



leading the public health industry in geospatial analysis



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Changing the view on public health

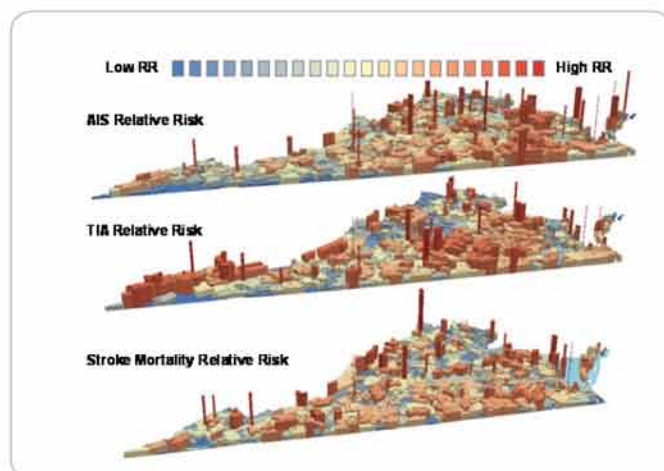
The mission of the Virginia Network for Geospatial Health Research is to support both public and private sector initiatives using geospatial analysis of health and healthcare relevant data. VANGHR represents a major collaborative effort in support of geospatial analysis of public health data and the promotion of health equity. VANGHR supports and coordinates existing expertise in geospatial analysis, health policy, health planning, environmental health analysis and epidemiology. VANGHR facilitates the development of new approaches and methodologies to sustain effective public health and healthcare interventions.

Geospatial Analysis Applied to Public Health and Epidemiology

VANGHR is one of the national leaders in the application of geospatial technology and analysis to public health and the healthcare industry. By "changing the view of public health", VANGHR's team of epidemiologists and geospatial professionals use location-based data and technology to embed geography as a variable in the analysis of disease, social determinants of health, and environmental factors. VANGHR's use of predictive modeling and generation of high priority target areas (HPTAs) provide clients with important decision-making tools in the implementation of public health policy and intervention.

SOPHISTICATED GEOSPATIAL ANALYSIS TOOLS

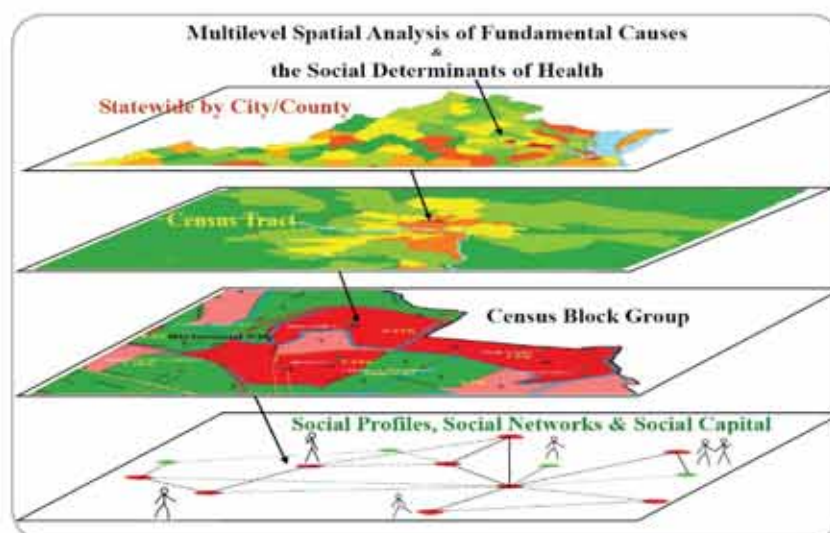
- Spatial autocorrelation
- Hot spot analysis
- Ordinary least squares regression
- Geographically weighted regression
- Kriging
- Kernel Density
- Service area analysis



“VANGHR understands that where one lives is as important as any other factor when it comes to health.”

Location-based analysis of public health data

VANGHR understands that where one lives is as important as any other factor when it comes to health. The Virginia Network for Geospatial Health Research (VANGHR) is advancing the analysis of public health through multi-level spatial analysis of outcomes and social determinants of health. VANGHR is reframing health policy questions of today by including the variable of place in public health analysis.

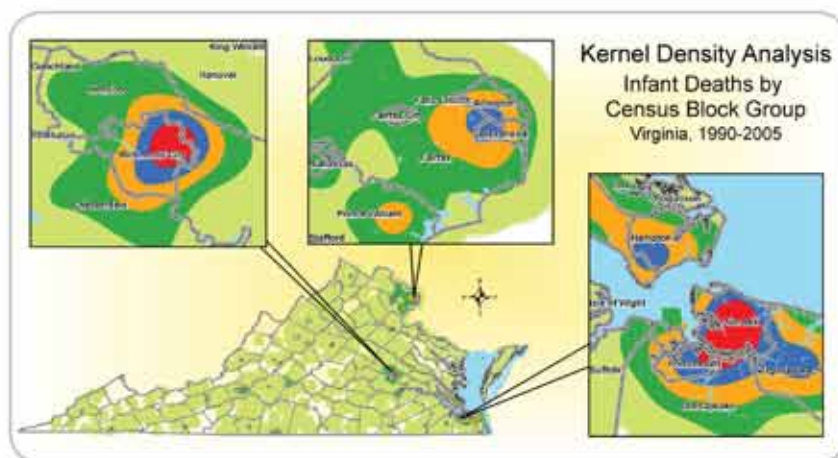


High priority target areas

VANGHR's analytical approach provides results that enable communities to identify HPTAs: High Priority Target Areas.

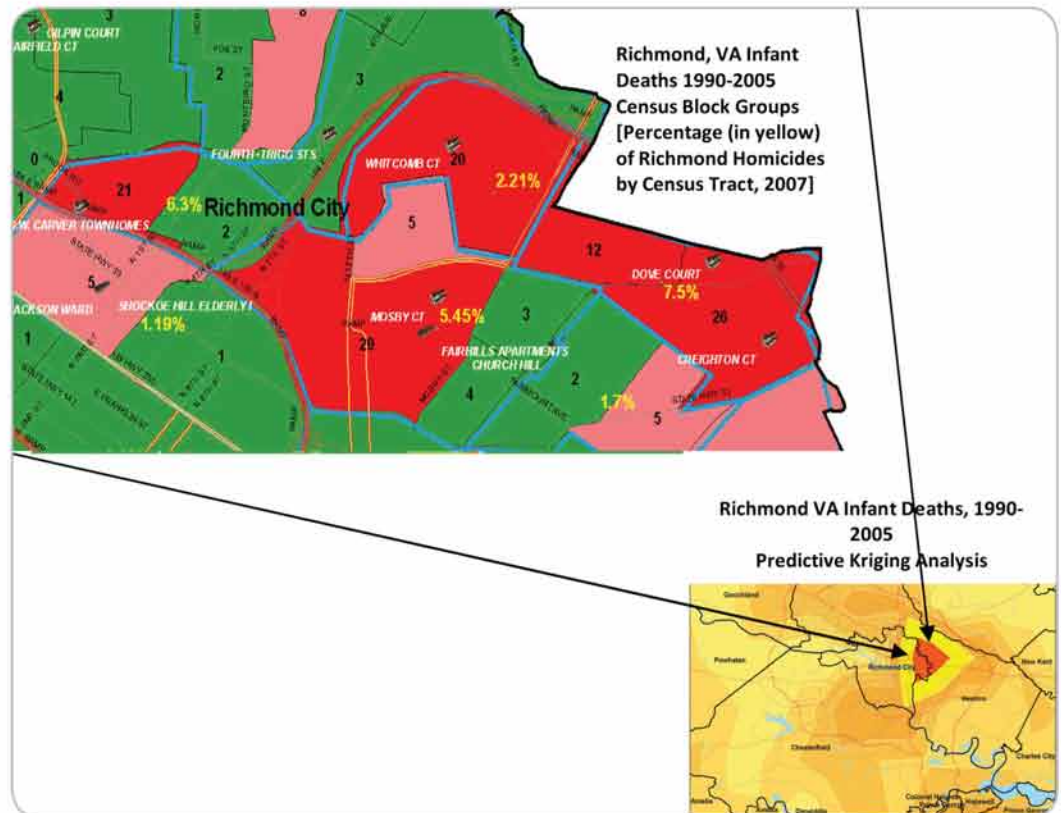
This includes two types of targeting:

- Geographic targeting at the county, ZIP code, census tract, and census block group levels.
- Social program targeting within these geographic areas for intervention and policy change.



High priority target areas

VANGHR's provides the basis for targeting policy and interventions.



Virginia Geographical Weighted Regression (GWR) Medicaid Asthma Inpatient Hospitalization (18 Years and Below)* 1999-2003.

Geographically Weighted Regression Model	
Asthma Hospitalization Rate	Dep Var
% Linguistically Isolated	Indep Var
% Housing Units Built before 1950	Indep Var
% Housing Stress (Census HCT 28)	Indep Var
% 25 and Over Without High School Diploma	Indep Var
Total Wages Manufacturers with Asthma Triggers	Indep Var
R-Square = 0.46	

