Sensing Health with Geospatial Science and Analytics

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Drivers of Health Inequity

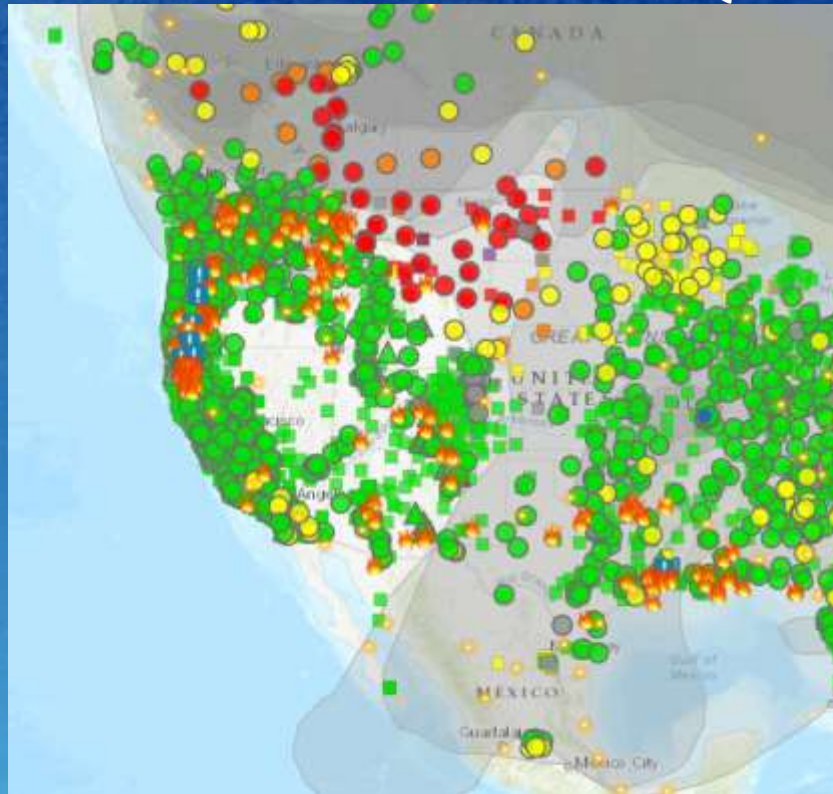**Causes of Death, Globally 2019 (World Health Organization)**

1. Heart disease
2. Stroke
3. Chronic obstructive pulmonary disease
4. Lower respiratory infections
5. Neonatal conditions
6. Lung trachea, bronchus, cancer
7. Alzheimer disease and other dementia
8. Diarrheal diseases
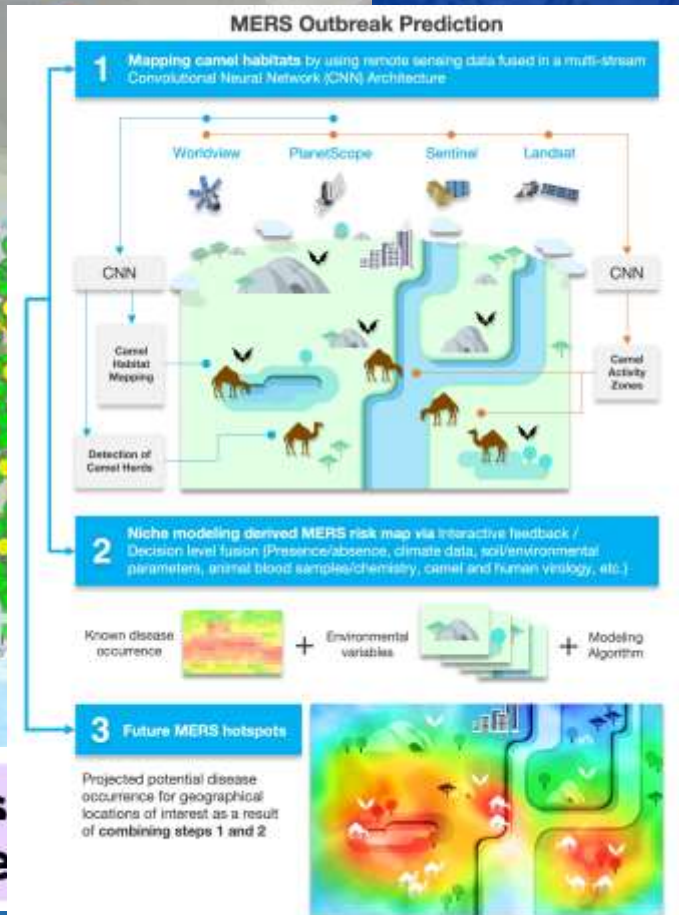9. Diabetes
10. Kidney diseases

Climate Crises

EPA Fire and Air Quality Map

Remote sensing insights

Real-Time Data Collection and Intervention

Community Mobility Patterns

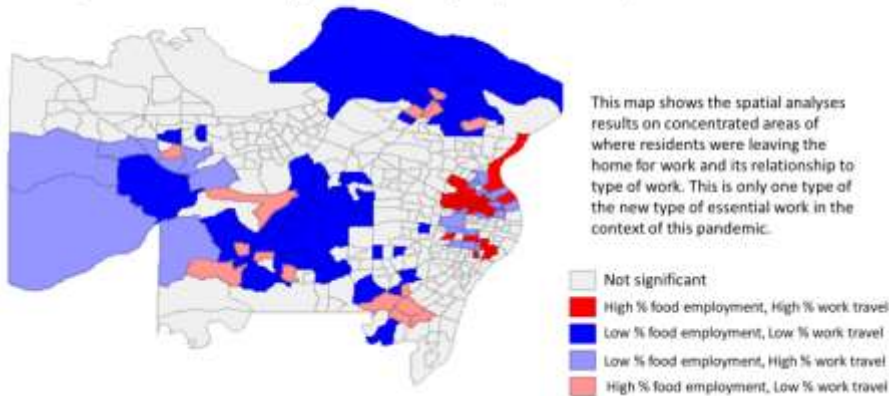Figure 1. Food Service Employment and Work Travel During Stay-At-Home Policy; St Louis Region, Missouri, June 2020

This map shows the spatial analyses results on concentrated areas of where residents were leaving the home for work and its relationship to type of work. This is only one type of the new type of essential work in the context of this pandemic.

Not significant
High % food employment, High % work travel
Low % food employment, Low % work travel
Low % food employment, High % work travel
High % food employment, Low % work travel

Figure 2. Health Support Employment and Work Travel During Social Distancing

Not significant
High % health employment, High % work travel
Low % health employment, Low % work travel
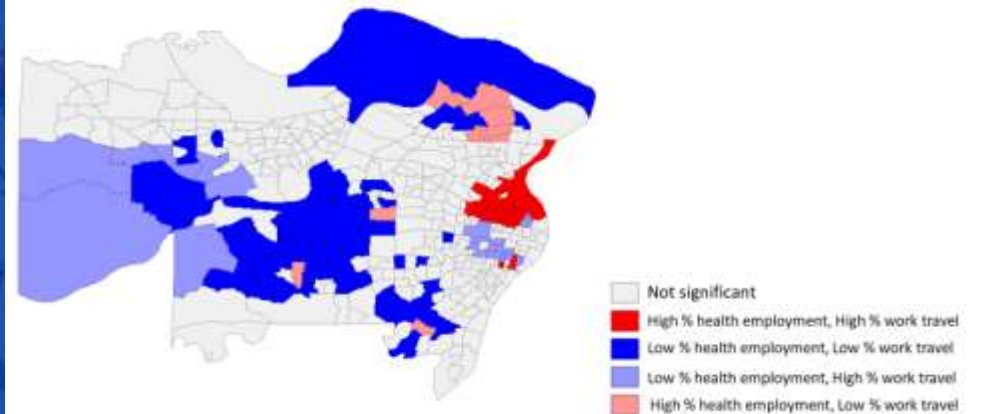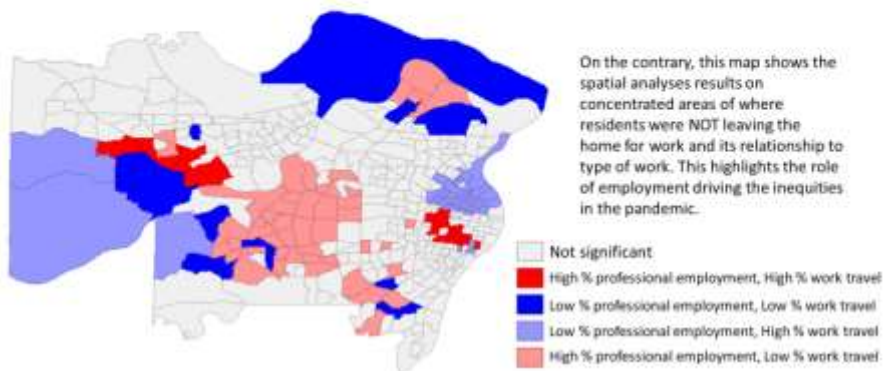Low % health employment, High % work travel
High % health employment, Low % work travel

Figure 3. Professional Employment and Work Travel During Stay-at-Home Policy, St Louis Region, Missouri, June 2020

On the contrary, this map shows the spatial analyses results on concentrated areas of where residents were NOT leaving the home for work and its relationship to type of work. This highlights the role of employment driving the inequities in the pandemic.

Not significant
High % professional employment, High % work travel
Low % professional employment, Low % work travel
Low % professional employment, High % work travel
High % professional employment, Low % work travel

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Community-Engaged Insights Build Trust