

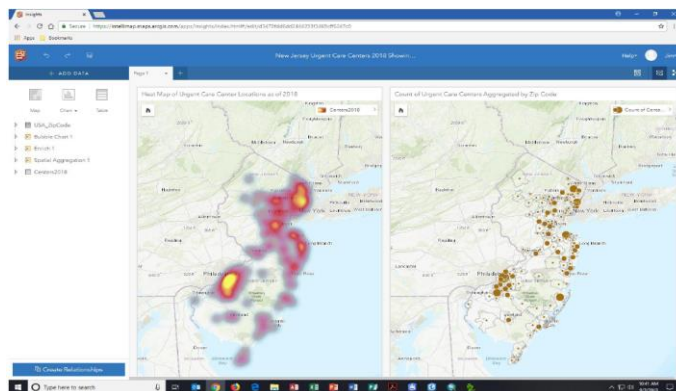
Geomark Insights

Utilizing Spatial Data in Healthcare Strategic Planning

Using the power of maps within a Geographic Information System (GIS) to visualize planning data, healthcare organizations can see spatial relationships between their firms and their competitors and between their locations and the communities they serve. They can better understand the locations of social determinants of health and more fully understand their primary and secondary service areas. Combining spatial data with non-spatial data can allow a deep dive into demographics and life-style sectors to better understand the consumer segments they serve. In addition, as the care and treatment of patients continues to shift to the out-patient setting, it becomes essential to be able to model transportation and mobility networks to better understand where services are needed.

Consumerism and the Healthcare Marketplace

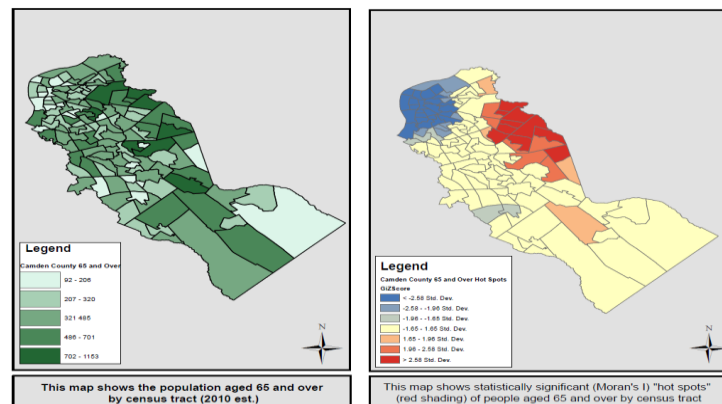
The shift from fee-based care to reimbursement for value, and the increasing number of visits to outpatient points of care, now makes the healthcare industry resemble the retail industry. The behavior of patients seeking care now resembles the traditional retail consumer. As such, there will be an increase in the use of traditional demographic and life-style segmentation analysis. The tools of GIS can combine spatial and non-spatial data to perform a deep dive into patient variables that have been traditionally been used by retail companies.



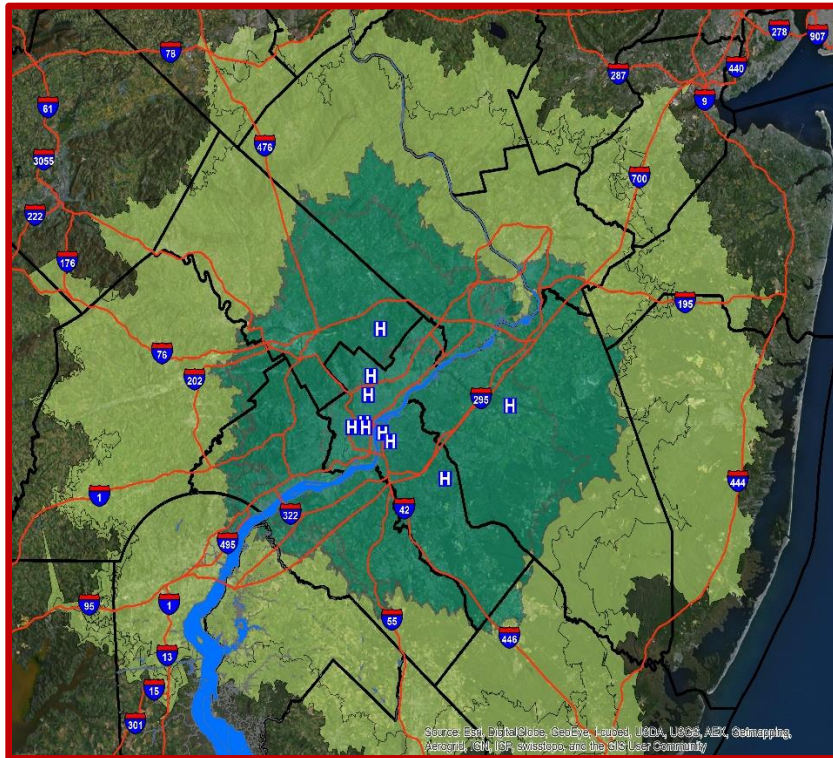
This map shows a heat map (left) of urgent care centers in New Jersey and the locations of the centers (right) aggregated at the zip code level. The aggregated data can then be used to perform demographic profiles as well as life-style segmentation analysis.

Hot Spot Analysis

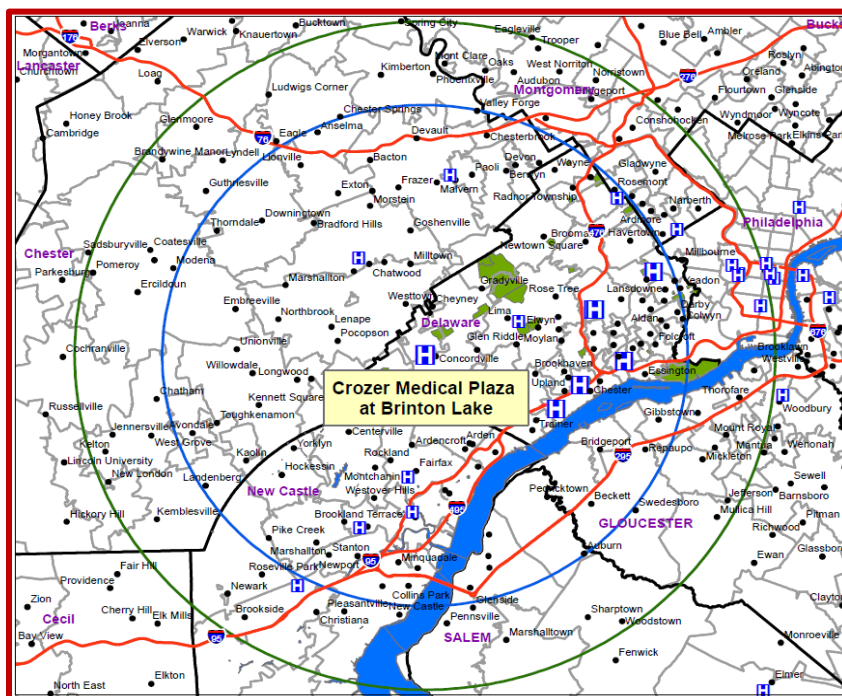
Hot Spot Analysis is often used to begin the process of determining optimal sites for a new clinic as well as identify locations of “super-utilizers” of healthcare services.



Access to Care and Community Health Needs Assessment



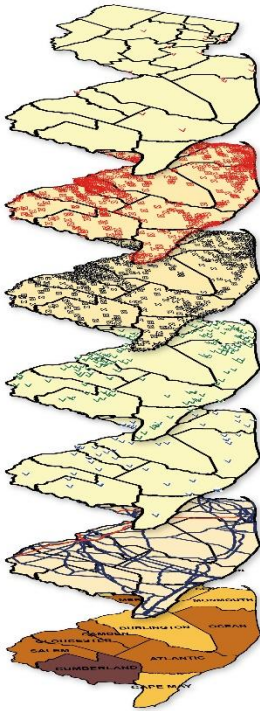
This map shows 30- and 60-minute drive-times around several hospitals in New Jersey and Pennsylvania. Access for emergent and non-emergent care is an important issue for patient care.



Having an understanding of service area by some level of geography is important for community health needs assessment. Understanding which towns are included in the service area can help reduce marketing costs and increase Return on Investment (ROI)

Location-Based Social Determinants of Health

As Healthy People 2020 points out, “Health starts in our homes, schools, workplaces, neighborhoods, and communities.” Healthcare organizations are increasingly focusing on the determinants of health, particularly place-based determinants, as a focal point for their resources. The tools and technologies of GIS handles this analysis very well.



Social Determinants of Health:

Location of potential neighborhood hazards

Availability of Police, Fire, EMS Stations

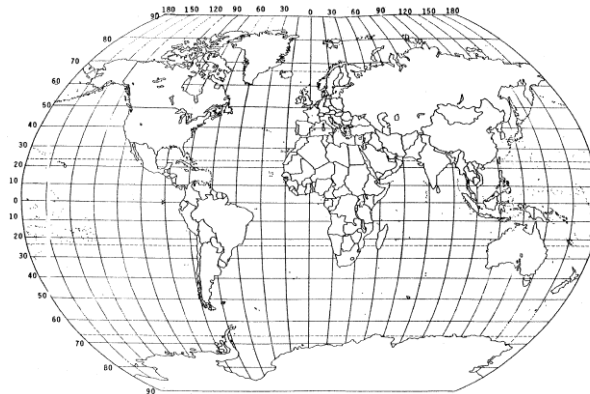
Availability of Economic, Educational and Job Opportunities

Availability of hospitals and clinics

Availability of Green spaces and recreational locations

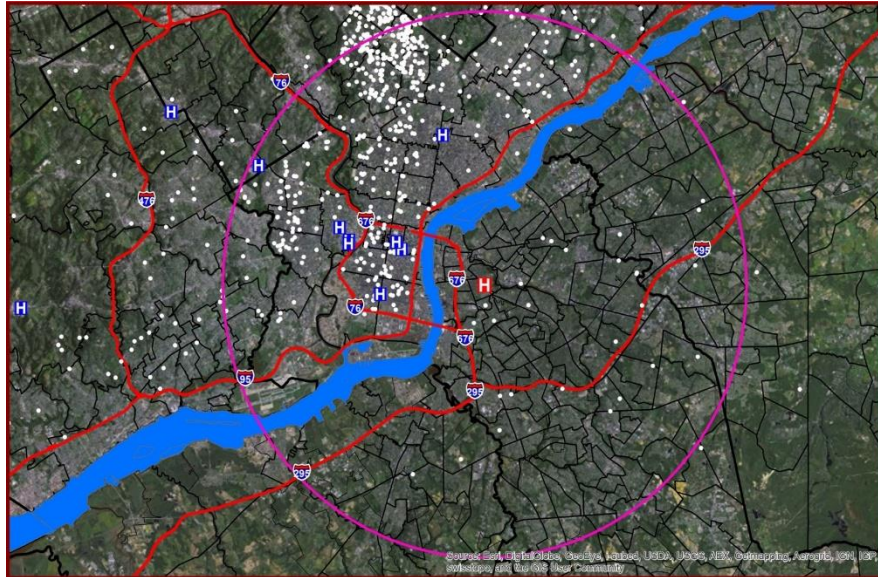
Transportation networks

Social variables (poverty level, per capita income, educational attainment, etc.)



Market Size and Patient Location

Traditionally, healthcare organizations have used data abstracted from their electronic medical record to assess the market for their services. Geomark Consulting looks at it differently. By showing de-identified consumer locations in a process known as “geocoding,” not only can the location of consumers be shown but patterns of concentrations of consumers, in spatial relation to the site of care, be understood.



Geomark Consulting's Capabilities

Using the tools and technologies of GIS, we believe this is a more efficient method to understanding a healthcare organizations' market. The retail industry has used GIS for a long time and as more care shifts to the outpatient setting, and patients mirror the behavior of traditional retail consumers, GIS will be an important tool for healthcare strategic planners.

GIS provides many advantages for the healthcare industry. By focusing on consumer locations, underlying demographic and life-style segments can be more fully utilized to understand consumer behavior. Also, the ability to visualize patterns from locations, statistically rigorous “hot spot” analyses can be used to determine where to site new locations for clinics. This better utilizes scarce capital dollars in an efficient way and can enhance return on investment. In addition, a drive-time analysis around a specific location can be used to better understand access to care in a multimodal environment.

Geomark Consulting is ready to help with your strategic planning projects. Feel free to visit us at our website, [Geomark Consulting](http://www.geomarkconsulting.com). You can also reach us at 609-706-2880 or by email at jwooten@geomarkconsulting.com.