

Leisure Time Physical Inactivity, Obesity and Diabetes Rates in the Southern United States

Jennifer O'Connor MS, RN, CFCN, CNE, PhD Student, Jane Scharff MN, RN, PhD(c), Deidre Wipke-Tevis PhD, RN, Emily Leary PhD



BACKGROUND

- Nearly 29 million Americans have diabetes (DM)
- 86 million have prediabetes
- Physical inactivity & obesity are modifiable risk factors for DM
- People in the Southern United States (US) are more likely to be inactive & obese than those in other US regions

PURPOSE

- To explore changes in and relationships among leisure time physical inactivity (LTPIA), obesity & DM rates in the US from 1994-2012

RESEARCH QUESTIONS

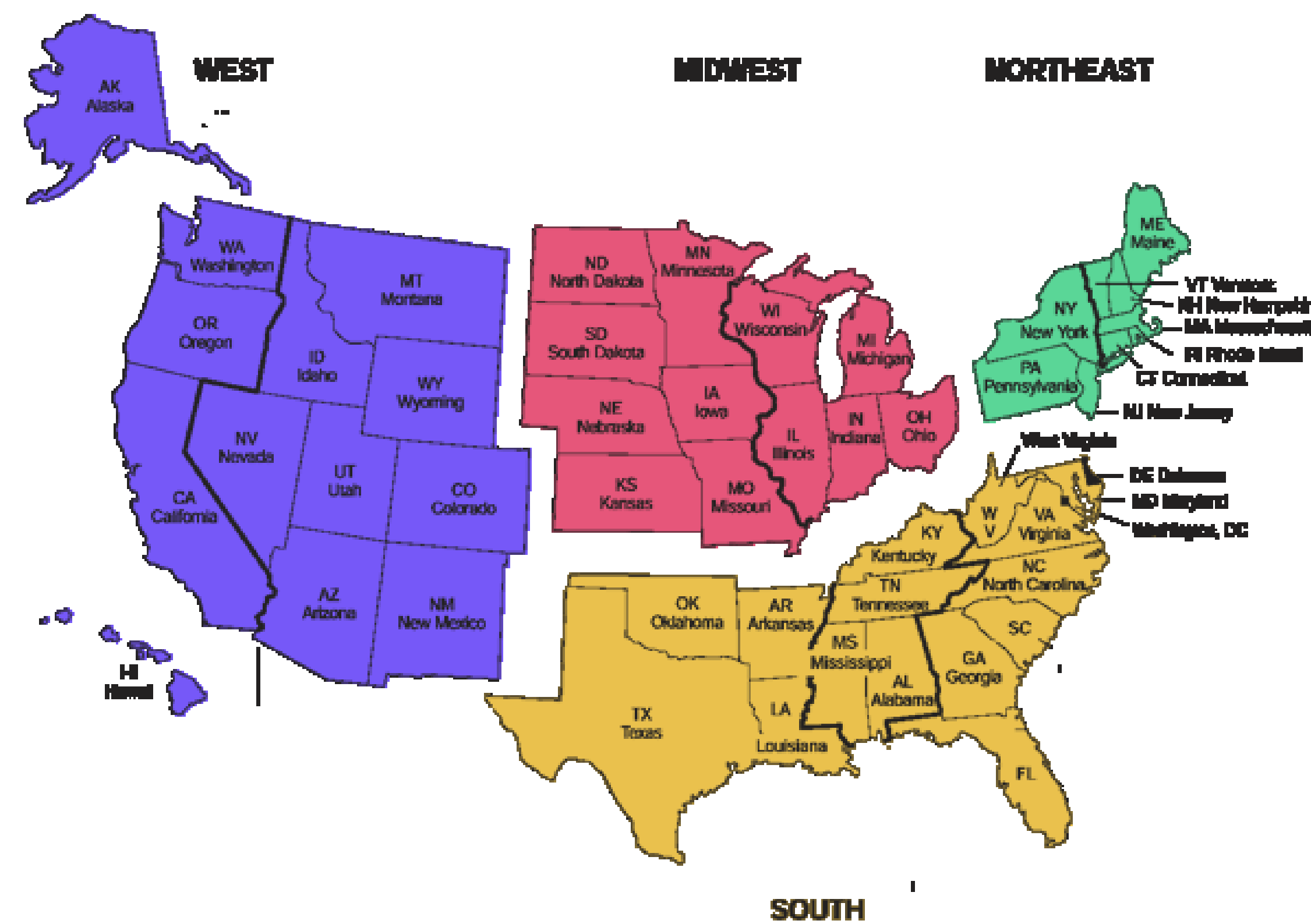
- How does the Southern US compare to other US regions in rates of obesity, LTPIA and DM?
- Is there a relationship between LTPIA and obesity on DM rates over time?

DATA SOURCE

- Centers for Disease Control & Prevention Behavioral Risk Factor Surveillance System (BRFSS)
- Annual telephone survey of over 400,000 Americans regarding health-related risk behaviors

VARIABLE DEFINITIONS

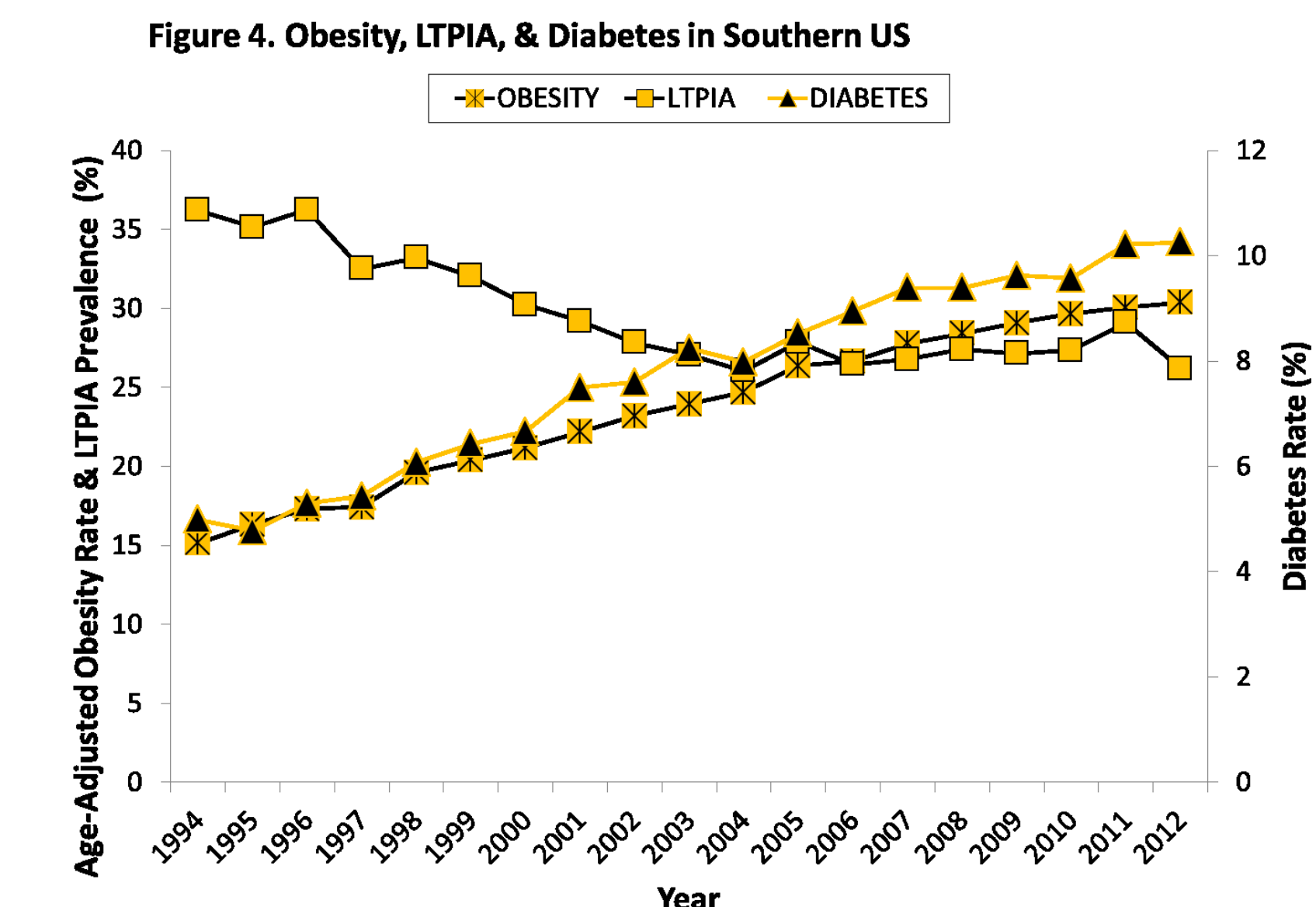
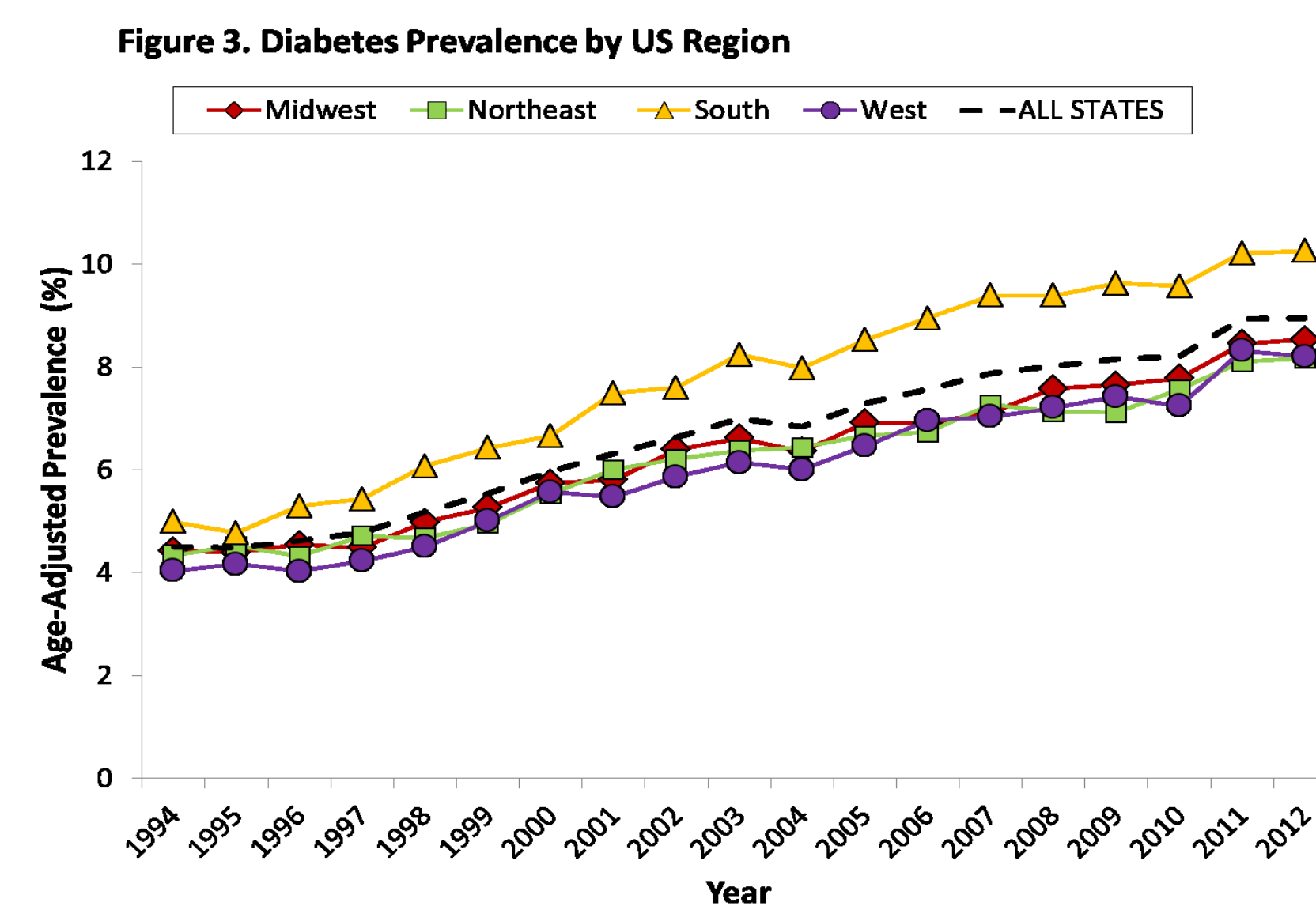
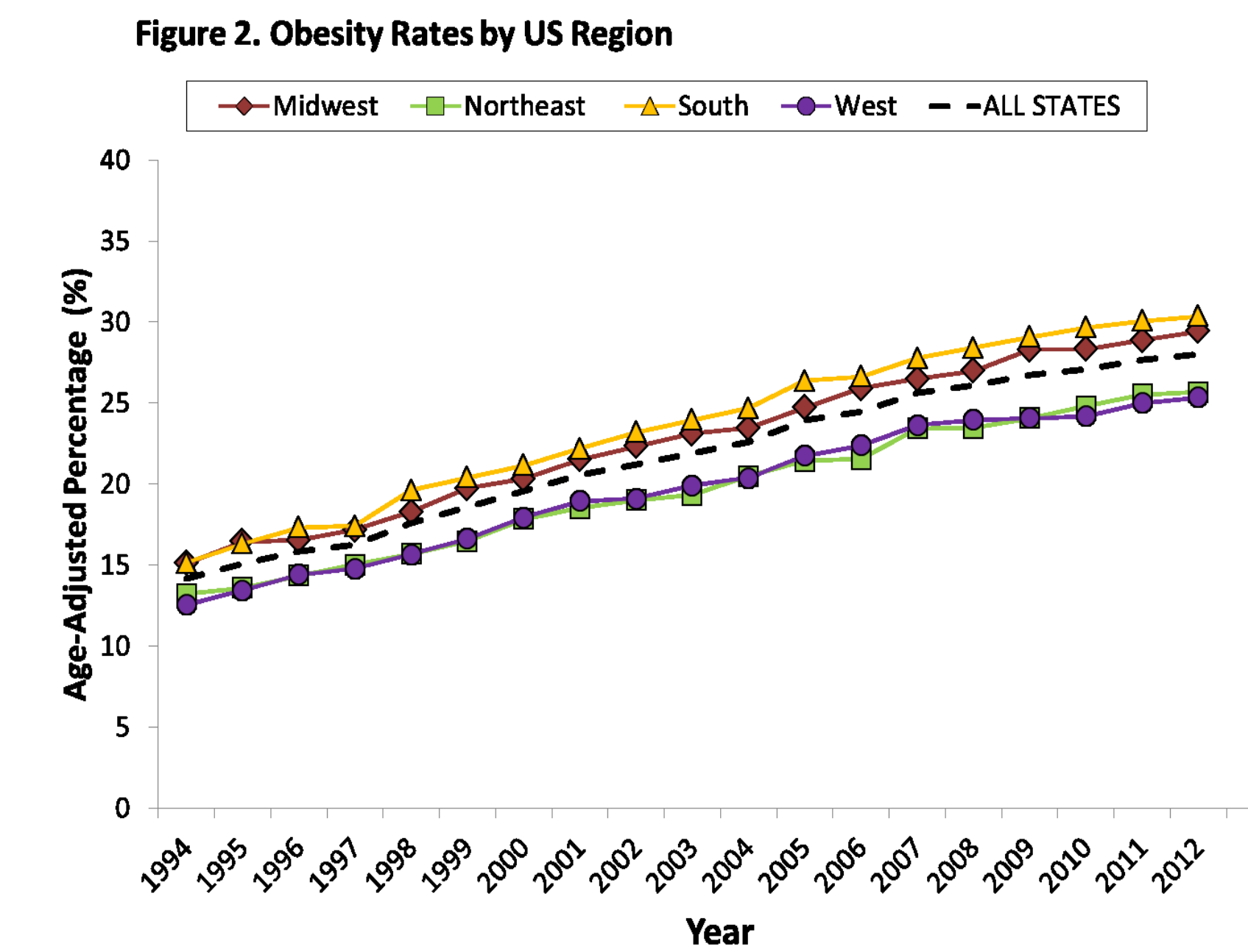
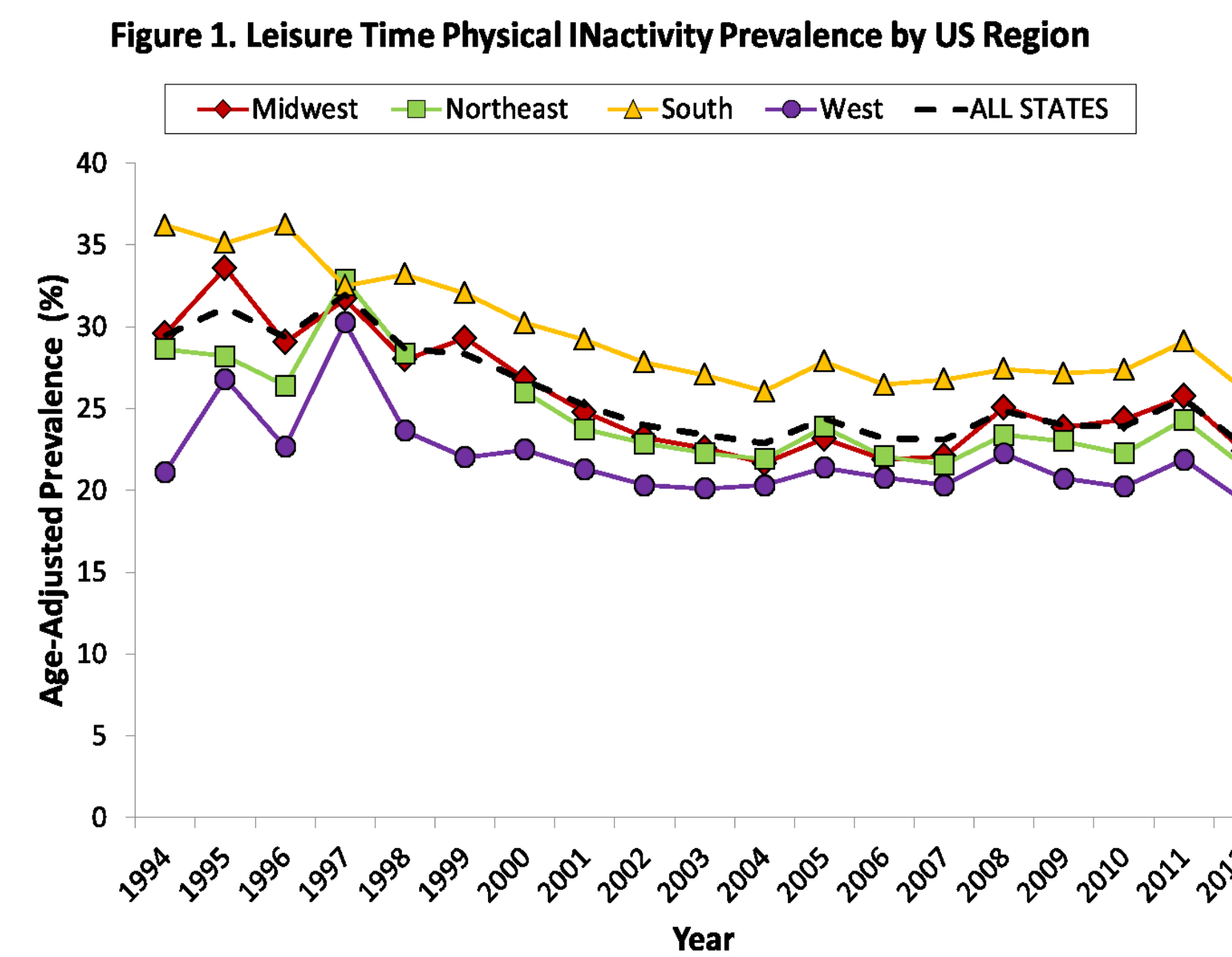
- LTPIA:** 'No' response to the question: During the past month, other than your regular job, did you participate in any physical activities or exercise, such as running, calisthenics, golf, gardening, or walking for exercise?
- DM:** 'Yes' response to the question: Has your doctor ever told you that you have diabetes?
- Obesity:** BMI ≥ 30 kg/m² based on self-reported height and weight
- Regions:** Based on US Census Bureau map of Census Regions and Divisions of the US



RESULTS

- Southern LTPIA rates ↓28%, while National LTPIA rates only ↓22%
- Southern & National Obesity & DM rates ↑100%
- Nationally, LTPIA & Obesity account for 75% of the variability in DM rates ($R^2=0.748$, $p<.05$)

RESULTS



CONCLUSIONS

- Age adjusted LTPIA, Obesity & DM rates are higher in the South than in other US regions
- Although self-reported LTPIA rates have dropped, both obesity & DM rates have continued to rise over the 19 year period
- Study limitation: Based on LTPIA definition, one episode of exercise during the month would qualify a person as 'NOT inactive'
- Revision of the LTPIA question on the BRFSS is recommended
- Future research needs to identify factors that contribute to higher rates of LTPIA, obesity and diabetes in the South

Jennifer O'Connor: JO2N8@mail.Missouri.edu