

Examining Disparities in Diabetes Hospitalization and Diabetes Self- Management Education (DSME) Programs in Florida 2004-2014

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Research Excellence Initiative- Orlando FL

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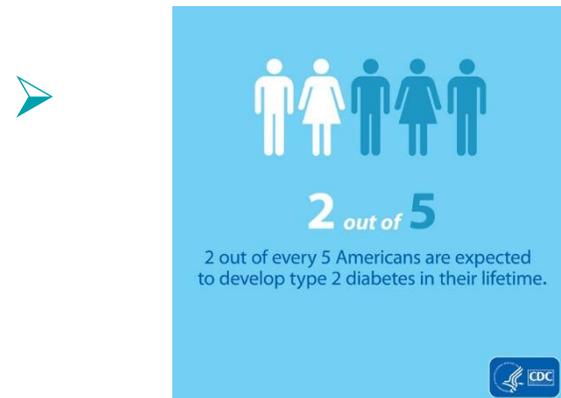


Outline

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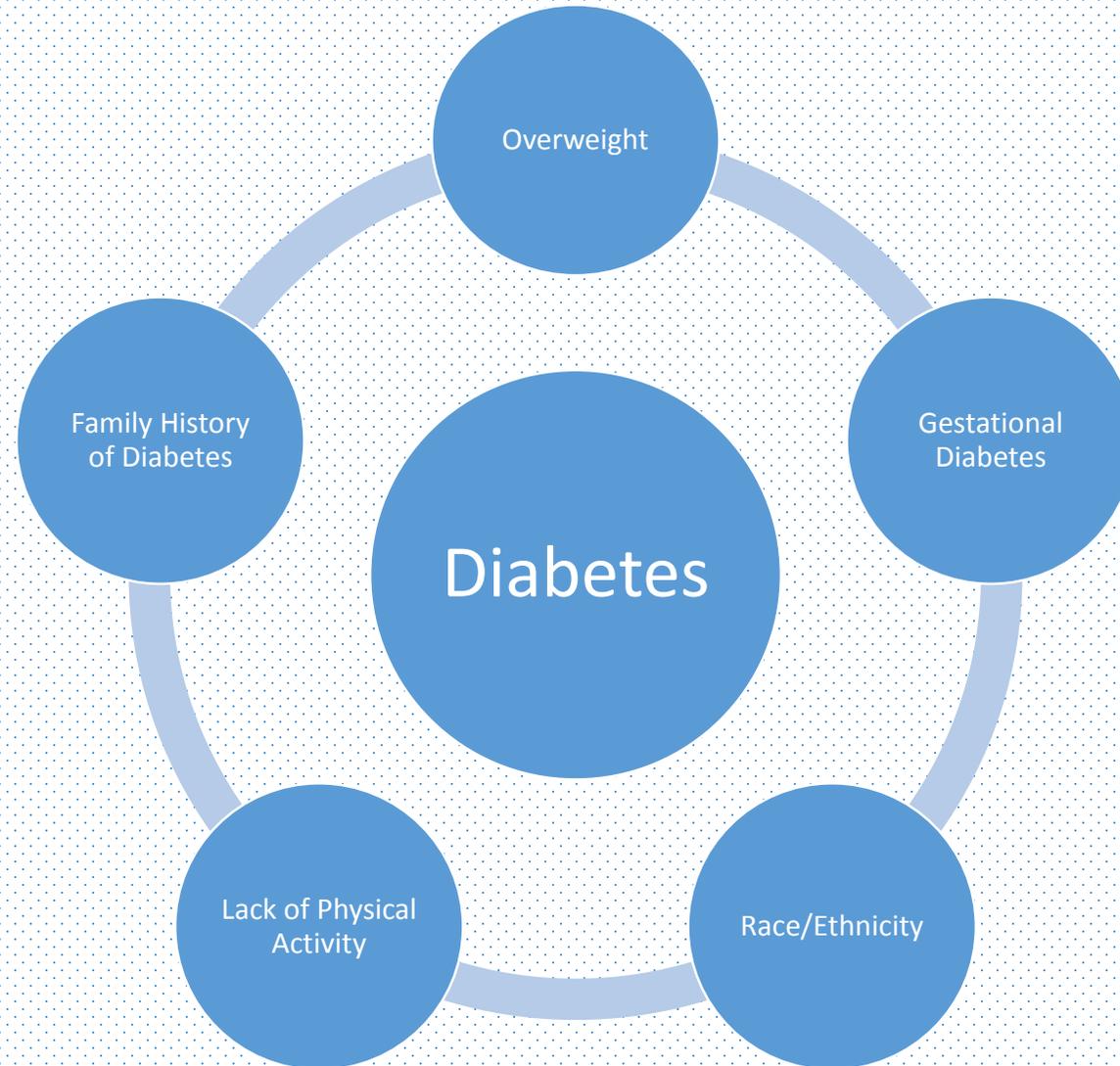
Introduction

- Diabetes is a serious health condition that affects the body's glucose intake and metabolism
- 29.1 Million people have diabetes. That is 1 out of every 11 people have diabetes and 1 out of 4 don't know they have diabetes

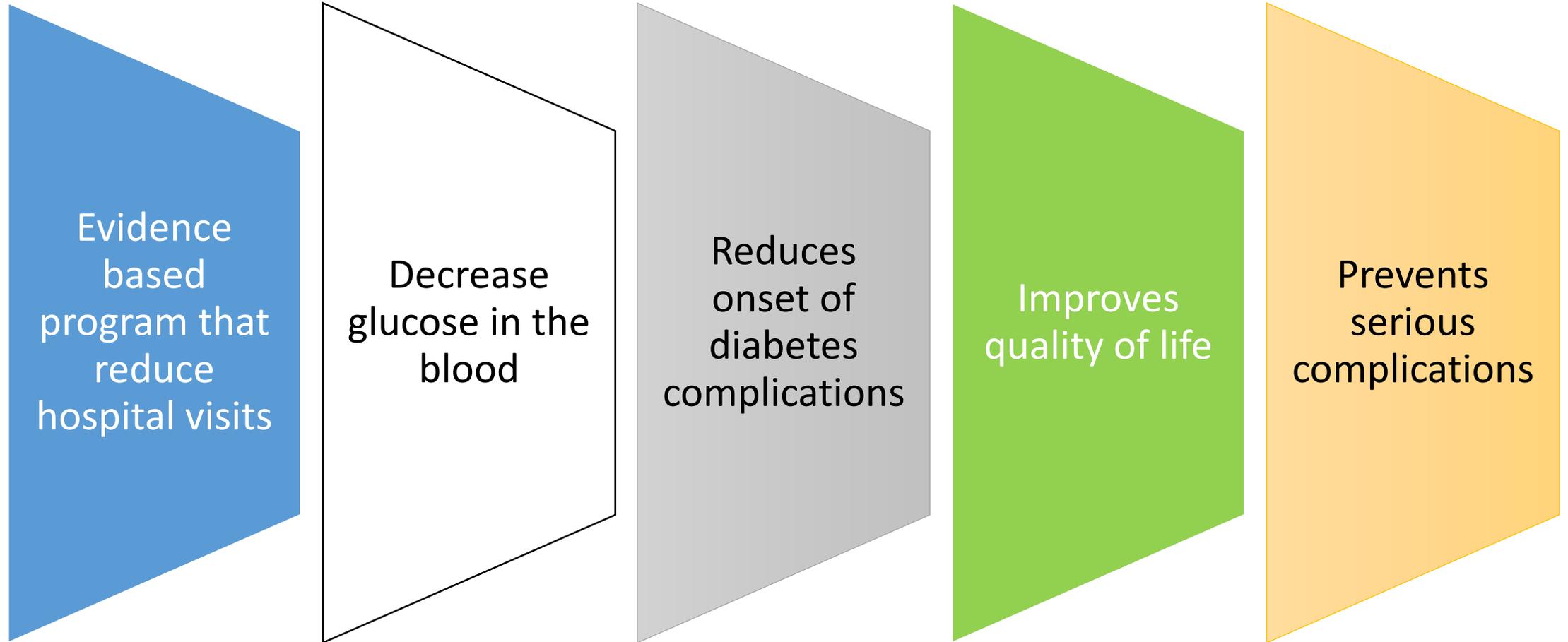


- The 2014 Florida Behavioral Risk Factor Surveillance System indicates that one out of nine Florida adults (11.2%) were diagnosed with diabetes

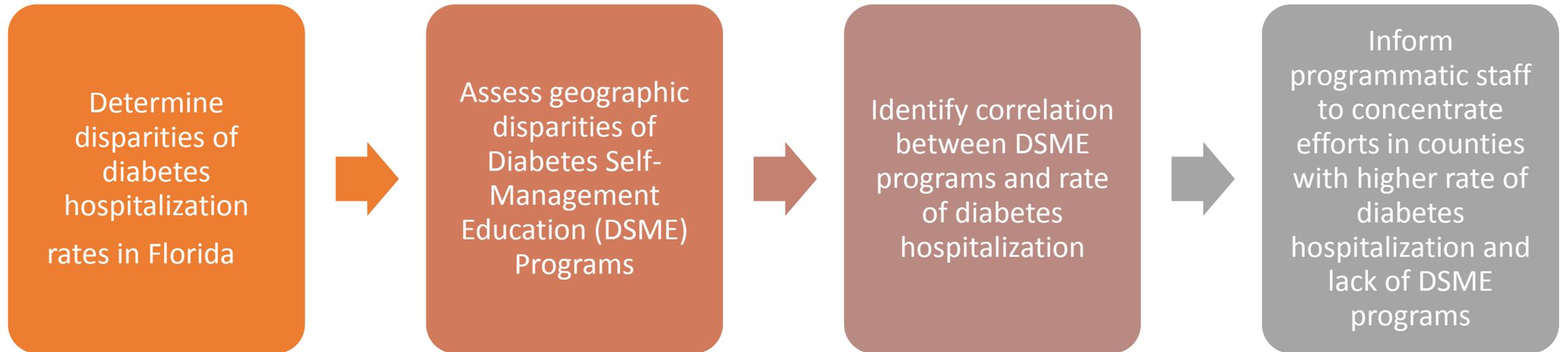
Diabetes Risk Factors



Diabetes Self Management Education (DSME) Programs



Objectives



Research Question

Disparities and Burden of Diabetes Hospitalization

- Are there any disparities in hospitalization over time?
- Are there any disparities by age, gender, race/ethnicity?
- Are there any disparities by geographic location of residency?
- What is the average length of stay?
- Are there disparities by payer type?
- What are the total cost of diabetes? By county per capita? Per hospitalization?

Diabetes Self Management Education (DSME) Programs

- Are there any geographic disparities in availability of DSME programs over time?
- Is there any correlation between availability of programs and rate of diabetes hospitalization?

Methods

➤ Study Area:

- ❖ Entire Florida population from 2004-2014

➤ Data Source:

- ❖ Agency for Health Care Administration- Hospital Discharge Data (2004-2014) and ICD-9-CM codes 250
- ❖ American Diabetes Association and American Association of Diabetes Educators- DSME Programs
- ❖ US census Bureau- County boundary shape file
- ❖ Florida CHARTS- Population estimates

➤ Data Analysis:

- ❖ SAS 9.4- All descriptive statistical analysis
- ❖ ArcGIS 10.3- All cartographic manipulation

Age-adjusted Diabetes Hospitalization Rates Over Time in Florida, 2004-2014



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Age-adjusted	15.6	16.0	16.0	16.1	16.8	17.4	18.1	18.4	18.4	18.6	19.3

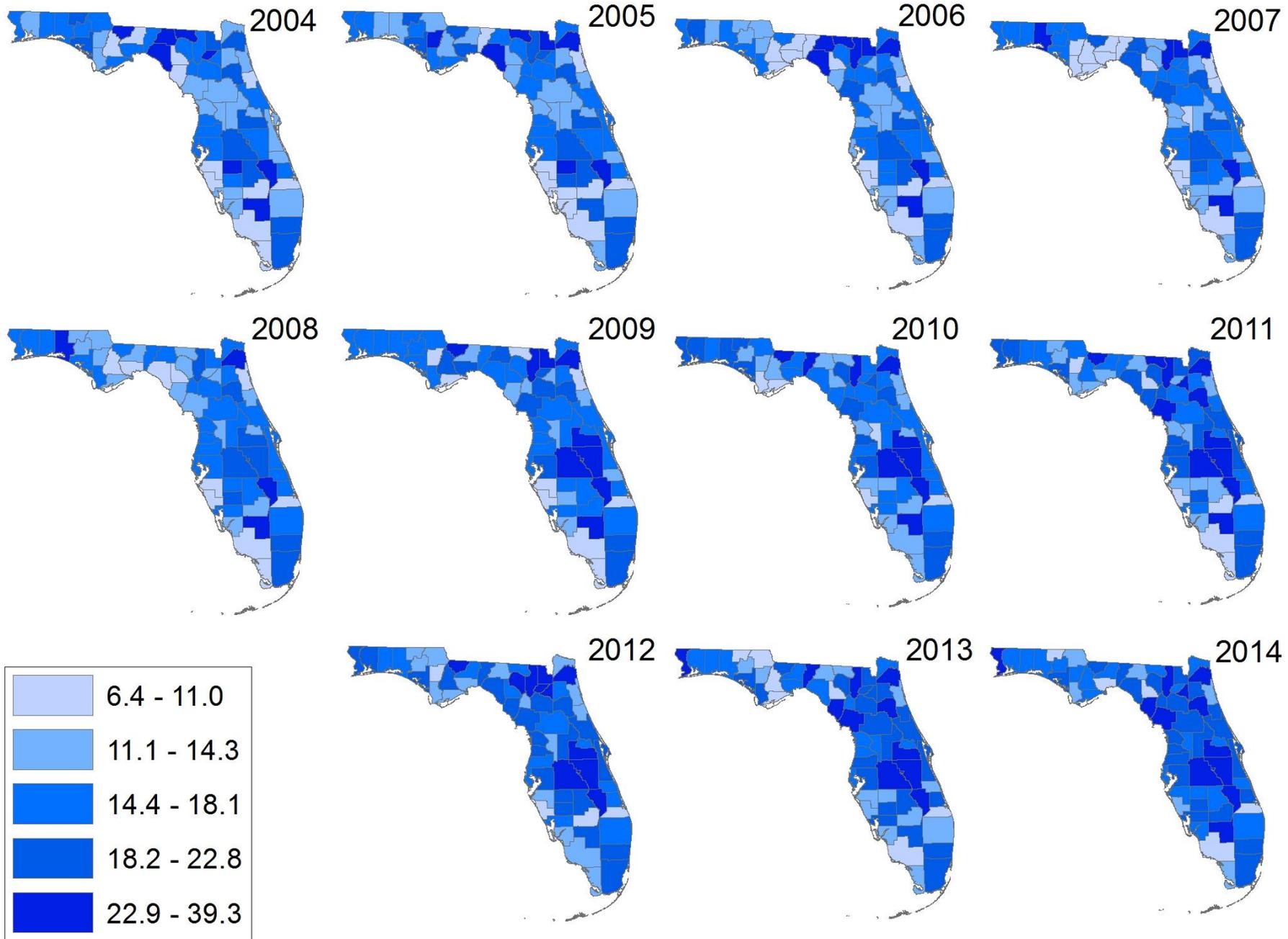
Age-adjusted

Year

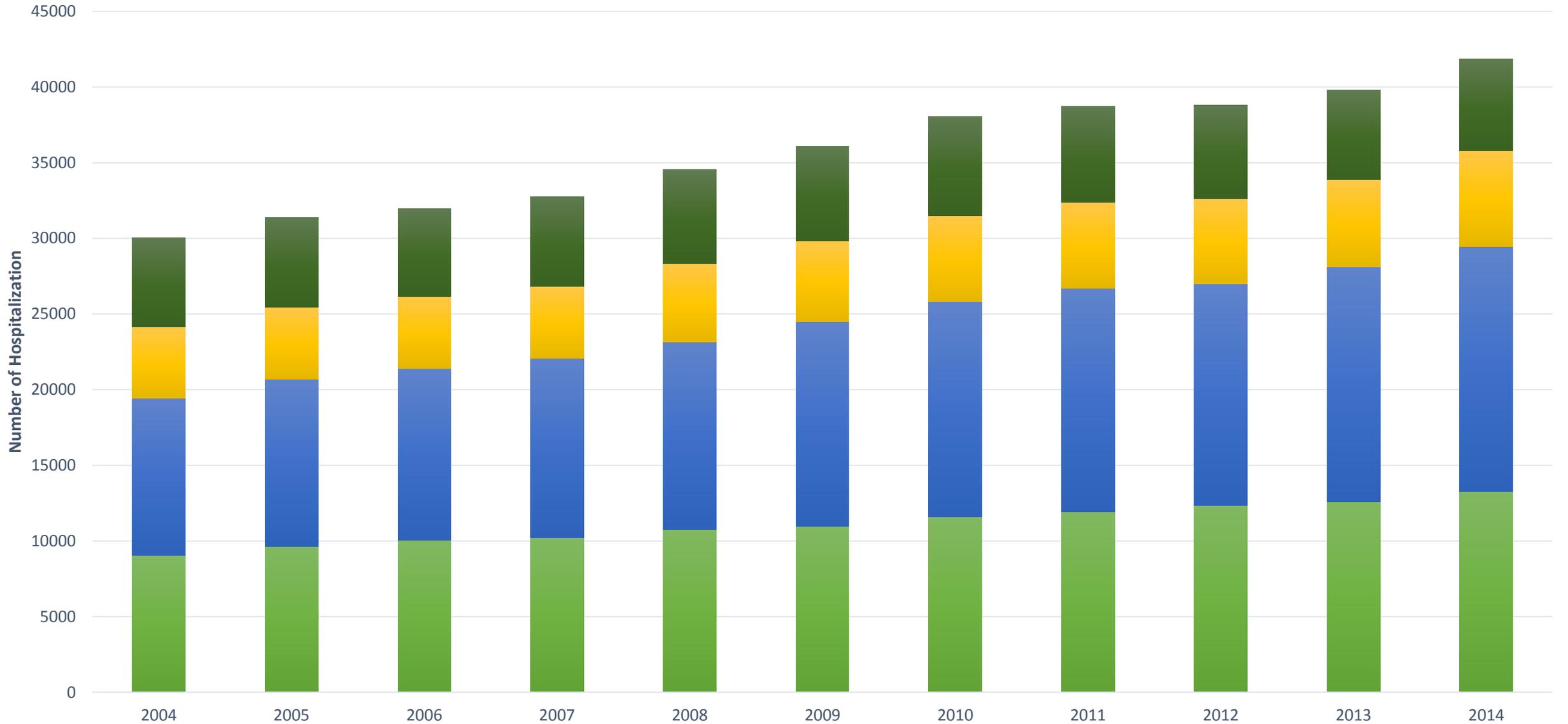
Age-adjusted



Age Adjusted Diabetes Hospitalization Rate by County per 10,000 persons 2004-2014

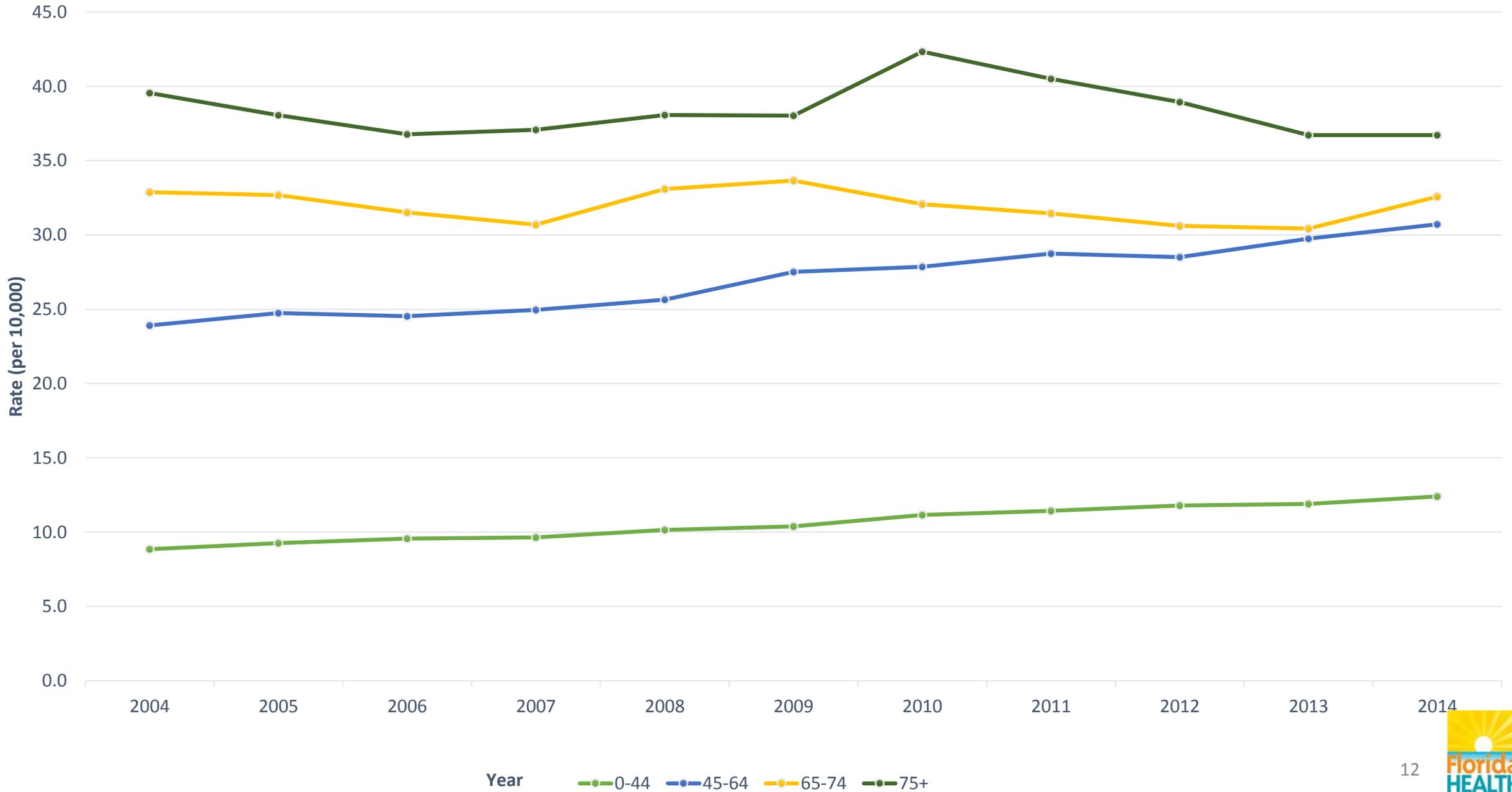


Number of Diabetes Hospitalization by Age in Florida, 2004-2014

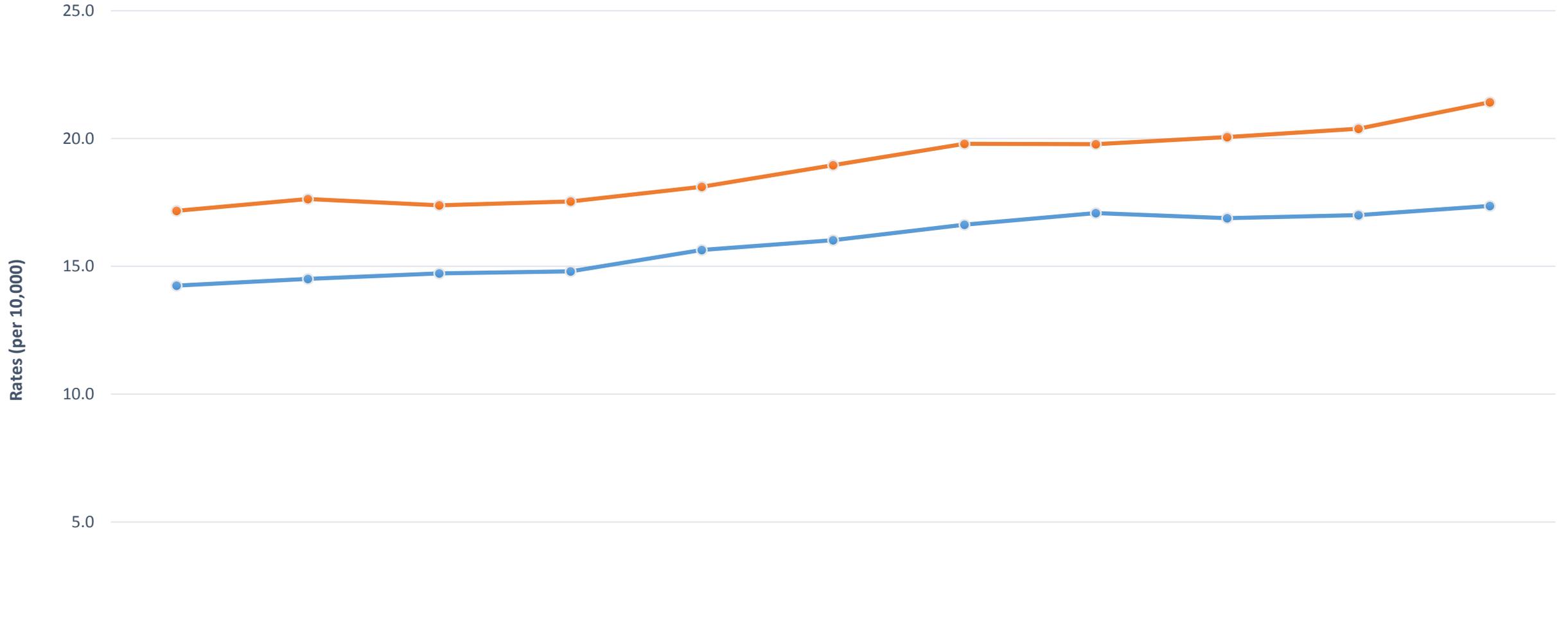


Year 0-44 45-64 65-74 75+

Age-specific Rates for Diabetes Hospitalization , Florida 2004-2014



Age-adjusted Diabetes Hospitalization Rates by Gender, Florida 2004-2014

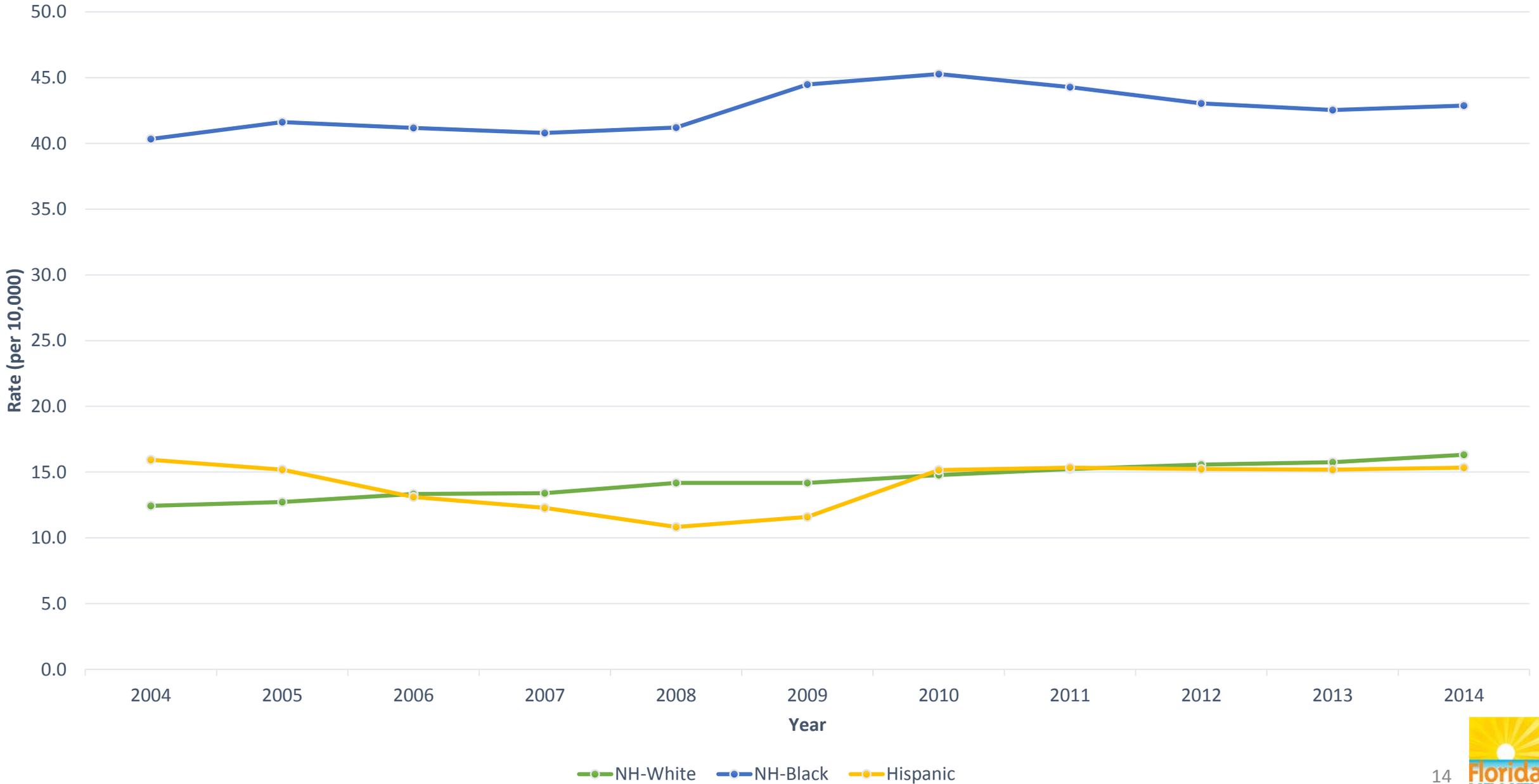


	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Female	14.2	14.5	14.7	14.8	15.6	16.0	16.6	17.1	16.9	17.0	17.4
Male	17.2	17.6	17.4	17.5	18.1	19.0	19.8	19.8	20.1	20.4	21.4

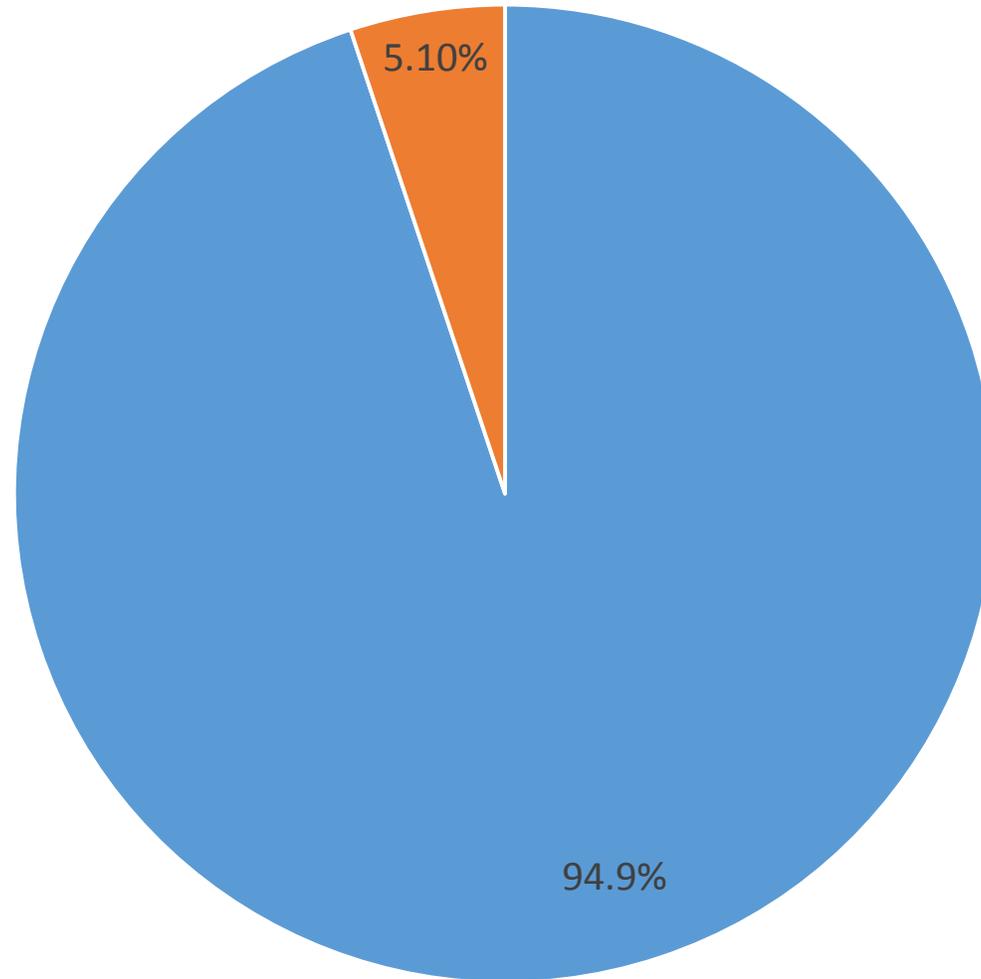
Year ● Female ● Male



Age-adjusted Diabetes Hospitalization Rates by Race/Ethnicity, Florida 2004-2014

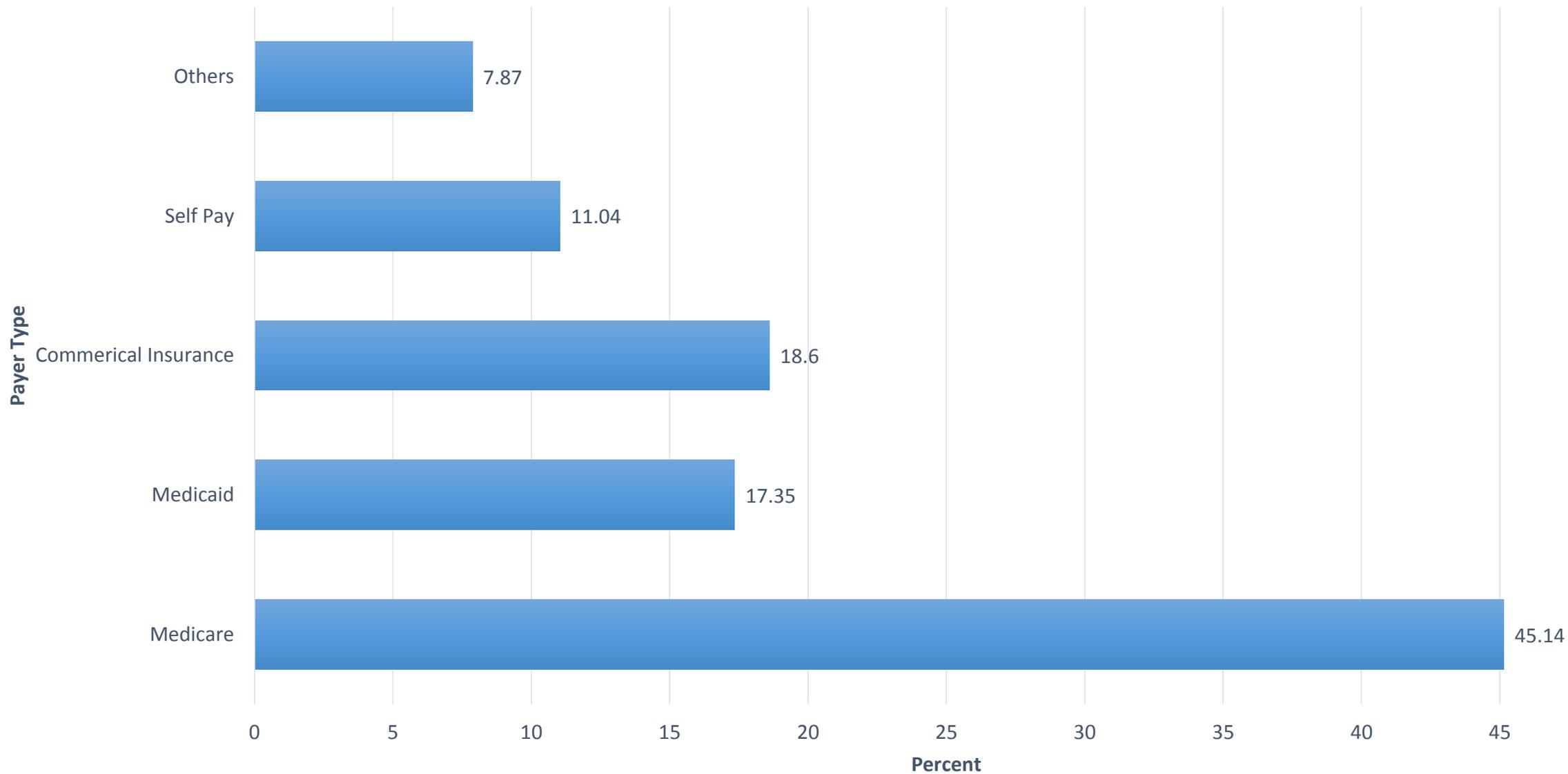


Diabetes Hospitalization by Urban/Rural Counties in Florida 2004-2014

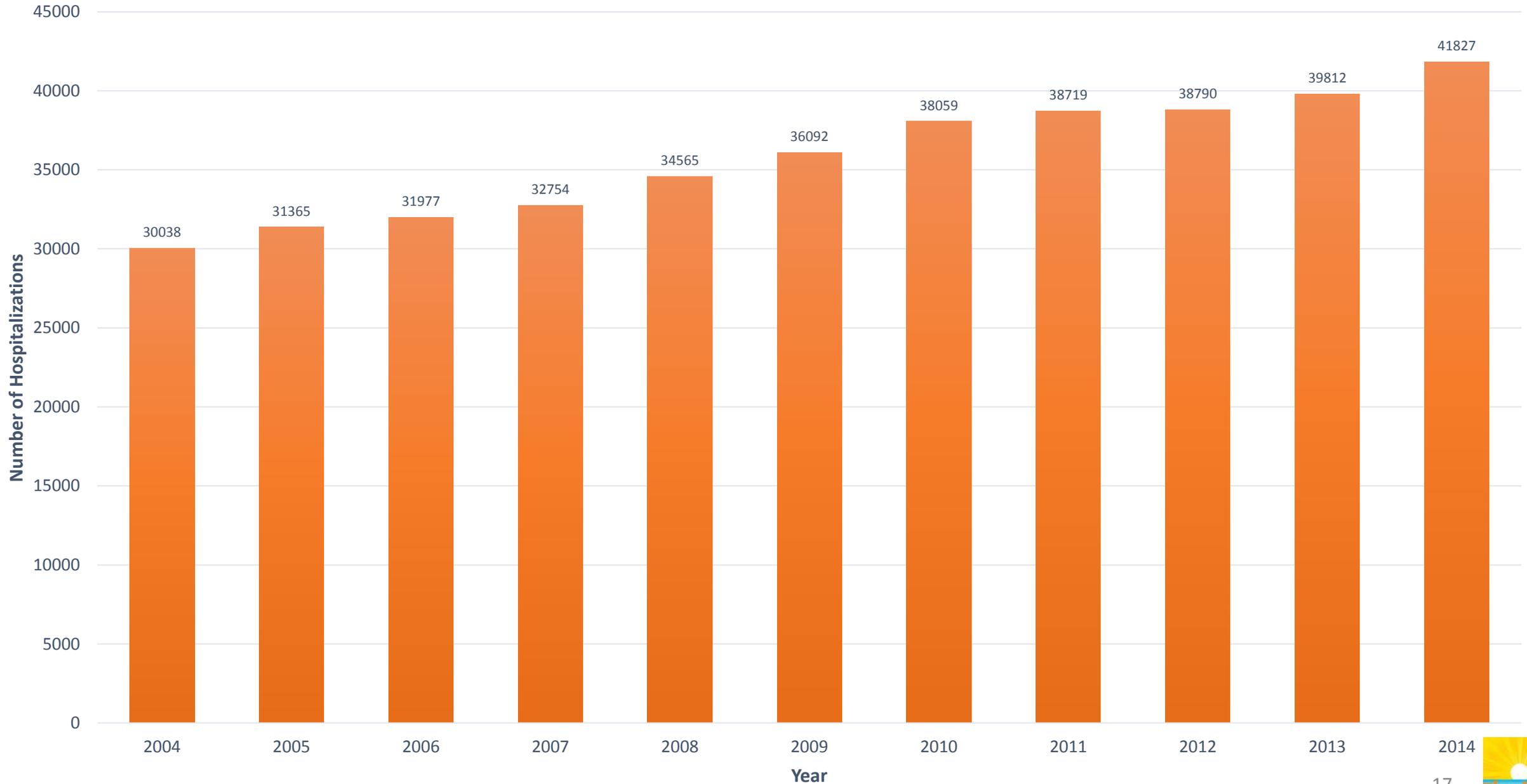


■ Urban ■ Rural

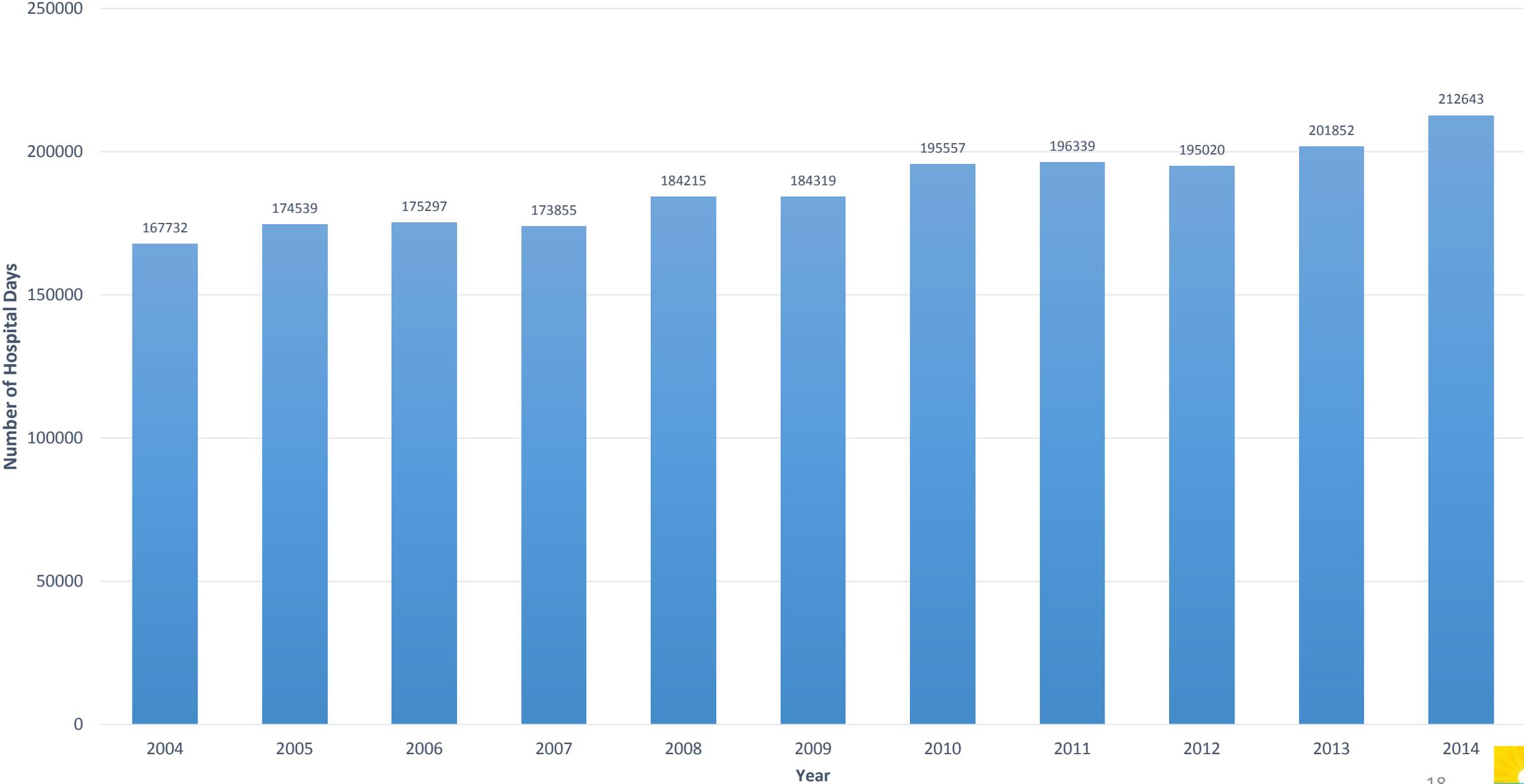
Diabetes Hospitalization by Payer, Florida 2004-2014



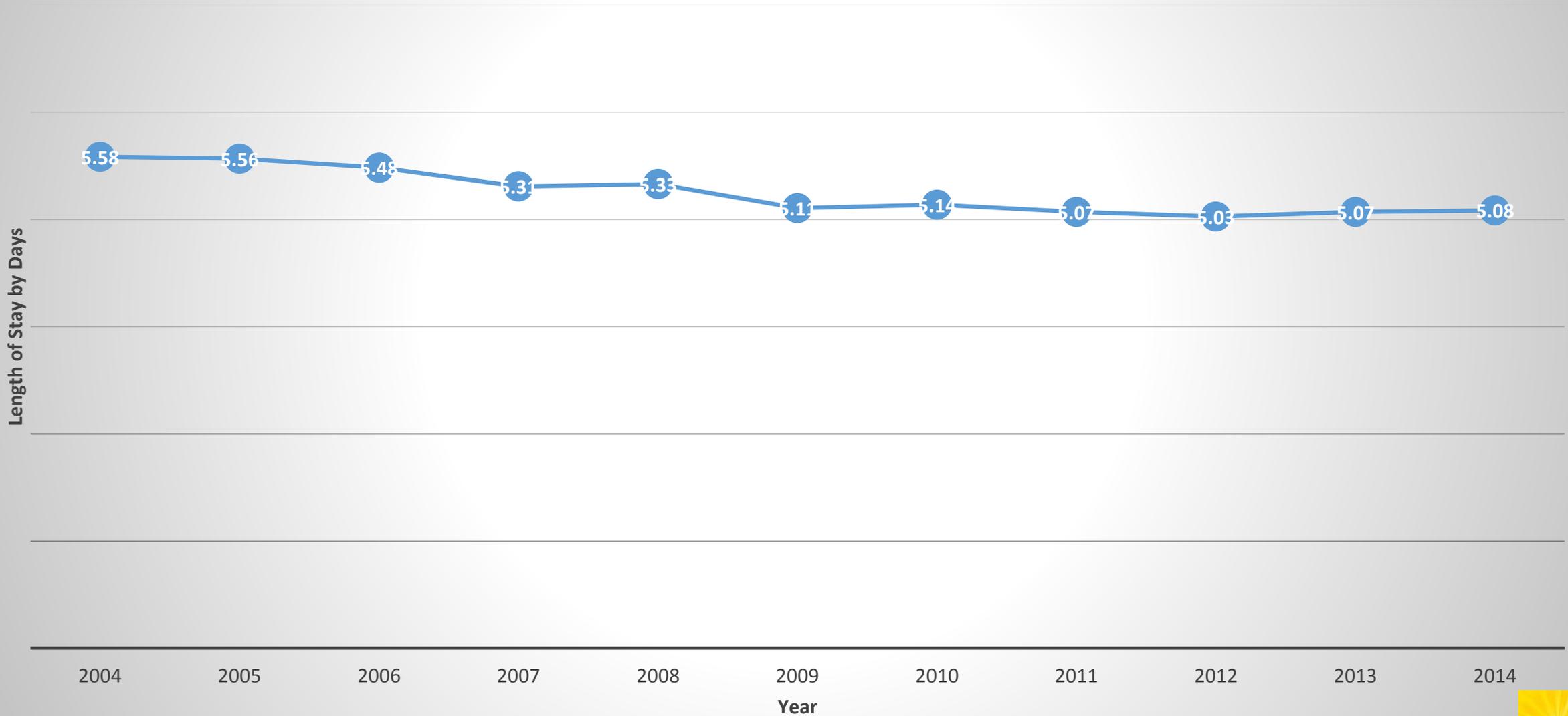
Total Number of Hospitalizations in Florida, 2004-2014



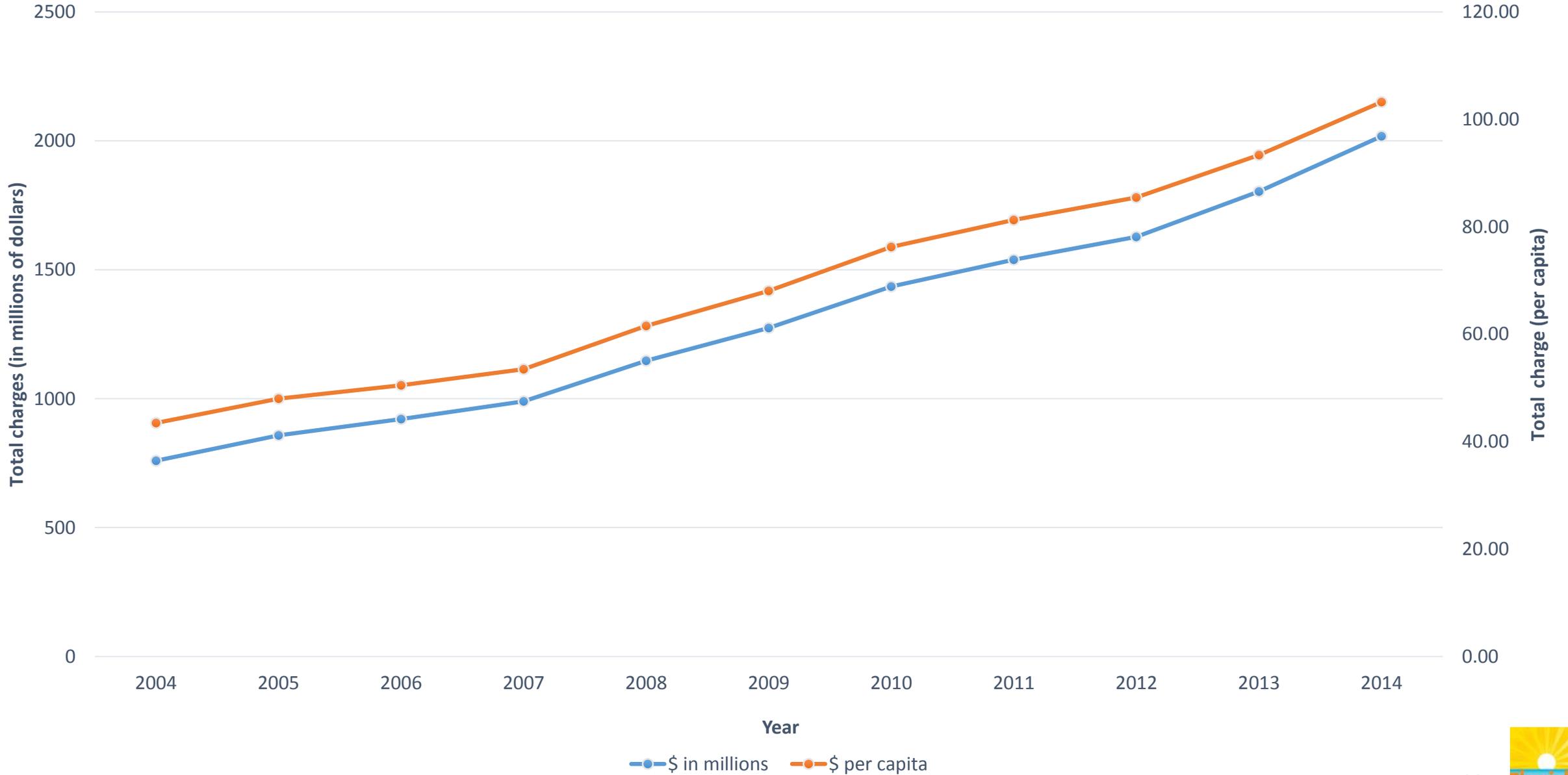
Total Number of Hospital Days in Florida, 2004-2014



Average Length of Stay by Days for Diabetes Hospitalization in Florida 2004-2014

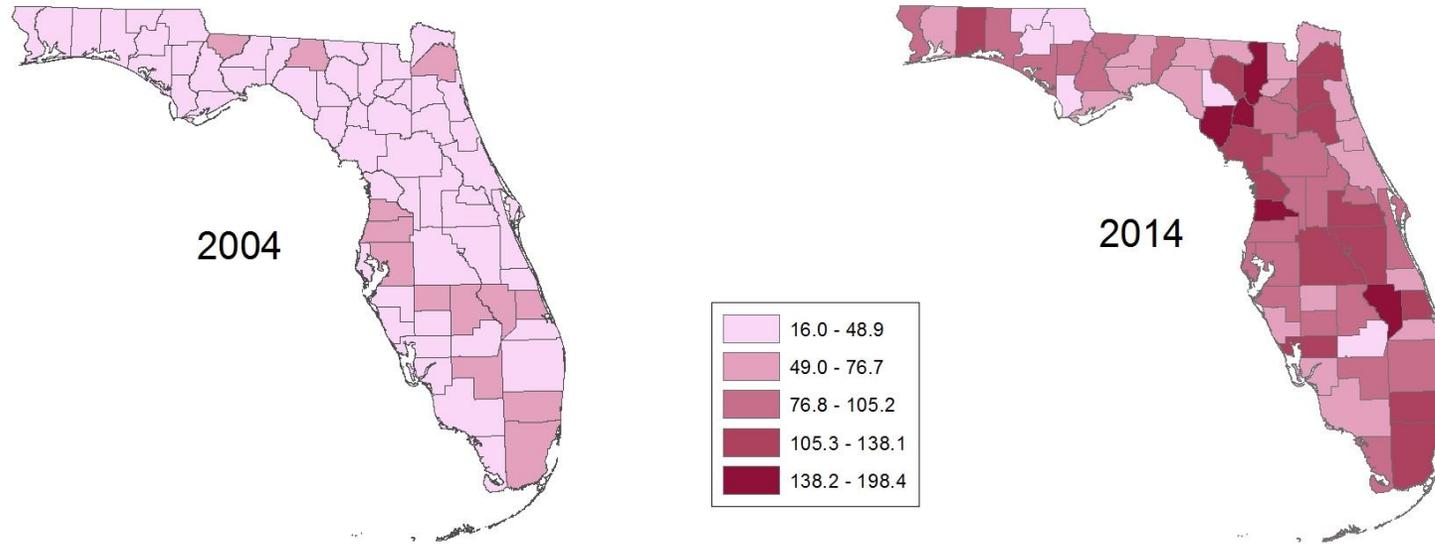


Total Charges of Diabetes Hospitalization, Florida 2004-2014

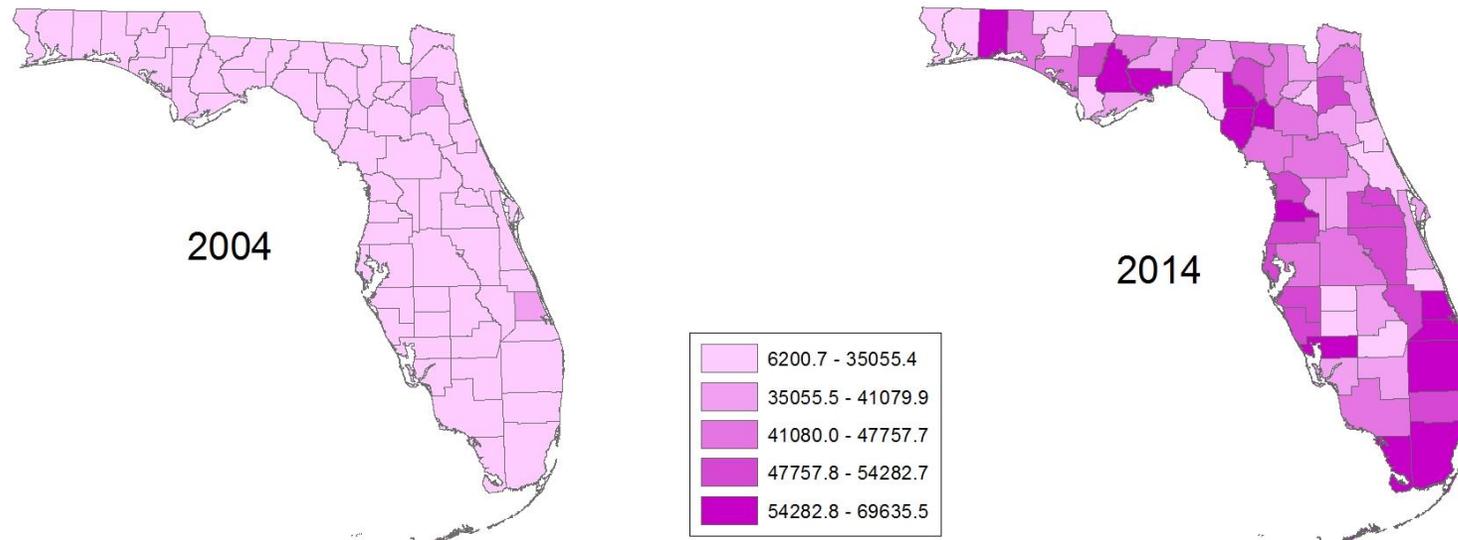




Total Charges of Diabetes Hospitalization Percapita between 2004 and 2014



Total Charges of Diabetes Hospitalization Per Hospitalization between 2004 and 2014



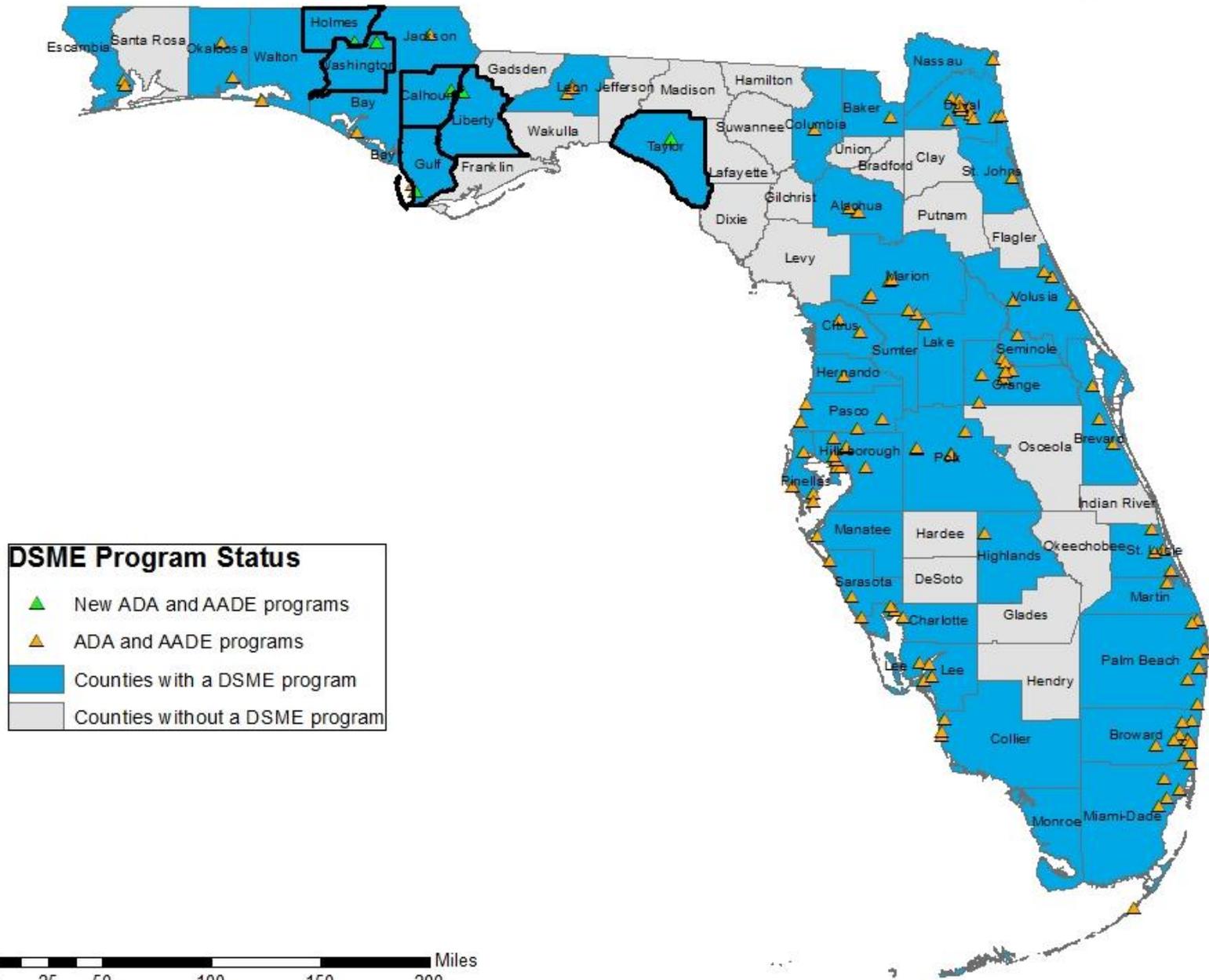
Diabetes Self Management Education (DSME) Programs

Contacted ADA
and AADE
regarding DSME
Programs

Contacted third
party company
that has historical
data of programs

Once list from
2004-2014 is
acquired, data
will be mapped

Florida Counties with ADA-recognized and AADE-accredited DSME Programs, 2016



Discussion

- Diabetes Hospitalization rates have been increasing from 2004-2014
- Hospitalization rates vary amongst different counties and variation are also seen over time
- There are noted disparities by age, gender, race/ethnicity, payer type and geographic location.
- Total number of hospitalization and hospital days has increased, but it could be due to population increase
- Average length of stay over the past 11 years has been similar
- Total cost of diabetes has increased, including increase in per capita and per hospitalization
- Disparities over availability of DSME programs have not been analyzed yet.

Continued/Future Studies

- Map the location of DSME programs by county from 2004-2014 to determine correlation between availability of program and hospitalization rates
- Analyze variations in length of stay and cost by race/ethnicity, gender, age and county
- Analyze difference in age, race/ethnicity in rural vs. urban counties
- Analyze disparities in diabetes co-morbid conditions

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 - ❖ Chronic Disease Epidemiologist- Florida Department of Health

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