Utilizing the NAACCR Geocoder to Improve the Quality of County at Diagnosis

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Alabama Statewide Cancer Registry (ASCR)

Background

The Alabama Statewide Cancer Registry (ASCR) provides each reporting facility with a ZIP code at Diagnosis. As part of an ongoing process to improve the quality of county at Diagnosis, the ASCR has been utilizing the NAACCR Geocoder to geocode addresses into census tract information for all ASCR cases. This process was first implemented in 2004 when the ASCR was replaced with the results from the NAACCR Geocoder.

County at Diagnosis and ZIP Code

Alabama ZIP Code Assignment and Methodology

- In 2004, the ASCR replaced their existing method with the NAACCR Geocoder.
- Each ZIP code has a default value for County at Diagnosis regardless of whether that ZIP code crosses county borders.
- Historically, Jefferson County has had one of the largest number of advanced edits for Census Tract 2000, State, County at Diagnosis.
- The majority of counties with significantly different results were due to miscoding by the abstractor.

GIS Coordinate Quality

- Coordinates are at mid-range.
- Coordinates are street intersections.
- Coordinates are address ZIP code+2 centroid.
- Coordinates are match of house number and street, interpolated over the matching range.
- Coordinates are address point.

Geocoding and the ASCR

- Geocoding was not always successful.
- The NAACCR Geocoder did a much better job of obtaining street-level matches in rural areas.
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- The NAACCR Geocoder was found to be consistent, and in some cases superior, to the existing method.

Geocoding Timeline

- Timeline of the NAACCR Geocoder implementation.
- The timeline includes the following:
  - 2004: Replacement of the existing method with the NAACCR Geocoder.
  - 2011: Retirement of the NAACCR Geocoder.

Abstract

- The NAACCR Geocoder was used to improve the quality of county at Diagnosis in the ASCR.
- The NAACCR Geocoder was found to be consistent, and in some cases superior, to the existing method.
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Geocoding and Jefferson County

- Jefferson County is the most populous county in Alabama, and the majority of Birmingham, the largest city in the state, is located within Jefferson County.
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Per centage Change of All Sites Combined Incidence Rates by County after Geocoding 2004-2011

- The percentage change of all sites combined incidence rates by county after geocoding 2004-2011.
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Incidence Rates for Reported County and Geocoded County at Diagnosis

- Incidence rates for reported county and geocoded county at diagnosis.
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Geocoding County vs. Reported County at Diagnosis and Incidence Rates

- The geocoding county vs. reported county at diagnosis and incidence rates.
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Conclusions

- The ASCR case established in 2004 by the Alabama Department of Public Health in response to stakeholder demand for accurate and timely reporting results. Data collection began in January 1999.
- The ASCR is a member of the North American Association of Central Cancer Registries (NAACCR) and therefore adheres to NAACCR standards. The ASCR is a member of the North American Association of Central Cancer Registries (NAACCR) and therefore adheres to NAACCR standards.
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For More Information

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