

Analyzing the Impacts of Hurricane Katrina from a Social & Economic Perspective

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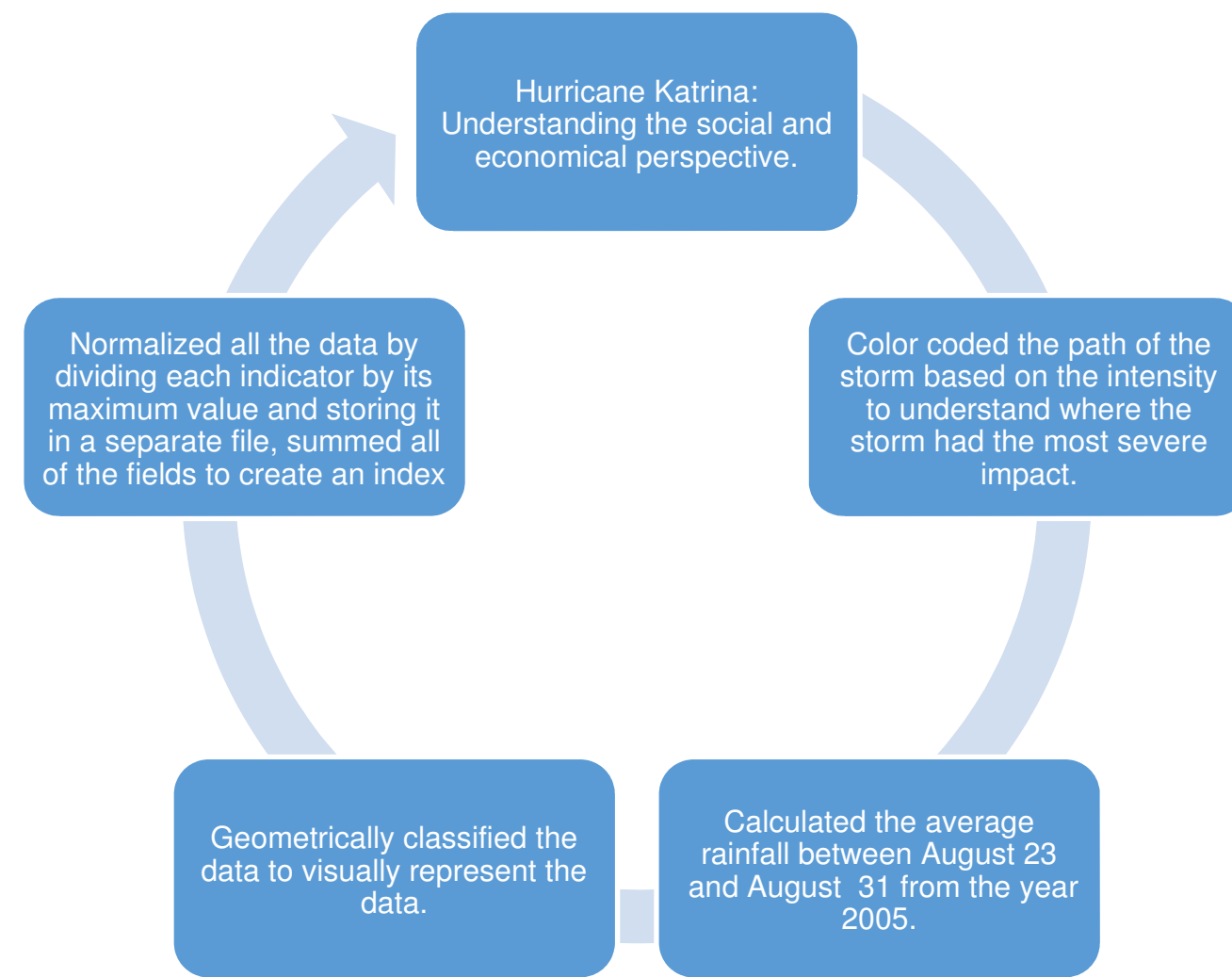
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Abstract

Hurricane Katrina was the largest and third strongest hurricane ever recorded to make landfall in the U.S., affecting over 15 million people in many different ways. The storm's post impacts were wide ranging from a social and economic perspective: rising property values, changing transportation patterns, and destabilizing the medical system. Essentially, the impact of the storm created a domino effect that was felt years later. To examine the impact of the storm, geospatial techniques were deployed to analyze specific social and economic variables. Furthermore, the software ArcMap was utilized to display the demographic data that was gathered from the U.S. Census Bureau. One of the primary spatial products developed was a socioeconomic index that allowed us to compare and contrast the different impacts of the storm throughout the city. The results of this analysis indicated that minorities and lower income residents were the most severely impacted. In conclusion, the analysis provides validation that the city needed to be more proactive in assisting residents in an equal manner, which could have mitigated the post instability within the city.

Methods



Background

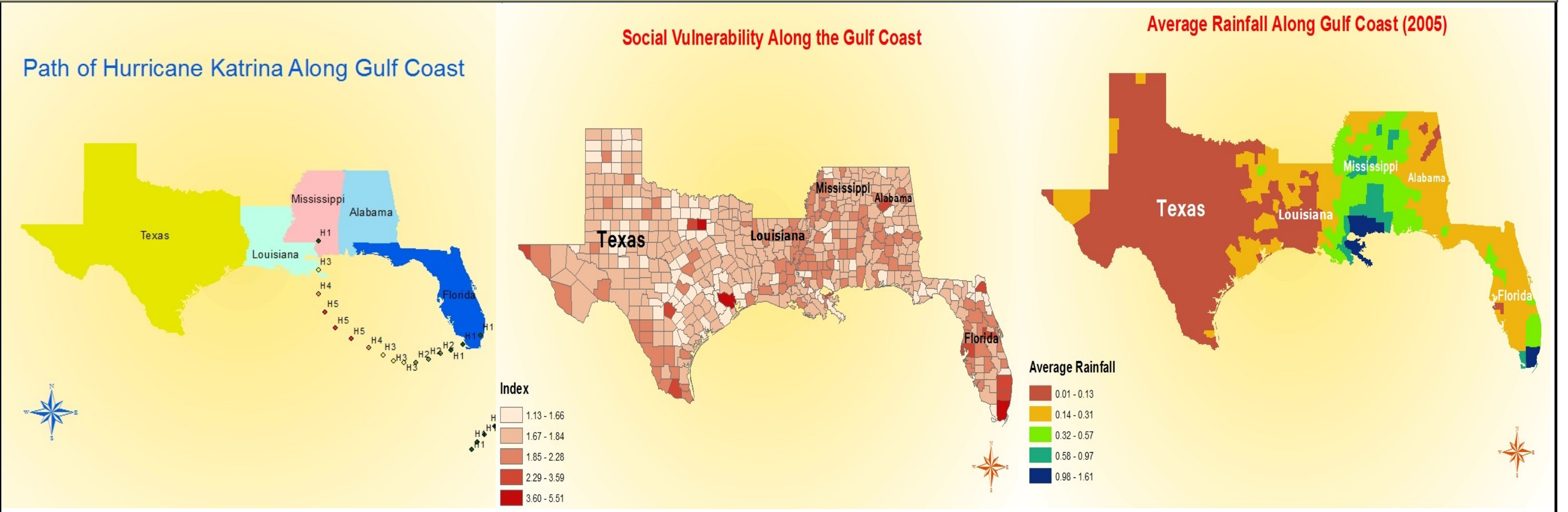
Hurricane Katrina, one of the deadliest and most destructive natural disasters ever recorded, brought about a tremendously high death toll to states bordering the Gulf Coast. It began as a Category 5 hurricane on August 28, 2005 with maximum sustained winds of 175 mph. However, when the storm made its landfall around the Gulf Coast, it decreased to a Category 3 rating on the Saffir-Simpson Hurricane Scale. Affecting nearly 1800 individuals, the hurricane washed away homes, businesses, hospitals and schools. Due to this, millions were left destitute and forced to abandon everything from their homes to their jobs. Such destruction topped the \$75 million mark. Hurricane Katrina impacted New Orleans primarily because of its geography and weak infrastructure. The relatively flat bottom of the Gulf of Mexico made the area even more vulnerable to the storm surge. Due to the Gulf's round-like shape, for instance, the storm surge caused more than 50 breaches in drainage canal levees. This caused 80% of New Orleans to be flooded leaving some parts under 15 feet (4.6 m) of water by August 31, 2005. Many of its massive effects could have been prevented with better engineering and preparation.

Results

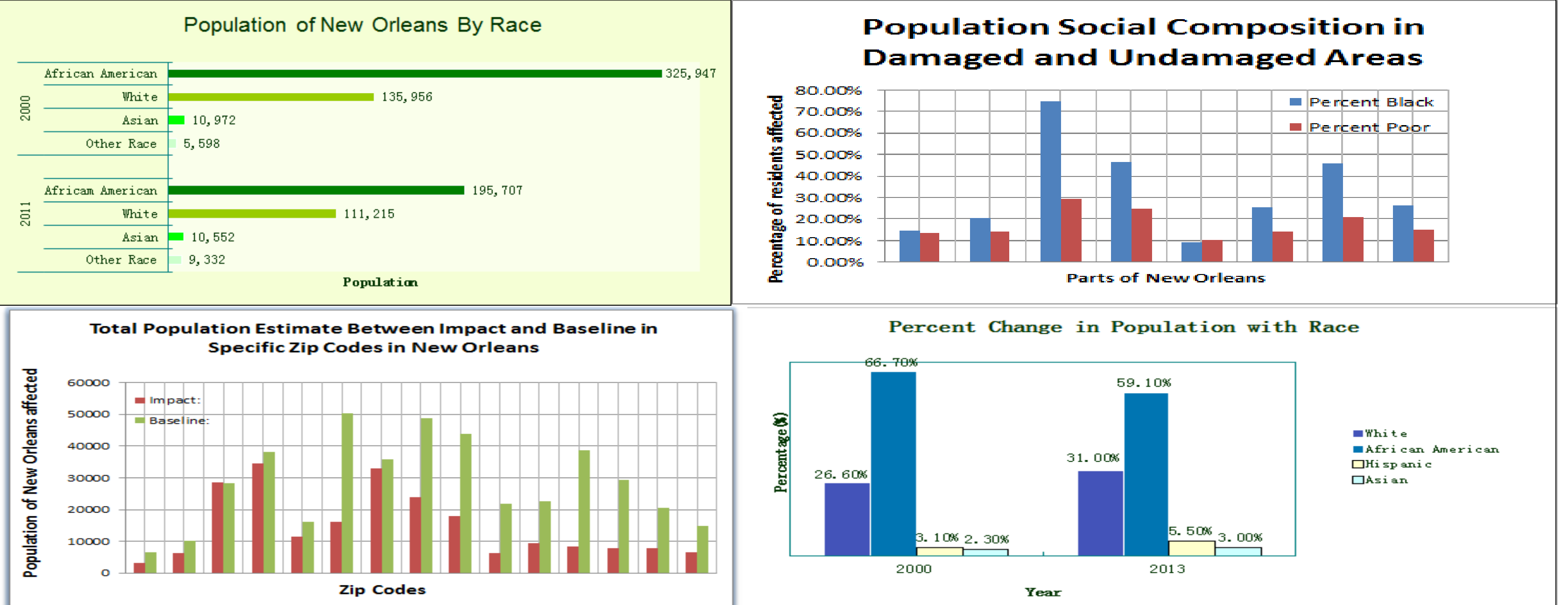
Hurricane Katrina's impacts were wide ranging from a social and economic perspective: rising property values, changing transportation patterns, and destabilizing the medical system. We were able to see that minority groups, specifically African Americans, had higher death rates than other races. This is significant, because more than 60% of the population of New Orleans was made up of minority groups, a large portion of New Orleans was unable to return home and attend their regular jobs, which greatly impacted the economy. Based on our data, median household income decreased after the hurricane by approximately \$10,000. Transportation, household income and unemployment were all interrelated.

We saw that before Hurricane Katrina, the share of commuters using public transit was 13.20% but afterwards it decreased to 8%. This decrease occurred because there was an increase in the unemployment rate, thus, fewer people needed transportation to travel to work. Due to infrastructure damages, we were also able to see that nearly five hospitals were closed down. These damages were largely a result of poor infrastructure, which created an avalanche of destruction post-Hurricane Katrina. Katrina's massive impact around the Gulf influenced the government to fix the infrastructure and change the socioeconomics of the city.

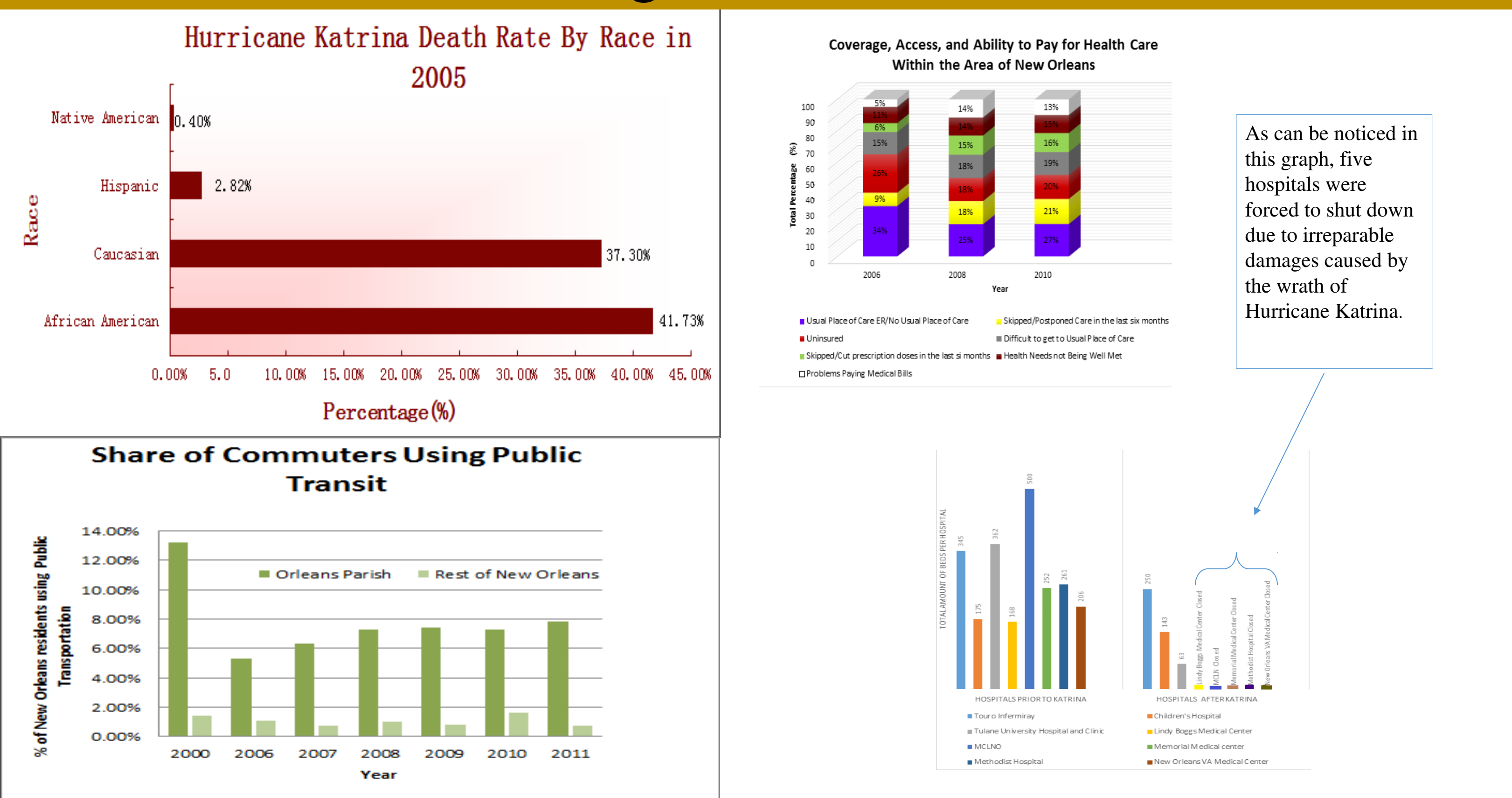
Hurricane Katrina's Path



Demographics



Logistics



Economy

