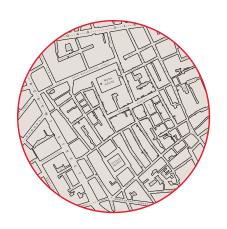


GIS @JSI

Using Claims Data to Map and Analyze Access to Care



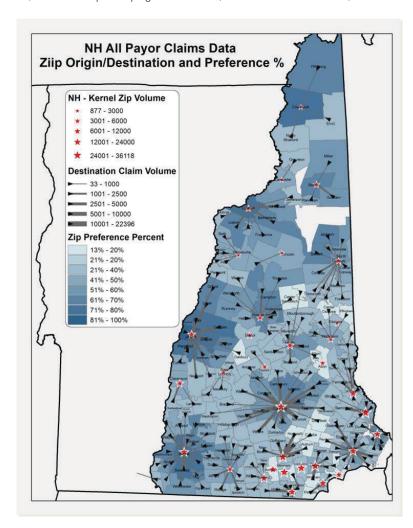
Medical claims data is becoming more accessible and more abundant with the growing adoption of All Payer Claims Databases. These data are increasingly used to study cost and quality, but relatively little work has been done to unlock the rich information regarding access patterns and the adequacy and accessibility of basic services that the data contain.

JSI has leveraged both statewide All Payer Claims Databases (APCD) and Medicaid claims data for this purpose. We have developed unique methods for extracting the access patterns found within the claims data and combining it with GIS spatial analysis technology to provide a range of detailed tools for visualizing and quantifying access to primary care and other key health care services. These tools can reveal natural hubs for service delivery and the service areas that rely on them, as well as quantifying the distance/time to access services,

the volume of care available and sought, competition/fragmentation of access, and differential access between different coverage types and population segments. The results can identify shortage areas and provide detailed planning inputs.

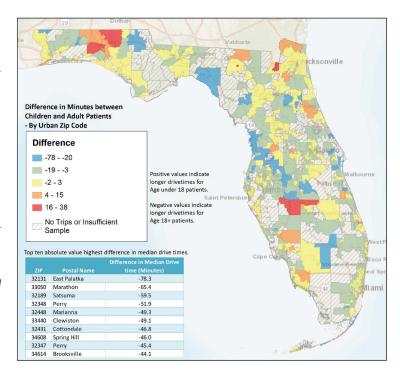
We use patient origin and destination data to reveal the natural patterns of access for different types of health care and the cohesiveness of these patterns for defining service areas and service hubs.

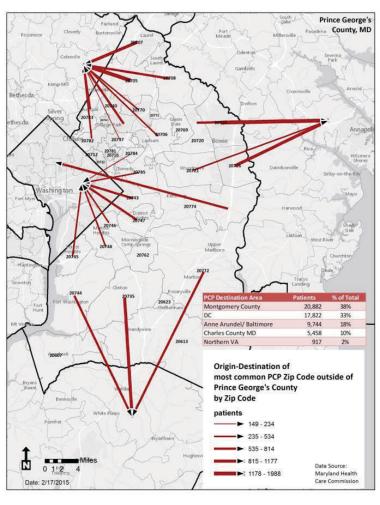
Primary care access patterns based on analysis of NH's all-payer claims data



By combining the results with spatial analysis tools, JSI further unlocks the value of the data to quantify access barriers and their impact on demand for care. Road network data can reveal areas where drive-times may be high or service utilization is low.

Median travel time by origin zip code, based on Florida primary claims analysis.





Mapping accessibility data provides insights into barriers to care beyond distance, including income, language, and provider availability for primary care, as well as specialists, etc.

Out-migration for primary care services in Prince George's County, MD

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John Snow, Inc., is a public health consulting firm working in the US and in more than 70 countries around the world. Continuing the pioneering public health principles developed by Dr. John Snow to halt a cholera epidemic in the 1840's, we use mapping technology to unlock and analyze critical public health information.