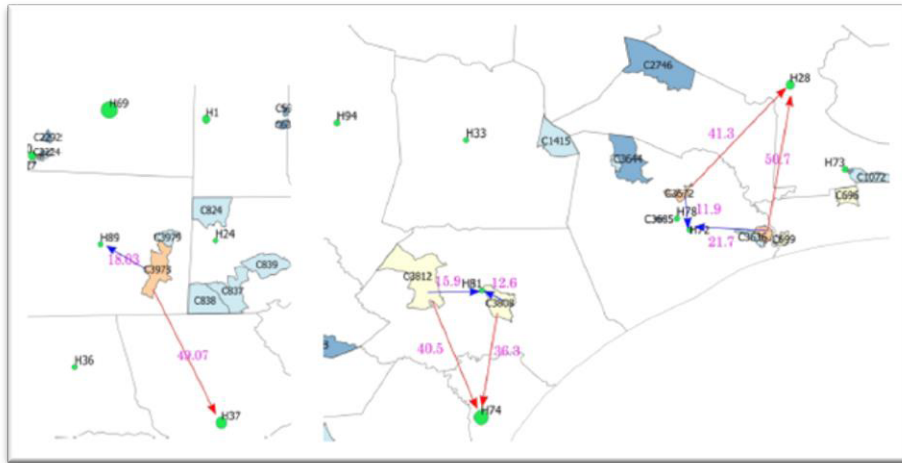


Mariama Oumarou Sidibe

Computational Science & Engineering

Title: “Impact of the Affordable Care Act on Hospital Accessibility”

Major Professor: Dr. Mark. L. Burkey



Map showing clusters of block groups that are highly affected

RESEARCH QUESTIONS/PROBLEMS:

- The 2010 Affordable Care Act (ACA) aims to expand health insurance coverage to over 30 million previously uninsured Americans. Many people are uninsured and cannot afford access to healthcare. However, even before this happens, we are facing supply-side problems. Many regions face shortages of hospitals/doctors, defined by low geographical accessibility and/or long queues.

METHODS:

- Using road network distances and estimated travel time by car, hospital bed capacities, and the location of the population in census block groups, we developed a capacitated assignment problem for the before and after ACA.

RESULTS/FINDINGS:

- we produced estimates of insurance coverage at the block group level for the 48 contiguous states
- we estimated the overall impact on accessibility to the assigned hospital as measured by the total travel time and the average travel time
- we identified areas of a state that will be most impacted by giving health insurance to everyone.

SIGNIFICANCE/IMPLICATIONS:

- The methods and results found in this research can be used to help project necessary increases in hospital capacity that might result from increases in health care insurance coverage in the population.