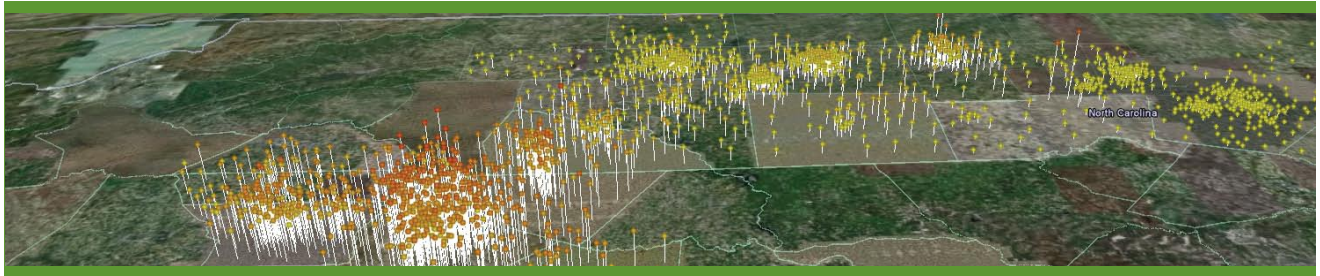


GIS for Health Research



RTI International applies the power of geospatial science and technology to help our clients achieve their public health research goals.

GIS Applications in Health, Survey Research, and Economics

RTI provides a full range of geographic information system (GIS) services to support public health, healthcare economics, and epidemiological research.

Synthesized Populations, Agent-based Modeling, and Visualizations

We have developed a nationwide, geospatially and statistically accurate database of households and persons for use in agent-based modeling (ABM), which can be used to understand the probable impact of various mitigation strategies on the spread of infectious disease. Customized versions of the database can be developed to meet specific demographic requirements of particular models. Infectious disease models are spatio-temporal in nature and therefore require advanced tools to visualize their outputs. RTI has developed tools to convert model outputs to Google KML format to enable users to easily and inexpensively display ABMs results in time and space.

Cartographic Modeling

Our staff members have used cartographic modeling techniques to model medical service markets, risk factors for disease, and other health outcomes to support informed decision making. We also develop applications using demographic and statistical models in a GIS environment to model surfaces and computer variables for statistical analyses.

Exposure and Human Health Risk Assessment

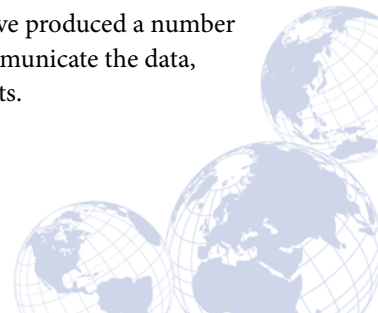
We are experienced in developing risk models to estimate human population health risks and have worked with the U.S. Environmental Protection Agency to develop GIS databases and tools for human health risk assessment. We also model the potential for exposure to environmental contaminants using GIS methods.

Data Management and QA

RTI manages and maintains large nationwide geodatabases of demographic, health, and environmental information, thereby reducing the costs and increasing the efficiency of building individual project databases. Because we deal with wide-ranging geospatial databases, we have experience in assessing and correcting data quality problems of secondary data and in proper QA/QC procedures to ensure that primary geospatial data are handled correctly.

Mapping

Mapping is the cornerstone in communicating geographic information. Our application experience includes mapping disease incidence and mortality rates. We are also leaders in the field of survey mapping, generating tens of thousands of detailed maps in support of field interview-based survey data collection. We have produced a number of atlases that comprehensively communicate the data, analyses, and results of many projects.

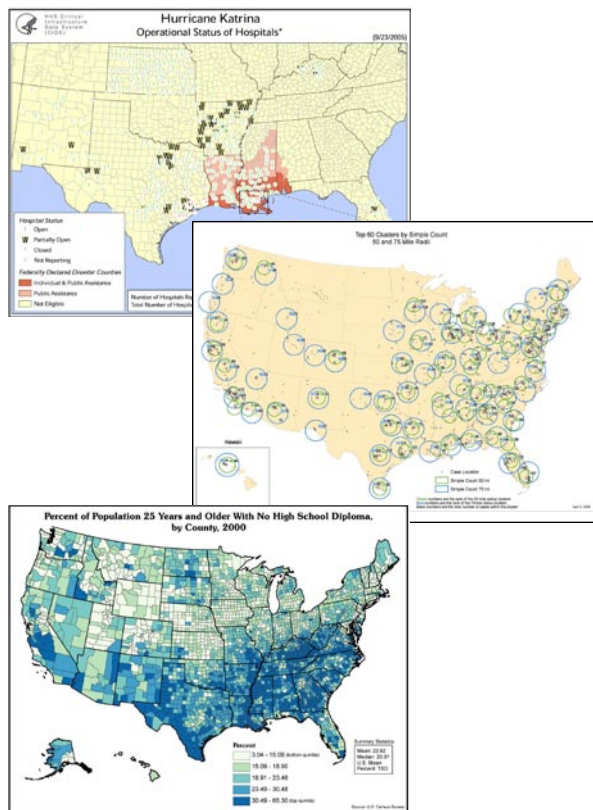


Internet Delivery and Applications Development

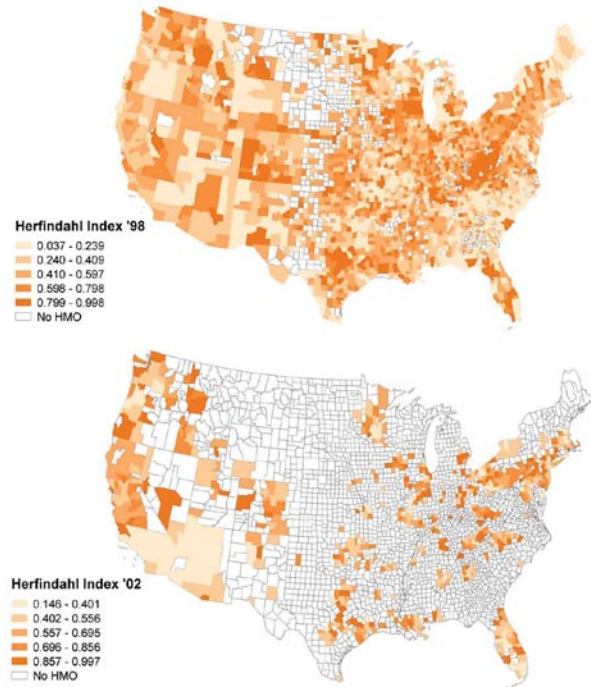
RTI's GIS capabilities include development of custom desktop and Internet map server applications. We use a wide range of application development tools to create desktop and web-based GIS applications to meet specific client requirements. We have experience in developing interactive, web-based mapping sites to promote project management and locational data collection.

Scientific Collaboration

Our GIS team collaborates with RTI research scientists who have experience in more than 130 disciplines, including epidemiology, health and social policy, international health and development, survey and statistics, and environmental health. These teams capitalize on the combined power of health science and geographic science to provide outstanding value to our clients.



Reduction in Choice for the Elderly: Increased Concentration of Medicare Managed Care Enrollees in Medicare HMO Plans 1998-2002



RTI Medicare policy researchers use GIS to analyze the impact of policy changes on access to Medicare services for the elderly.

For more information about GIS for health research, contact

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