race

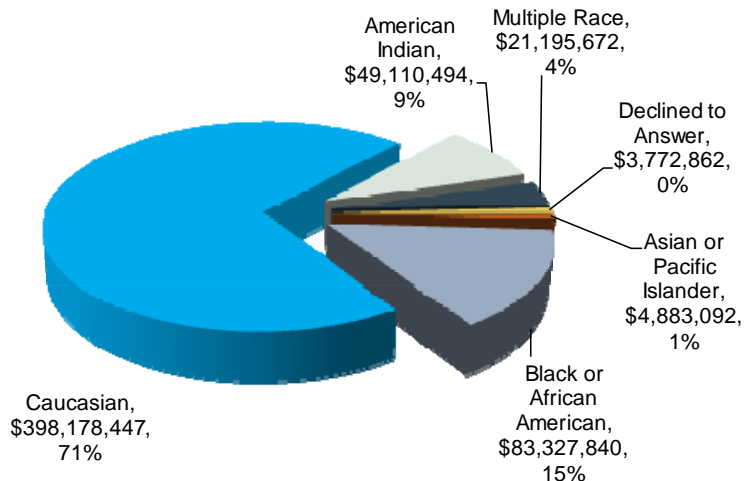
| | Member Count | Total Reimbursement | Cost per Member |
|---------------------------|---------------|----------------------|-----------------|
| Asian or Pacific Islander | 148 | \$1,224,008 | \$8,270 |
| Black or African American | 2,436 | \$38,064,828 | \$15,626 |
| Caucasian | 11,461 | \$182,357,911 | \$15,911 |
| American Indian | 1,733 | \$26,479,027 | \$15,279 |
| Multiple Race | 855 | \$13,126,142 | \$15,352 |
| Declined to Answer | 232 | \$2,126,908 | \$9,168 |
| Total | 16,865 | \$263,378,824 | |



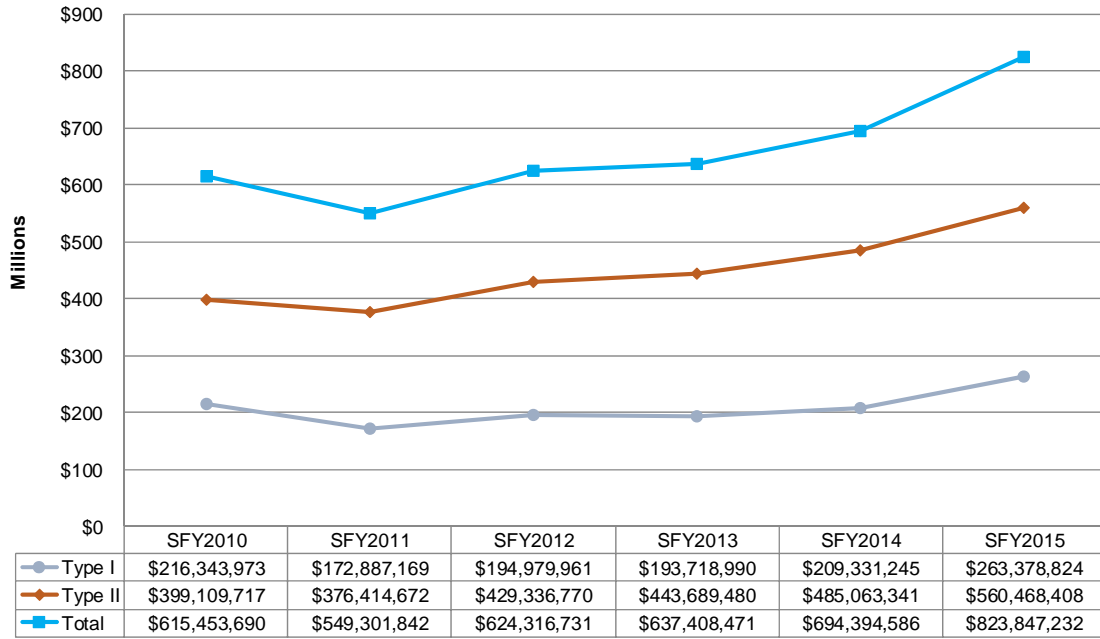
Reimbursement for SoonerCare Members with Diabetes Type II

Reimbursement for SoonerCare Members with Diabetes Type II by Race

| | Member Count | Total Reimbursement | Cost per Member |
|---------------------------|---------------|----------------------|-----------------|
| Asian or Pacific Islander | 859 | \$4,883,092 | \$5,685 |
| Black or African American | 6,412 | \$83,327,840 | \$12,996 |
| Caucasian | 29,757 | \$398,178,447 | \$13,381 |
| American Indian | 3,976 | \$49,110,494 | \$12,352 |
| Multiple Race | 2,061 | \$21,195,672 | \$10,284 |
| Declined to Answer | 613 | \$3,772,862 | \$6,155 |
| Total | 43,678 | \$560,468,408 | |

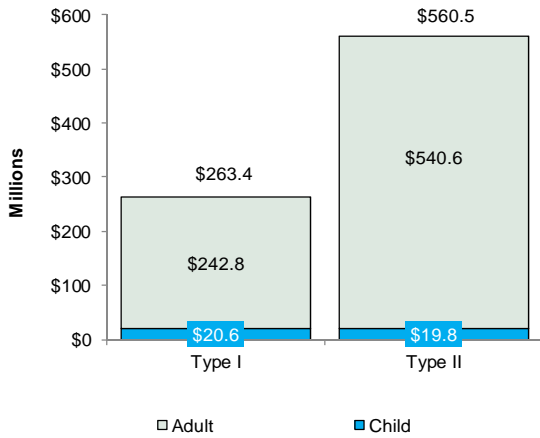


Reimbursement for SoonerCare Members with Diabetes

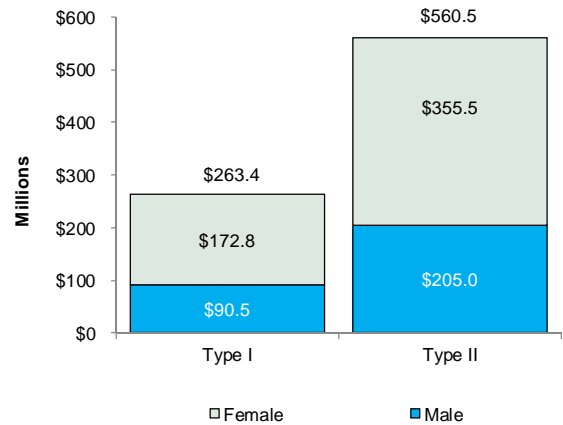


Please note that there have been various and ongoing budget cuts since 2010.

Total Reimbursement by Age of SoonerCare Members with Diabetes

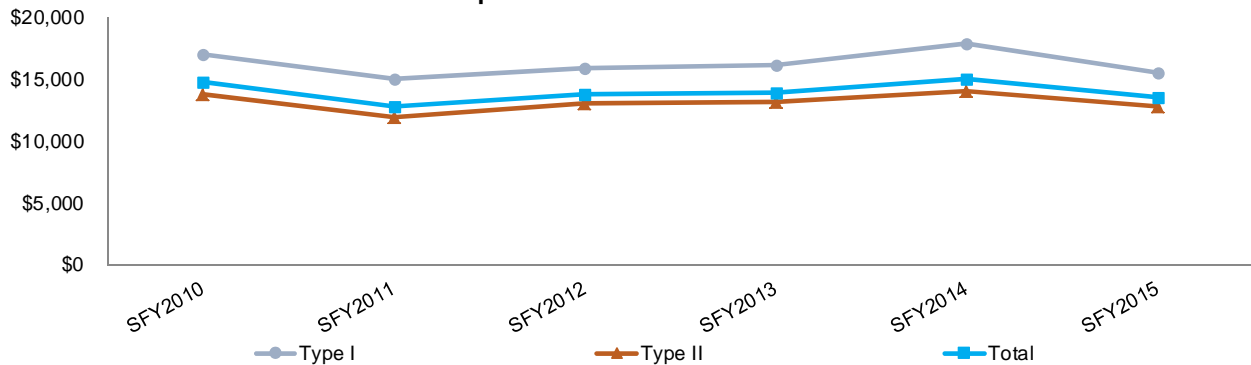


Total Reimbursement by Gender of SoonerCare Members with Diabetes



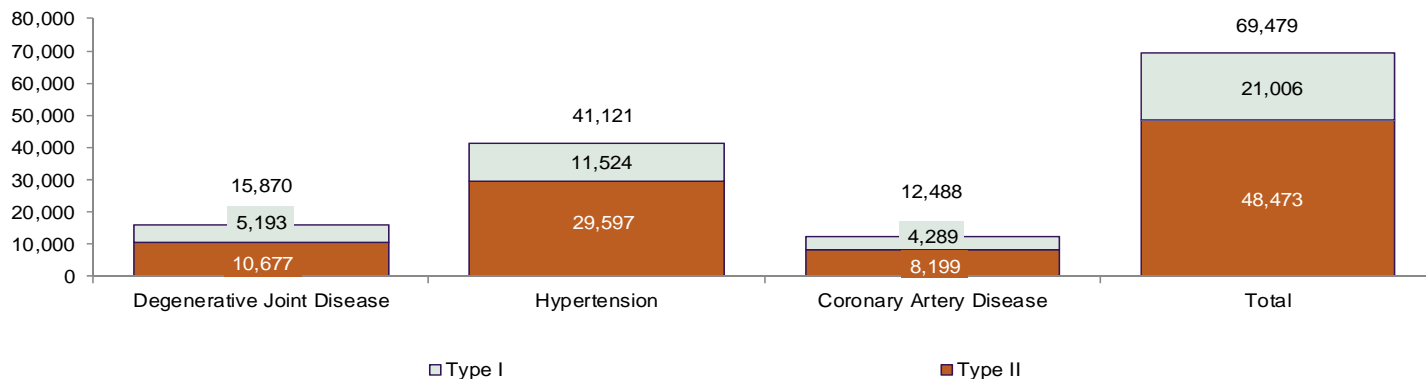
Although there are less males in the SoonerCare population identified as having diabetes, men cost more per person than females. SoonerCare males cost per member in SFY2015 was \$15,144 while females cost per person was \$12,889. Perhaps with more preventive and consistent care, the cost of males could be decreased to align with female rates.

Cost per SoonerCare Members with Diabetes



Comorbidities occur when two chronic disease or conditions are present in a patient at the same time. It is very important when looking at a person’s health to observe all the elements that affect that person’s health. The majority of all SoonerCare members also suffer from one or more comorbidity. Sixty-eight percent of members with diabetes also had hypertension, a disease that exacerbates some symptoms of diabetes. Chronic Lower Respiratory Disease (CLRD), which is normally caused by tobacco use, affected over one-third of SoonerCare members with diabetes. Due to the high rates of comorbidities in the chronic disease population, special outreach and preventive efforts should be made when someone is identified as having a chronic disease. By early detection of comorbidities, the chronic disease of interest could be potentially managed better, and therefore, reduce health complications later.

Comorbidities of SoonerCare Members with Diabetes



Notes: Members were counted if they had one or more diagnosis code with a comorbidity in SFY of reporting period. Members were only counted once unless the member had more than one type of comorbidity.

| Additional Comorbidities of SoonerCare Members with Diabetes SFY2015 | | | | |
|--|--------------|--------------------------------------|---------------|--------------------------------------|
| Comorbidity | Member Count | Percent of Total Diabetes Population | Reimbursement | Percent of Total Diabetes Population |
| Depression | 6,774 | 11.2% | \$13,694,214 | 1.7% |
| Heart Failure | 12,002 | 19.8% | \$59,396,065 | 7.2% |
| Chronic Lower Respiratory Disease | 21,051 | 34.8% | \$63,540,900 | 7.7% |
| Prescribed Psychostimulants - Antidepressants | 10,584 | 17.5% | \$3,639,778 | 0.4% |

| Count and Reimbursement of SoonerCare Members with End Stage Renal Disease (ESRD) and Diabetes | | |
|--|--------------|---------------|
| | Member Count | Reimbursement |
| Members with ESRD | 3,521 | \$71,231,648 |
| Members with Diabetes and ESRD | 2,346 | \$50,257,247 |

For a full list of diagnosis codes used please refer to appendix B. Reimbursement is for paid claims only during dates of service for the report SFY. Members were only counted once unless the member had more than one type of comorbidity.

Percent of total ESRD members with diabetes: 67%

| Count and Reimbursement of SoonerCare Members Who Had an Amputation and Diabetes | | |
|--|--------------|---------------|
| | Member Count | Reimbursement |
| Members Who had an Amputation | 419 | \$8,643,529 |
| Members with Diabetes and Who Had an Amputation | 338 | \$5,011,047 |

Percent of total members who had an amputation with diabetes: 81%

Nerve disease and poor circulation among type II diabetics are two of the primary reasons for amputation of the lower body for diabetics. As public awareness grew and medicine advanced for the treatment of diabetes, amputation numbers greatly decreased in the last decade, and with ongoing medical advancement, the number will continue to decline. Additionally, with appropriate management and medical attention when warning signs occur, amputation can be avoided the majority of the time. It should be noted that out of the 419 total amputations that took place, 247 (59%) were performed on males.

Emergency Department (ED) utilization is important to look at when evaluating the overall health of our members. High ED utilization indicates that the overall health of the member is unstable. Diabetes members show higher utilization and cost for adults with type II diabetes but a higher cost per member for adult members with type I diabetes.

Please note that the reimbursement for ED utilization in this report could be higher than other reported amounts by OHCA due to differences in methodology. This data was pulled using incurred dates rather than paid dates and includes all costs incurred on the date of the ED visit not just ED specific claims based on ED procedure and ED revenue codes. For a more detail description of the methodology used for this report, please refer to the appendix section.

| Summary of Adult and Child Emergency Department Usage by Diabetes Type | | | | | | | | | | |
|--|---------------------|--------------------|-----------------|-------------------|---------------------------|---------------------|---------------------|-----------------|-------------------|---------------------------|
| Type of Diabetes | CHILD | | | | | ADULT | | | | |
| | Number of ED Visits | Total Cost | Cost per Member | Utilizing Members | Cost per Utilizing Member | Number of ED Visits | Total Cost | Cost per Member | Utilizing Members | Cost per Utilizing Member |
| Type I | 1,850 | \$1,815,178 | \$933 | 867 | \$2,094 | 13,744 | \$23,397,128 | \$1,568 | 3,715 | \$6,298 |
| Type II | 2,912 | \$1,917,251 | \$681 | 1,236 | \$1,551 | 27,414 | \$37,936,551 | \$928 | 8,997 | \$4,217 |
| Total | 4,762 | \$3,732,429 | \$1,613 | 2,103 | \$3,645 | 41,158 | \$61,333,679 | \$2,497 | 12,712 | \$10,515 |

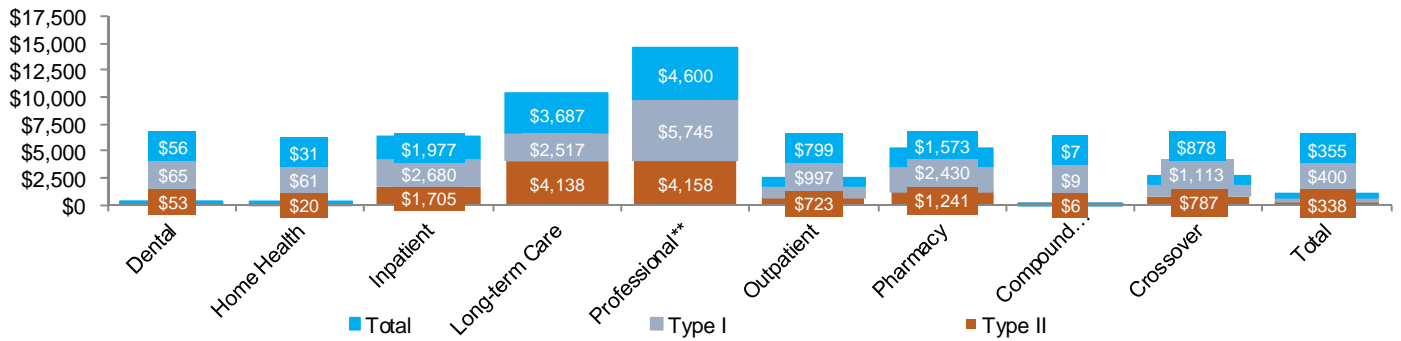
| Emergency Department Reimbursement of SoonerCare Members with Total Diabetes by Claim Type | | | | |
|--|---------------------|--------------------|---------------------|--------------------|
| Claim Type | Type I | | Type II | |
| | Reimbursement | Percent of ED Cost | Reimbursement | Percent of ED Cost |
| Inpatient | \$15,839,414 | 62.8% | \$23,590,875 | 59.2% |
| Outpatient | \$4,281,645 | 17.0% | \$8,065,972 | 20.2% |
| Professional* | \$4,650,612 | 18.4% | \$7,700,547 | 19.3% |
| Dental | \$3,362 | 0.0% | \$4,779 | 0.0% |
| Crossover | \$16,112 | 0.1% | \$35,631 | 0.1% |
| Pharmacy | \$342,002 | 1.4% | \$378,870 | 1.0% |
| Long-term Care | \$65,420 | 0.3% | \$67,848 | 0.2% |
| Home Health | \$13,011 | 0.1% | \$8,254 | 0.0% |
| Compound Drug | \$729 | 0.0% | \$1,026 | 0.0% |
| Total | \$25,212,306 | 100.0% | \$39,853,802 | 100.0% |

| Emergency Department Reimbursement of SoonerCare Members with Type I Diabetes by Claim Type | | | | |
|---|---------------------|--------------------|--------------------|--------------------|
| Claim Type | Adult | | Child | |
| | Reimbursement | Percent of ED Cost | Reimbursement | Percent of ED Cost |
| Inpatient | \$14,937,268 | 63.8% | \$902,146 | 49.7% |
| Outpatient | \$3,880,731 | 16.6% | \$400,914 | 22.1% |
| Professional* | \$4,188,089 | 17.9% | \$462,523 | 25.5% |
| Dental | \$2,640 | 0.0% | \$721 | 0.0% |
| Crossover | \$16,112 | 0.1% | \$0 | 0.0% |
| Pharmacy | \$293,198 | 1.3% | \$48,804 | 2.7% |
| Long-term Care | \$65,420 | 0.3% | \$0 | 0.0% |
| Home Health | \$13,011 | 0.1% | \$0 | 0.0% |
| Compound Drug | \$659 | 0.0% | \$69 | 0.0% |
| Total | \$23,397,128 | 100.0% | \$1,815,178 | 100.0% |

| Emergency Department Reimbursement of SoonerCare Members with Type II Diabetes by Claim Type | | | | |
|--|---------------------|--------------------|--------------------|--------------------|
| Claim Type | Adult | | Child | |
| | Reimbursement | Percent of ED Cost | Reimbursement | Percent of ED Cost |
| Inpatient | \$22,801,783 | 60.1% | \$789,092 | 41.2% |
| Outpatient | \$7,477,467 | 19.7% | \$588,505 | 30.7% |
| Professional* | \$7,212,131 | 19.0% | \$488,416 | 25.5% |
| Dental | \$3,144 | 0.0% | \$1,635 | 0.1% |
| Crossover | \$35,631 | 0.1% | \$0 | 0.0% |
| Pharmacy | \$329,400 | 0.9% | \$49,470 | 2.6% |
| Long-term Care | \$67,848 | 0.2% | \$0 | 0.0% |
| Home Health | \$8,189 | 0.0% | \$65 | 0.0% |
| Compound Drug | \$959 | 0.0% | \$67 | 0.0% |
| Total | \$37,936,551 | 100.0% | \$1,917,251 | 100.0% |

*Professional claim is a CMS1500 claim type.

Average Cost per SoonerCare Member with Diabetes by Claim Type by Diabetes Type



| Reimbursement for SoonerCare Members with Diabetes by Claim Type | | | | |
|--|---------------|------------------|-------------------|---------------------------|
| Claim Type | Reimbursement | Cost per Member* | Utilizing Members | Cost per Utilizing Member |
| Dental | \$3,403,381 | \$56 | 8,439 | \$403 |
| Home Health | \$1,904,741 | \$31 | 1,972 | \$966 |
| Inpatient | \$119,665,229 | \$1,977 | 9,270 | \$12,909 |
| Long-term Care | \$223,212,092 | \$3,687 | 7,340 | \$30,410 |
| Professional** | \$278,496,108 | \$4,600 | 45,221 | \$6,159 |
| Outpatient | \$48,389,497 | \$799 | 25,016 | \$1,934 |
| Pharmacy | \$95,207,764 | \$1,573 | 28,552 | \$3,335 |
| Compound Drug | \$398,008 | \$7 | 977 | \$407 |
| Crossover | \$53,170,411 | \$878 | 31,635 | \$1,681 |
| Total | \$823,847,232 | \$355 | | |

| Reimbursement for SoonerCare Members with Diabetes Type I by Claim Type | | | | |
|---|---------------|------------------|-------------------|---------------------------|
| Claim Type | Reimbursement | Cost per Member* | Utilizing Members | Cost per Utilizing Member |
| Dental | \$1,093,125 | \$65 | 2,625 | \$416 |
| Home Health | \$1,029,853 | \$61 | 986 | \$1,044 |
| Inpatient | \$45,194,729 | \$2,680 | 3,139 | \$14,398 |
| Long-term Care | \$42,454,293 | \$2,517 | 1,513 | \$28,060 |
| Professional** | \$96,881,961 | \$5,745 | 13,931 | \$6,954 |
| Outpatient | \$16,815,755 | \$997 | 7,202 | \$2,335 |
| Pharmacy | \$40,987,521 | \$2,430 | 8,253 | \$4,966 |
| Compound Drug | \$144,671 | \$9 | 348 | \$416 |
| Crossover | \$18,776,917 | \$1,113 | 8,704 | \$2,157 |
| Total | \$263,378,824 | \$400 | | |

| Reimbursement for SoonerCare Members with Diabetes Type II by Claim Type | | | | |
|--|---------------|------------------|-------------------|---------------------------|
| Claim Type | Reimbursement | Cost per Member* | Utilizing Members | Cost per Utilizing Member |
| Dental | \$2,310,257 | \$53 | 5,814 | \$397 |
| Home Health | \$874,889 | \$20 | 986 | \$887 |
| Inpatient | \$74,470,499 | \$1,705 | 6,131 | \$12,147 |
| Long-term Care | \$180,757,799 | \$4,138 | 5,827 | \$31,021 |
| Professional** | \$181,614,147 | \$4,158 | 31,290 | \$5,804 |
| Outpatient | \$31,573,743 | \$723 | 17,814 | \$1,772 |
| Pharmacy | \$54,220,243 | \$1,241 | 20,299 | \$2,671 |
| Compound Drug | \$253,337 | \$6 | 629 | \$403 |
| Crossover | \$34,393,494 | \$787 | 22,931 | \$1,500 |
| Total | \$560,468,408 | \$338 | | |

*Cost per member uses the total number of members in the group of interest whether or not they utilized a service. Cost per utilizing member only includes the members in the group of interest who actually utilized a service.

**Professional claim is a CMS1500 claim type.

| Total Reimbursement for SoonerCare Members with Diabetes by Procedure Code | | | |
|--|---------------|-------------------|---------------------------|
| Procedure Code | Reimbursement | Utilizing Members | Cost per Utilizing Member |
| Alcohol Substance Abuse | \$21,519,595 | 9,221 | \$2,334 |
| Anesthesia | \$4,090,268 | 7,762 | \$527 |
| DME | \$5,270,828 | 7,502 | \$703 |
| Dental | \$3,380,525 | 8,406 | \$402 |
| Emergency | \$5,022,801 | 14,815 | \$339 |
| Injectable | \$2,408,836 | 5,096 | \$473 |
| Medicine | \$6,260,768 | 19,219 | \$326 |
| Observation/ Evaluation | \$27,281,797 | 26,933 | \$1,013 |
| Other* | \$164,376,280 | 26,186 | \$6,277 |
| Parenteral | \$472,740 | 143 | \$3,306 |
| Pathology | \$8,490,480 | 22,872 | \$371 |
| Radiology | \$5,094,037 | 19,744 | \$258 |
| Surgery | \$17,147,840 | 16,071 | \$1,067 |
| Transportation and Supplies | \$10,784,963 | 22,692 | \$475 |
| Vision | \$297,268 | 1,734 | \$171 |
| Total | \$281,899,027 | | |

| Total Reimbursement for SoonerCare Members with Diabetes Type I by Procedure Code | | | |
|---|---------------|-------------------|---------------------------|
| Procedure Code | Reimbursement | Utilizing Members | Cost per Utilizing Member |
| Alcohol Substance Abuse | \$6,750,202 | 2,801 | \$2,410 |
| Anesthesia | \$1,304,796 | 2,371 | \$550 |
| DME | \$1,874,955 | 2,933 | \$639 |
| Dental | \$1,086,778 | 2,617 | \$415 |
| Emergency | \$1,766,540 | 4,582 | \$386 |
| Injectable | \$465,257 | 1,515 | \$307 |
| Medicine | \$2,165,783 | 5,916 | \$366 |
| Observation/ Evaluation | \$9,888,601 | 7,798 | \$1,268 |
| Other* | \$57,633,382 | 8,591 | \$6,709 |
| Parenteral | \$206,404 | 53 | \$3,894 |
| Pathology | \$2,577,053 | 6,834 | \$377 |
| Radiology | \$1,524,498 | 5,768 | \$264 |
| Surgery | \$5,647,682 | 4,650 | \$1,215 |
| Transportation and Supplies | \$4,966,416 | 8,584 | \$579 |
| Vision | \$116,665 | 705 | \$165 |
| Total | \$97,975,014 | | |

| Total Reimbursement for SoonerCare Members with Diabetes Type II by Procedure Code | | | |
|--|---------------|-------------------|---------------------------|
| Procedure Code | Reimbursement | Utilizing Members | Cost per Utilizing Member |
| Alcohol Substance Abuse | \$14,769,393 | 6,420 | \$2,301 |
| Anesthesia | \$2,785,472 | 5,391 | \$517 |
| DME | \$3,395,873 | 4,569 | \$743 |
| Dental | \$2,293,747 | 5,789 | \$396 |
| Emergency | \$3,256,261 | 10,233 | \$318 |
| Injectable | \$1,943,579 | 3,581 | \$543 |
| Medicine | \$4,094,985 | 13,303 | \$308 |
| Observation/ Evaluation | \$17,393,196 | 19,135 | \$909 |
| Other* | \$106,742,898 | 17,595 | \$6,067 |
| Parenteral | \$266,336 | 90 | \$2,959 |
| Pathology | \$5,913,427 | 16,038 | \$369 |
| Radiology | \$3,569,539 | 13,976 | \$255 |
| Surgery | \$11,500,158 | 11,421 | \$1,007 |
| Transportation and Supplies | \$5,818,547 | 14,108 | \$412 |
| Vision | \$180,603 | 1,029 | \$176 |
| Total | \$183,924,013 | | |

*The category of "other" includes all procedure codes that start with the letter C (device categories, new technology procedure and drugs, biologicals and radiopharmaceuticals that do not have other HCPCS codes assigned), G (professional health care procedures and services that would otherwise be coded in CPT, but for which there are no CPT codes), M, (office visits, cellular therapy, prolotherapy, intragastric hypothermia, IV chelation therapy, and fabric wrapping of an abdominal aneurysm) Q, S, T, W (temporary codes to pay health care providers for which no permanent code has been assigned).

| Reimbursement for SoonerCare Members with Diabetes by Top Diagnosis Groups (SFY2015) | | | | | | | | | | |
|--|---|---------------------|--------------------------|-------------------|-------------------|---|---------------------|--------------------------|-------------------|-------------------|
| Rank | Child | | | | | Adult | | | | |
| | Diagnosis Group | Total Reimbursement | Percent of Reimbursement | Utilizing Members | Percent Utilizing | Diagnosis Category | Total Reimbursement | Percent of Reimbursement | Utilizing Members | Percent Utilizing |
| 1 | No Diagnosis Reported | \$13,622,057 | 33.7% | 4,517 | 94.8% | No Diagnosis Reported | \$100,731,467 | 12.9% | 27,530 | 49.4% |
| 2 | Mood disorders | \$2,656,328 | 6.6% | 604 | 12.7% | Developmental disorders | \$63,074,979 | 8.1% | 1,280 | 2.3% |
| 3 | Diabetes mellitus with complications | \$1,827,214 | 4.5% | 1,164 | 24.4% | Diabetes mellitus without complication | \$40,381,614 | 5.2% | 35,696 | 64.0% |
| 4 | Developmental disorders | \$1,100,791 | 2.7% | 162 | 3.4% | Delirium; dementia; and amnesic and other cognitive disorders | \$30,623,033 | 3.9% | 3,320 | 6.0% |
| 5 | Diabetes mellitus without complication | \$935,503 | 2.3% | 1,746 | 36.7% | Essential hypertension | \$26,396,960 | 3.4% | 20,017 | 35.9% |
| 6 | Attention-deficit; adjustment disorders | \$869,022 | 2.1% | 569 | 11.9% | Diabetes mellitus with | \$23,573,044 | 3.0% | 21,730 | 39.0% |
| 7 | Adjustment disorders | \$812,970 | 2.0% | 439 | 9.2% | Chronic obstructive pulmonary disease and bronchiectasis | \$22,774,834 | 2.9% | 12,037 | 21.6% |
| 8 | Complication of device; implant or graft | \$798,684 | 2.0% | 39 | 0.8% | Mood disorders | \$22,391,938 | 2.9% | 11,581 | 20.8% |
| 9 | Other nutritional; endocrine; and metabolic disorders | \$773,391 | 1.9% | 802 | 16.8% | Congestive heart failure; nonhypertensive | \$20,932,439 | 2.7% | 7,186 | 12.9% |
| 10 | Normal pregnancy and/or delivery | \$570,221 | 1.4% | 485 | 10.2% | Septicemia (except in labor) | \$20,137,938 | 2.6% | 2,989 | 5.4% |

| Reimbursement for SoonerCare Members with Diabetes Type I by Top Diagnosis Groups (SFY2015) | | | | | | | | | | |
|---|---|---------------------|--------------------------|-------------------|-------------------|---|---------------------|--------------------------|-------------------|-------------------|
| Rank | Child | | | | | Adult | | | | |
| | Diagnosis Group | Total Reimbursement | Percent of Reimbursement | Utilizing Members | Percent Utilizing | Diagnosis Category | Total Reimbursement | Percent of Reimbursement | Utilizing Members | Percent Utilizing |
| 1 | No Diagnosis Reported | \$9,045,655 | 43.9% | 1,873 | 96.2% | No Diagnosis Reported | \$35,740,242 | 15% | 7,241 | 48.5% |
| 2 | Diabetes mellitus with complications | \$1,770,420 | 8.6% | 997 | 51.2% | Diabetes mellitus with complications | \$15,676,890 | 6% | 9,615 | 64.4% |
| 3 | Mood disorders | \$866,961 | 4.2% | 210 | 10.8% | Diabetes mellitus without complication | \$13,856,717 | 6% | 11,057 | 74.1% |
| 4 | Diabetes mellitus without complication | \$794,977 | 3.9% | 1,109 | 57.0% | Developmental disorders | \$10,953,254 | 5% | 234 | 1.6% |
| 5 | Complication of device; implant or graft | \$415,967 | 2.0% | 20 | 1.0% | Septicemia (except in labor) | \$7,950,750 | 3% | 1,073 | 7.2% |
| 6 | Maintenance chemotherapy; radiotherapy | \$341,763 | 1.7% | 7 | 0.4% | Chronic obstructive pulmonary disease and bronchiectasis | \$7,009,429 | 3% | 3,929 | 26.3% |
| 7 | Adjustment disorders | \$324,501 | 1.6% | 194 | 10.0% | Delirium; dementia; and amnesic and other cognitive disorders | \$6,843,605 | 3% | 906 | 6.1% |
| 8 | Attention-deficit; conduct; and disruptive behavior disorders | \$302,477 | 1.5% | 213 | 10.9% | Mood disorders | \$6,421,887 | 3% | 3,298 | 22.1% |
| 9 | Developmental disorders | \$230,802 | 1.1% | 61 | 3.1% | Osteoarthritis | \$6,313,081 | 3% | 3,290 | 22.1% |
| 10 | Anxiety disorders | \$191,795 | 0.9% | 123 | 6.3% | Congestive heart failure; nonhypertensive | \$5,561,573 | 2% | 2,648 | 17.7% |

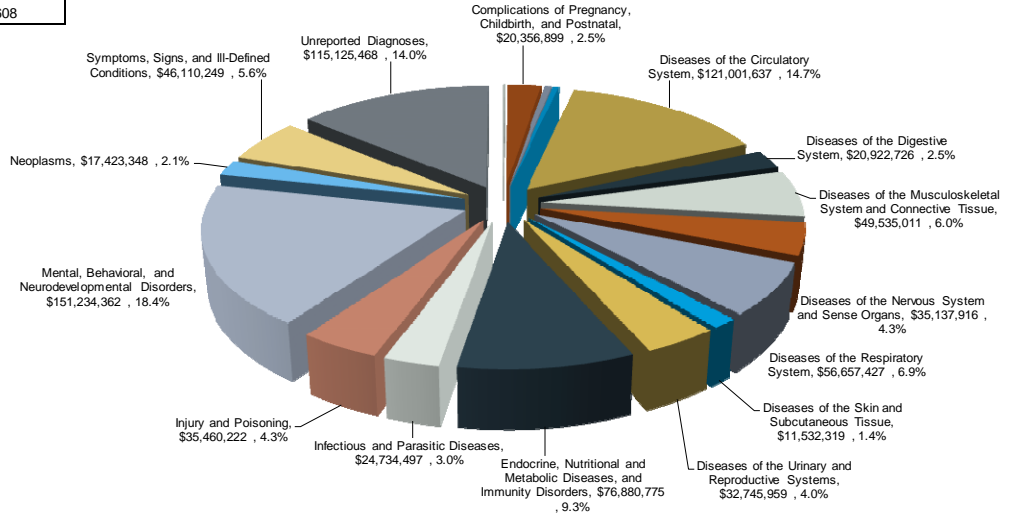
| Reimbursement for SoonerCare Members with Diabetes Type II by Top Diagnosis Groups (SFY2015) | | | | | | | | | | |
|--|---|---------------------|--------------------------|-------------------|-------------------|---|---------------------|--------------------------|-------------------|-------------------|
| Rank | Child | | | | | Adult | | | | |
| | Diagnosis Group | Total Reimbursement | Percent of Reimbursement | Utilizing Members | Percent Utilizing | Diagnosis Category | Total Reimbursement | Percent of Reimbursement | Utilizing Members | Percent Utilizing |
| 1 | No Diagnosis Reported | \$4,576,402 | 23.1% | 2,644 | 93.9% | No Diagnosis Reported | \$64,991,225 | 12.0% | 20,289 | 49.7% |
| 2 | Mood disorders | \$1,789,368 | 9.0% | 394 | 14.0% | Developmental disorders | \$52,121,725 | 9.6% | 1,046 | 2.6% |
| 3 | Developmental disorders | \$869,989 | 4.4% | 101 | 3.6% | Diabetes mellitus without complication | \$26,524,898 | 4.9% | 24,639 | 60.3% |
| 4 | Other nutritional; endocrine; and metabolic disorders | \$608,151 | 3.1% | 557 | 19.8% | Delirium; dementia; and amnesic and other cognitive disorders | \$23,779,428 | 4.4% | 2,414 | 5.9% |
| 5 | Attention-deficit; conduct; and disruptive behavior disorders | \$566,544 | 2.9% | 356 | 12.6% | Essential hypertension | \$20,843,621 | 3.9% | 14,423 | 35.3% |
| 6 | Adjustment disorders | \$488,469 | 2.5% | 245 | 8.7% | Mood disorders | \$15,970,050 | 3.0% | 8,283 | 20.3% |
| 7 | Paralysis | \$454,935 | 2.3% | 17 | 0.6% | Chronic obstructive | \$15,765,405 | 2.9% | 8,108 | 19.8% |
| 8 | Normal pregnancy and/or delivery | \$407,727 | 2.1% | 354 | 12.6% | Congestive heart failure; nonhypertensive | \$15,370,866 | 2.8% | 4,538 | 11.1% |
| 9 | Liveborn | \$401,628 | 2.0% | 65 | 2.3% | Acute cerebrovascular disease | \$14,789,777 | 2.7% | 2,350 | 5.8% |
| 10 | Complication of device; implant or graft | \$382,717 | 1.9% | 19 | 0.7% | Schizophrenia and other psychotic disorders | \$13,383,298 | 2.5% | 3,049 | 7.5% |

Pharmacy claims do not contain a diagnosis, and are included in the "No Diagnosis Reported" category.

Reimbursement by Body System for SoonerCare Members with Diabetes

| | Child | Adult | Total |
|----------------------|--------------|---------------|---------------|
| Total Cost | \$40,429,522 | \$783,417,710 | \$823,847,232 |
| Avg. Cost per Member | \$8,488 | \$14,045 | \$13,608 |

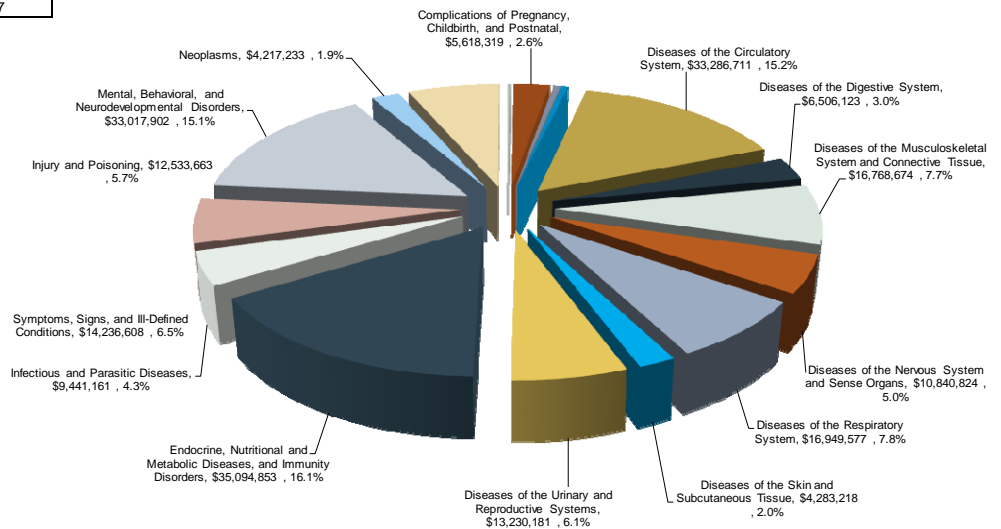
Reimbursement for SoonerCare Members with Diabetes by Body System



Reimbursement by Body System for SoonerCare Members with Diabetes Type I

| | Child | Adult | Total |
|----------------------|--------------|---------------|---------------|
| Total Cost | \$20,603,718 | \$242,775,106 | \$263,378,824 |
| Avg. Cost per Member | \$10,588 | \$16,273 | \$15,617 |

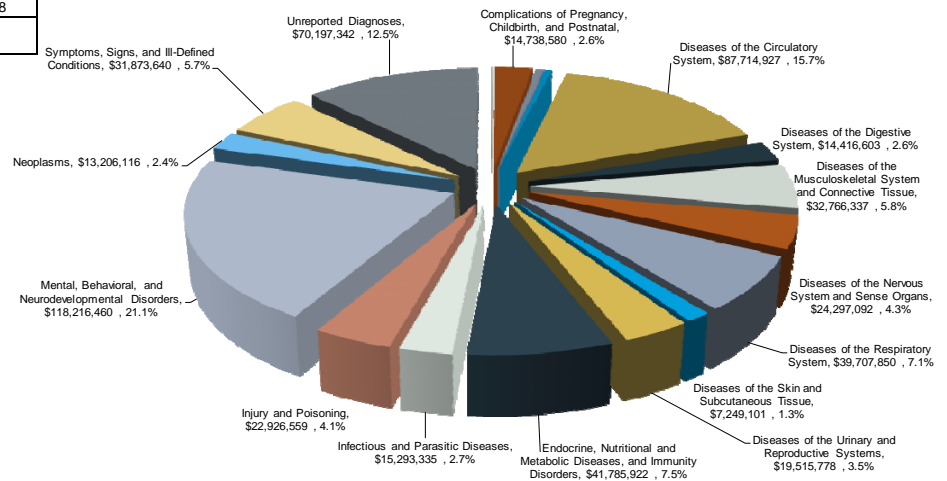
Reimbursement for SoonerCare Members with Diabetes Type I by Body System



Reimbursement by Body System for SoonerCare Members with Diabetes Type II

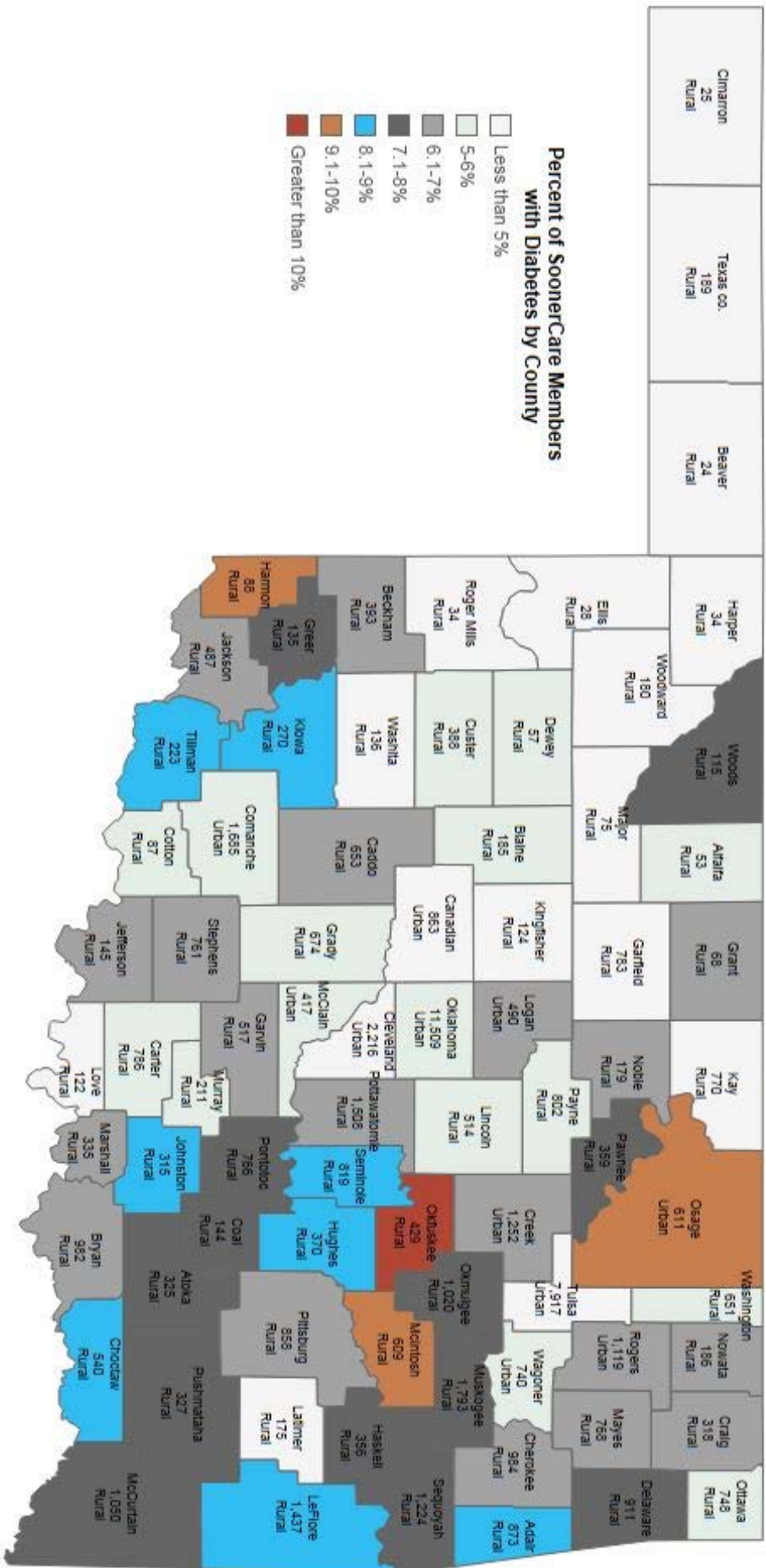
| | Child | Adult | Total |
|----------------------|--------------|---------------|---------------|
| Total Cost | \$19,825,804 | \$540,642,604 | \$560,468,408 |
| Avg. Cost per Member | \$7,038 | \$13,231 | \$12,832 |

Reimbursement for SoonerCare Members with Diabetes Type II by Body System



Note: Systems representing less than 1% of reimbursement are not labelled.

Count of SoonerCare Members with Diabetes by County SFY2015



Appendix A – Methodology

Listed below is the methodology used to identify the data in this report.

1. IDs were pulled from OHCA's Medicaid Management Information System (MMIS).
 - Only valid IDs with a paid claim using a diabetes diagnosis code (refer to appendix B for the list of diagnosis codes) were used.
 - The Department of Mental Health (DMH) uses OHCA's MMIS system to process claims. OHCA does not pay for these claims, and therefore these claims were excluded from this report.
 - Paid claims were based on dates of service (7/1/2014-6/30/2015).
2. Once the SoonerCare members with diabetes were identified, their IDs were used to pull all of their paid claims—not just claims related to diabetes.
 - Only paid claims were included.
 - Paid claims had to incur between the dates of service of 7/1/2014-6/30/2015 and had to be paid on or after 7/1/2014.
 - DMH claims were excluded.
 - By pulling the IDs and then pulling their claims, all claims type were captured in the data (e.g., pharmacy and compound drug claim types).
3. The claim data was then ran through a PERL analysis script.
 - PERL uses a hierarchy method to categorize members into one diabetic group (i.e., type I or type II). Meaning that if a person has type I diabetes and type II, they will only be counted in the type I category.

Appendix B - Codes Used

Comorbidities Diagnosis Codes

Chronic Lower Respiratory Disease: 490, 4910, 4911, 4918, 4919, 4920, 4928, 49122, 49321, 49121, 49322, 49120, 49320, 496, 49300, 49310, 49302, 49312, 49301, 49311, 49392, 49391, 49390, 49381, 49382, 49390, 4941, 4940

Coronary Artery Disease: 41400-41490

Degenerative Joint Disease: 71500-71598

Depression: 2962-29626 and 2963-29636

End Stage Renal Disease: 585.6

Heart Failure: 428.0-428.9

Hypertension: 40100-40190

Diabetes Diagnosis Codes

Type I: 25001, 25003, 25011, 25013, 25021, 25023, 2503, 25031, 25033, 25041, 25043, 25051, 25053, 25061, 25063, 25071, 25073, 25081, 25083, 25091, 25093, 3572, 5881

Type II: 249, 2490, 24900, 24901, 2491, 24910, 24911, 2492, 24920, 24921, 2493, 24930, 24931, 2494, 24940, 24941, 2495, 24950, 24951, 2496, 24960, 24961, 2497, 24970, 24971, 2498, 24980, 24981, 2499, 24990, 24991, 250, 2500, 2501, 2502, 2504, 2505, 2506, 2507, 2508, 2509, 25000, 25002, 25010, 25012, 25020, 25022, 25030, 25032, 25040, 25042, 25050, 25052, 25060, 25062, 25070, 25072, 25080, 25082, 25090, 25092

Other

Amputation: Procedure codes 84.10-84.19

Prescribed Psychostimulants - Antidepressants: State Therapeutic Class Code 11