

Research Overview: Green Heart Study

Panel 4: Community and Multi-Sectoral Partnerships

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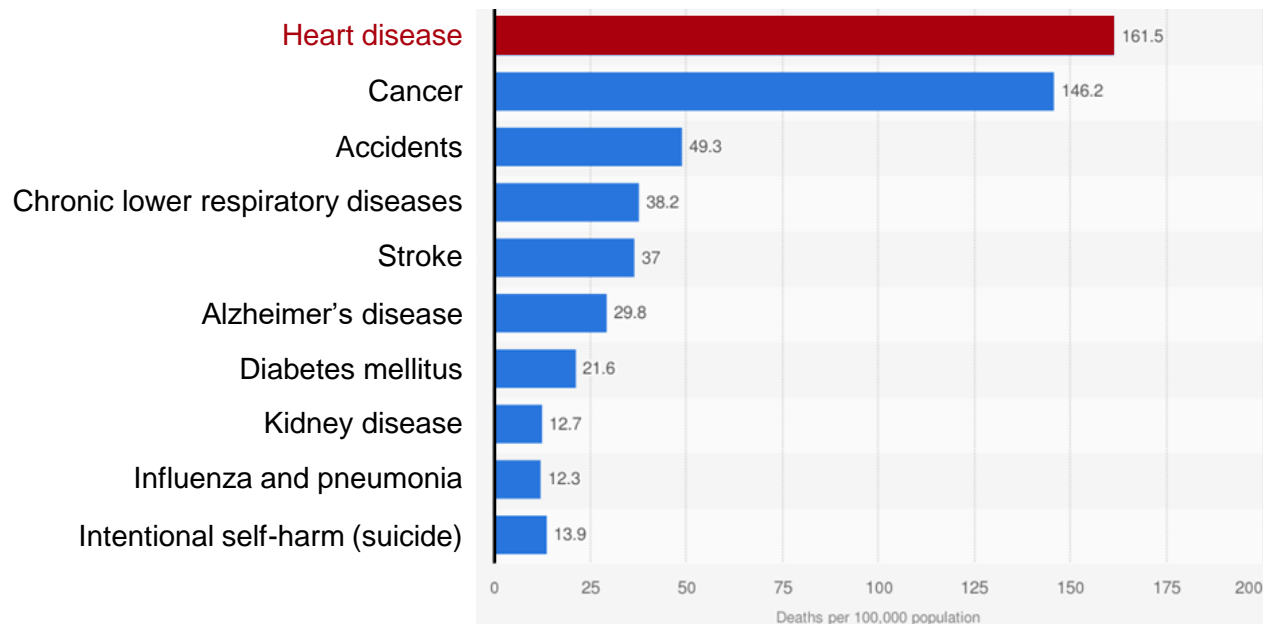
University of Louisville

 @DrDeJarnett

Cardiovascular Disease (CVD)

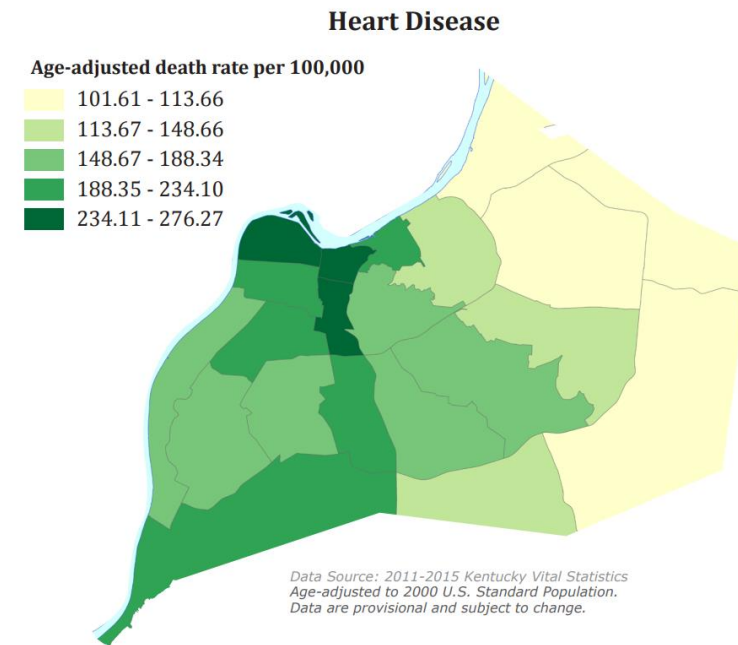
Heart disease is the **leading cause of death** in the US. Kentucky ranks **7th** for highest CVD death rate.

Rates of 10 Leading Causes of Death in the US in 2019



CDC, NCHS, Statistica® 2021

Heart Disease Deaths in Louisville



LMPHW, 2018

Risk Factors for CVD



Age



Gender



High Blood Pressure



Diabetes



High Cholesterol



Tobacco



Overweight & Obesity



Unhealthy Diet



Kidney Disease



Harmful Use of Alcohol



Physical Inactivity



Air Pollution

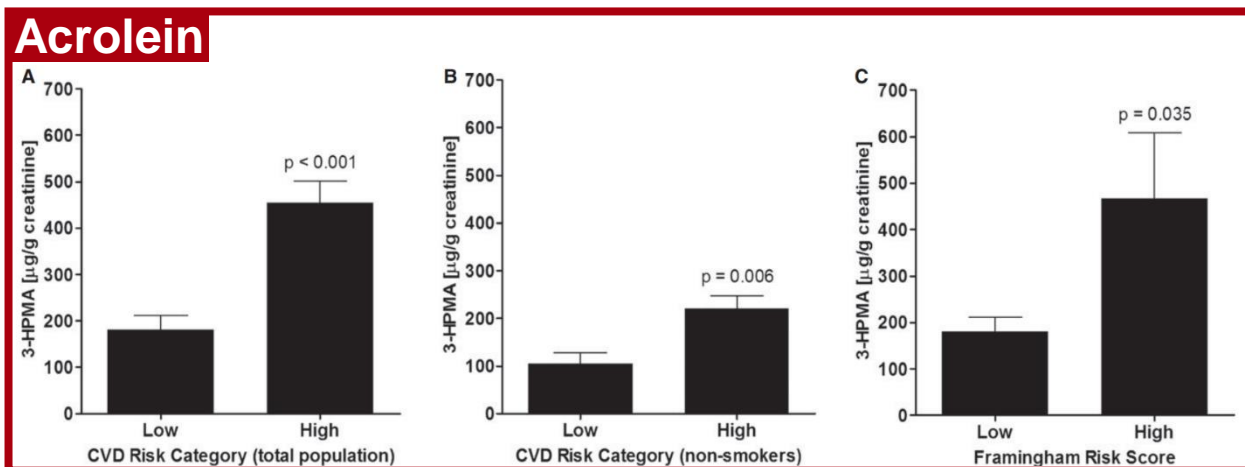
- Traditional risk factors do not fully explain CVD
- **70-80%** of CVD could be due to environmental causes

Bhatnagar, 2006, 2017

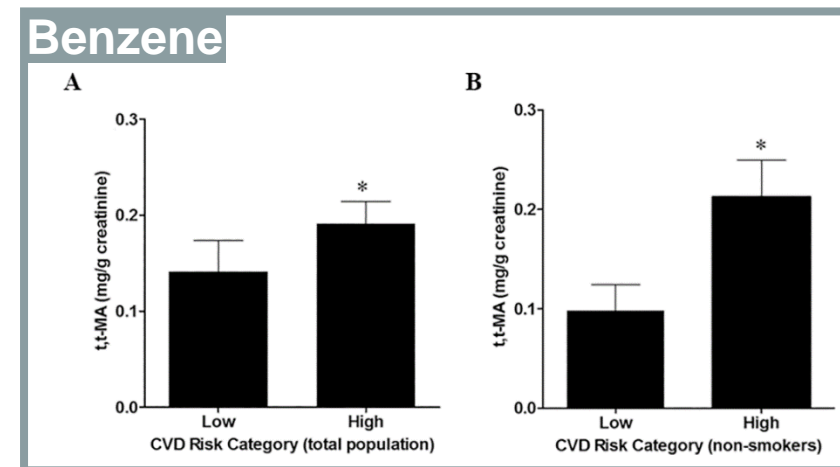
Environmental Health Assessment



Acrolein and **benzene** exposures are linked with higher CVD risk.



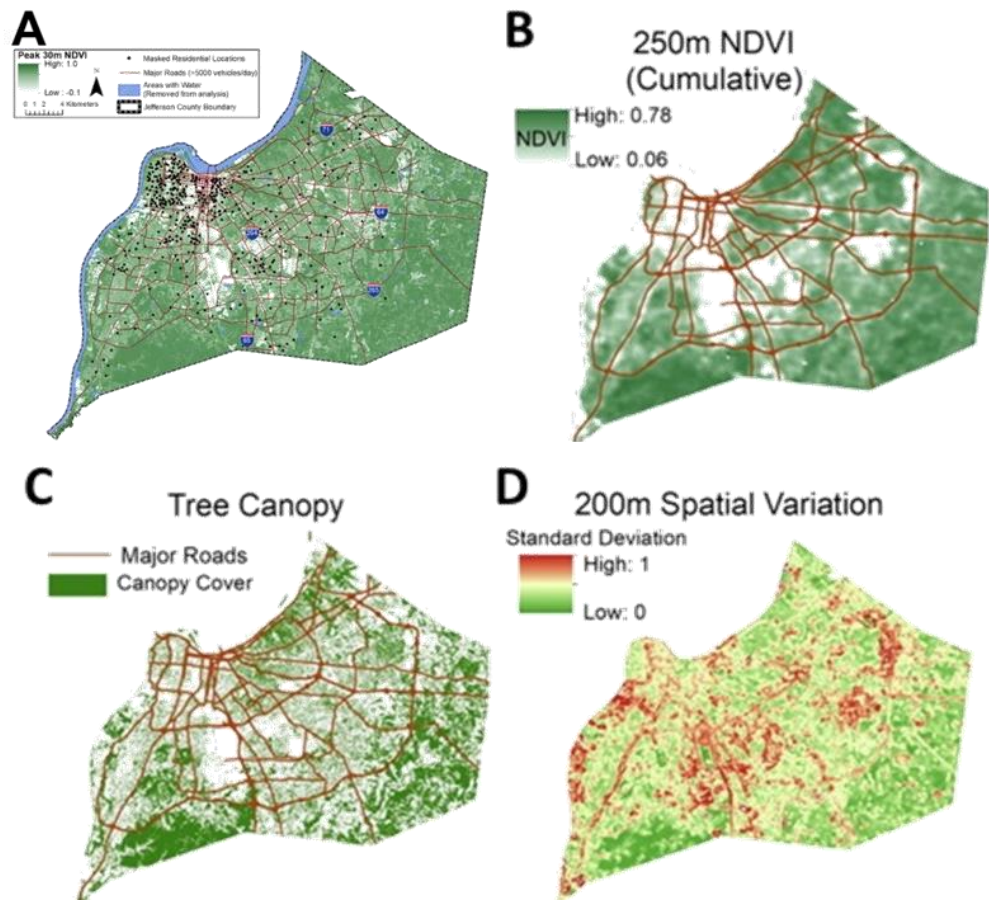
DeJarnett et al. 2014



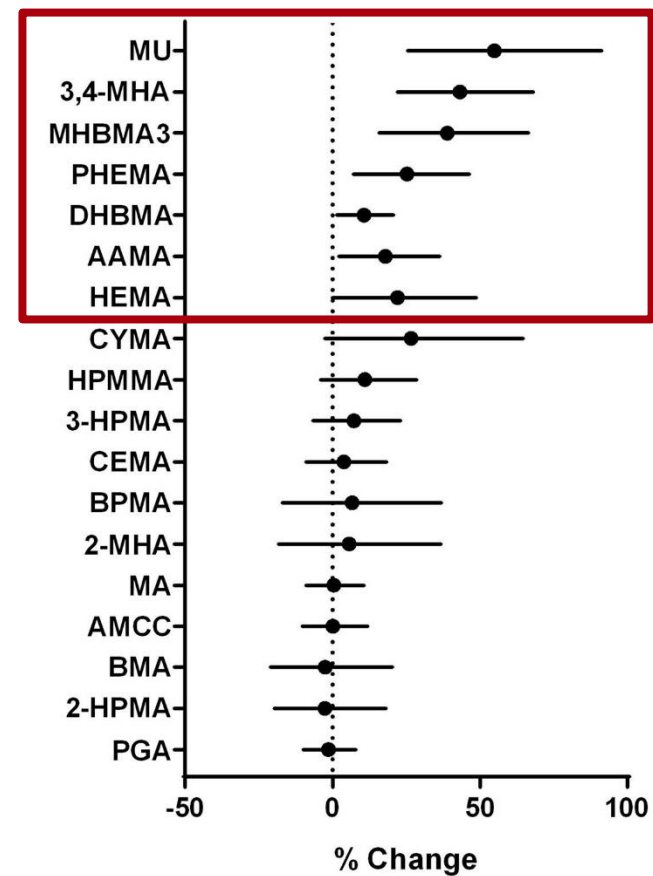
Abplanalp, DeJarnett, et al. 2017

Environmental Health Assessment

Distribution of Greenness in Louisville, KY



Inverse Association between Spatial Variation and Residential Greenness and Volatile Organic Compound Metabolites



Yeager et al. 2018

Green Heart Project

Louisville's air quality ranks among the worst in Kentucky.

And our current tree canopy is only 37%.



Meaningful Partnerships

Green Heart Louisville Community Advisory Board



Community Advisory Board virtual meeting

Shared Leadership



Community partner sharing with the CAB

Bi-directional Education



CAB member representing Green Heart at a community event

Participation



CAB member discussing Green Heart

Engagement

Meaningful Partnerships



Community Advisory Board

South Louisville residents meet quarterly, help determine community engagement activities, and participate in Green Heart Louisville events.



Community Organizations

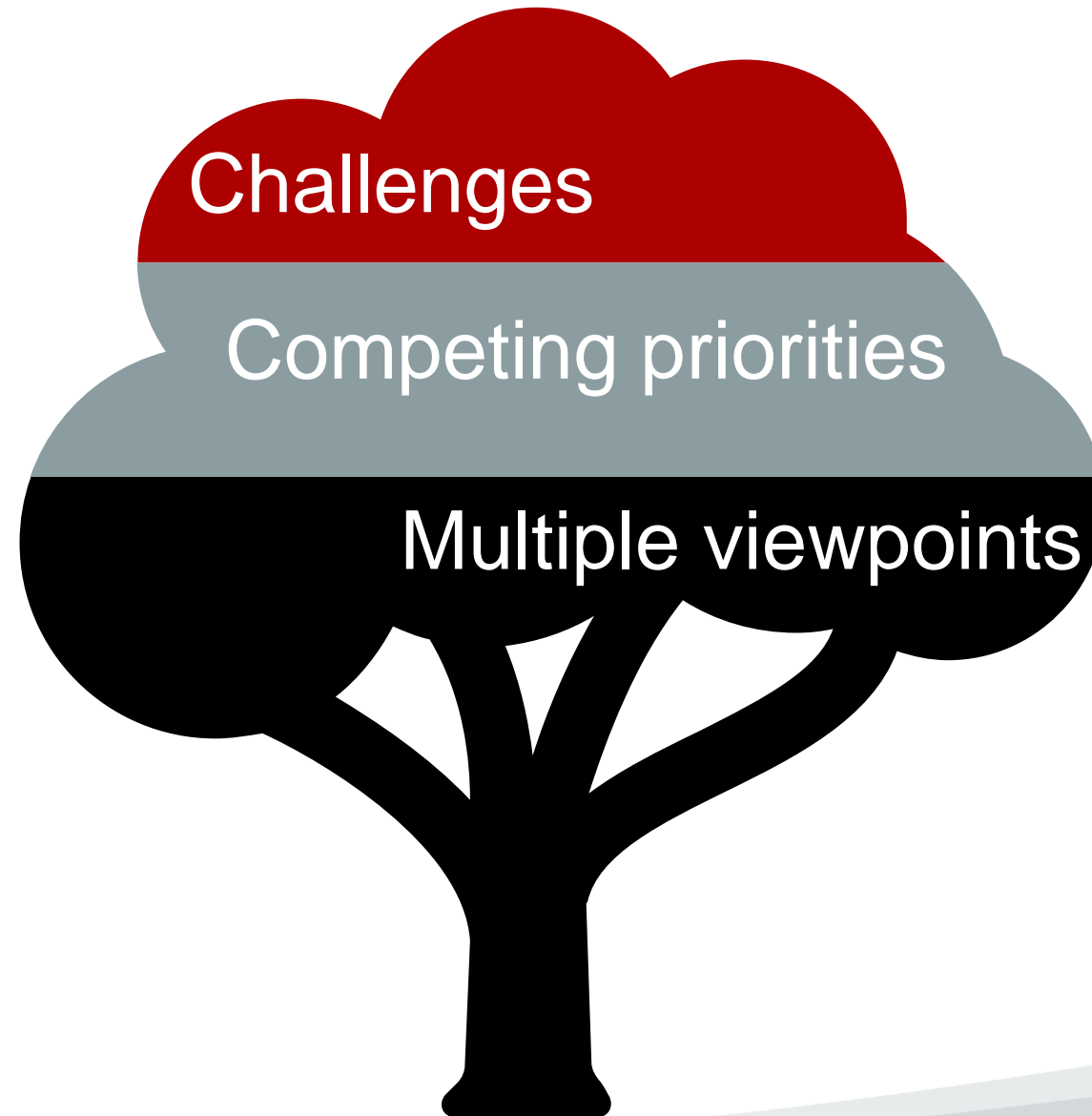
Louisville Grows
Neighborhood associations
Local schools
Faith-based organizations



Activities

Health screenings
Conversation Club
The Canopy Newsletter
Art and Literature Showcase

Lessons Learned



Overcoming Implementation Barriers



TREE SELECTION



TREE EQUITY FUND



STRATEGIC PARTNERSHIP

Potential Implementation Science Questions

What is the association between health outcomes and implementation of the intervention?

What factors influence the usefulness of the greening intervention?

What are the most effective techniques to ensure sustainability of the greening intervention?

Does implementation of the greening intervention change the perceived barriers noted by the community?

What contextual factors can be modified to increase the chance of success in other communities seeking to implement greening interventions?

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