



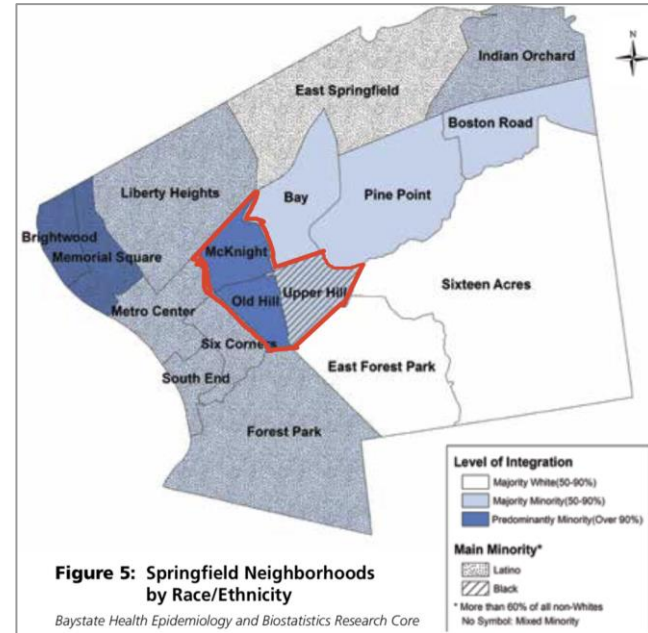
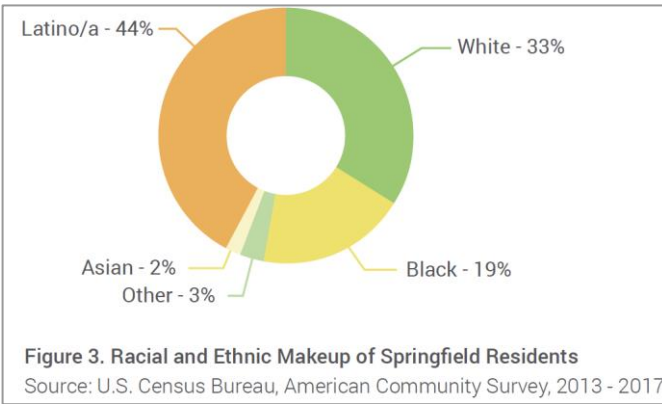
# Vitamin Green: Public Perception of the Impact of Trees

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Theodore Medling, Warren Smith

# Springfield, MA & McKnight-Hill



- Population estimate: 155,032
  - 53% women
  - 26% are children under 18 y.o.
- Diverse background
  - 10% foreign born
  - 38% over age of 5 primarily speak a non-English at home
    - 32% spanish
    - 3% indo-european
- Economically disadvantaged city
  - 30% live in poverty
  - McKnight-Hill Median income: \$28,197





# 12th Most Violent City

In America, according to the FBI's 2011 Report

## 2,800 Residents

Were members of the city's gangs

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## 21% Decrease in Crime

From 2008 to 2014

## 38% Decrease in Aggravated Assault

From 2008 to 2014

# C3 Mason Square Community Meetings



# Interprofessional & Intra-community

All united by one shared neighborhood & one goal

*Pros:*

Transparency

Open Forum → everyone has a voice

Mutual Respect

*Cons:*

Not all groups are represented at the meetings,  
including clinicians

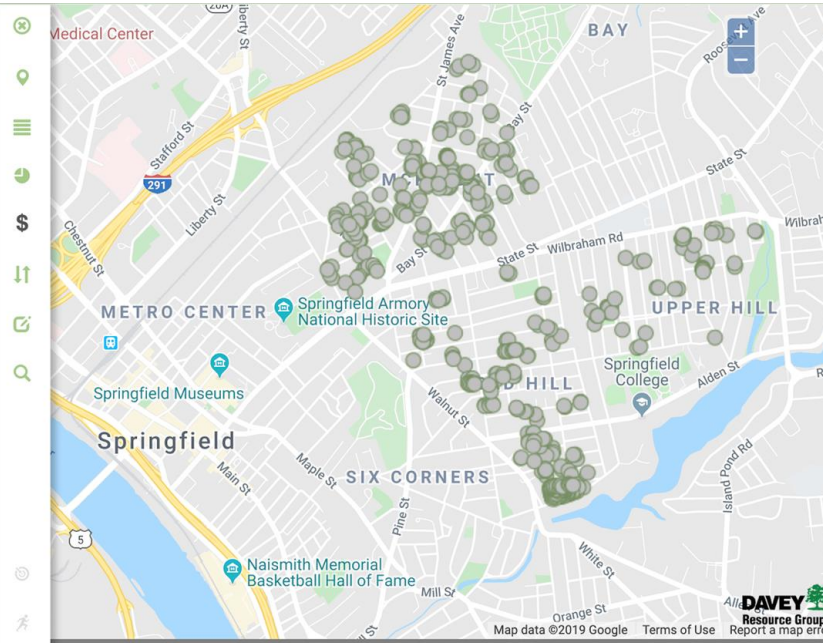




# Tree Inequity

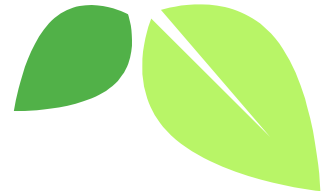
McKnight-Hill is classified as an **Environmental Justice Area** by *minority and income level*

Tree Benefits
GGCP ▾
<b>471</b> Calculated Trees
Total Yearly Eco Benefits
<b>\$9,812.04</b>
Greenhouse Gas Benefits
<b>\$20.75</b>
<b>4,635.91 lbs CO<sub>2</sub> avoided</b>
<b>1,941.90 lbs CO<sub>2</sub> sequestered</b>
Water Benefits
<b>\$122.33</b>
<b>15,291.13 gallons saved</b>
Energy Benefits
<b>\$1,397.07</b>
<b>1,644.14 kWh saved</b>
<b>828.64 Therms saved</b>
Air Quality Benefits
<b>\$149.45</b>
<b>28.18 lbs pollutants saved</b>



Initial Tree Cover by Neighborhood:

- McKnight- 11.4%
- Old Hill- 15.9%
- Upper Hill- 12%





- 
- | Condition | White | Black | Latino/a |
|-----------|-------|-------|----------|
| Asthma    | 589   | 1304  | 2584     |
| COPD      | 998   | 1875  | 3832     |

# Percent of Students with Asthma

Percent of Students with Asthma

Legend:

- 2% - 5.9%
- 6% - 17.9%
- 18% - 20.9%
- 21% - 23.9%
- 24% - 29.9%



# Environmental Justice



2016 BMC Community Health Needs Assessment:  
“Climate change is expected to ... **negatively affect the health** of a large number of BMC service area residents... Almost all of Springfield qualifies as an **environmental justice population** -- low income populations, communities of color, and immigrant [groups] that often experience **disproportionate exposure** to the impact of natural disasters, climate change and environmental hazards.”





# Environmental Health Organizations in Springfield



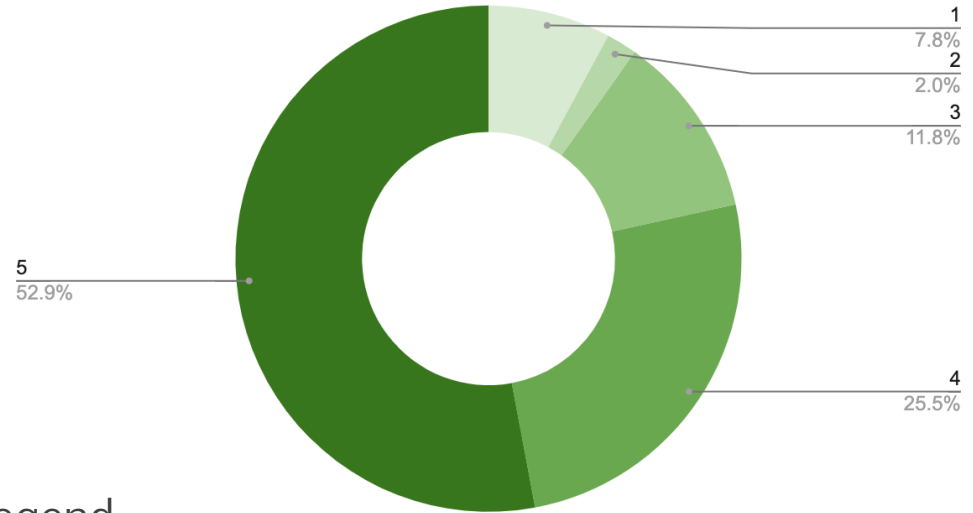


# Service to the Community

- Focused on the need to plant more trees in the community - to **improve asthma and pollution rates.**
- Analyzed local asthma rates, spoke with local residents, and examined areas where trees could potentially be planted.
- Conducted a survey with local residents to gather their **general views on trees.**

# Survey Results

How do Trees Affect your Mood?

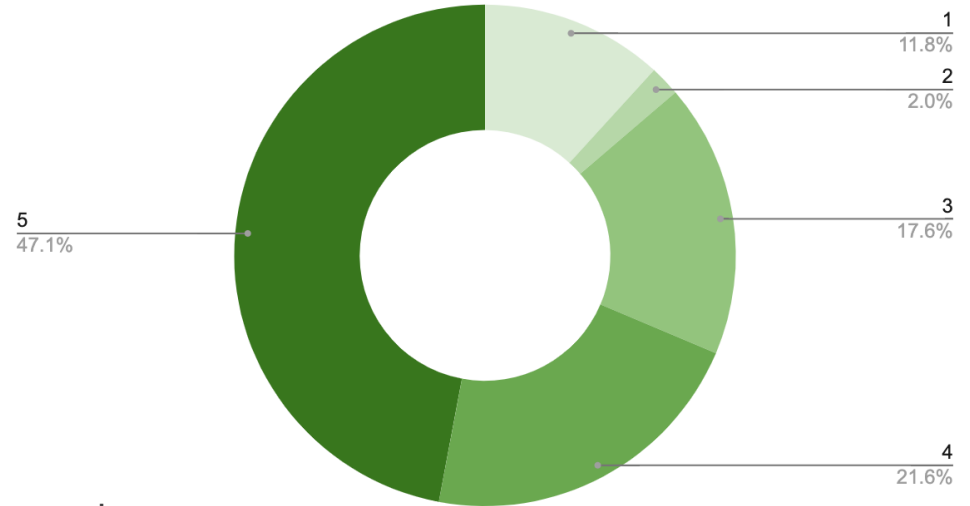


★ Legend



# Survey Results

How do Trees Affect your Physical Well-Being?

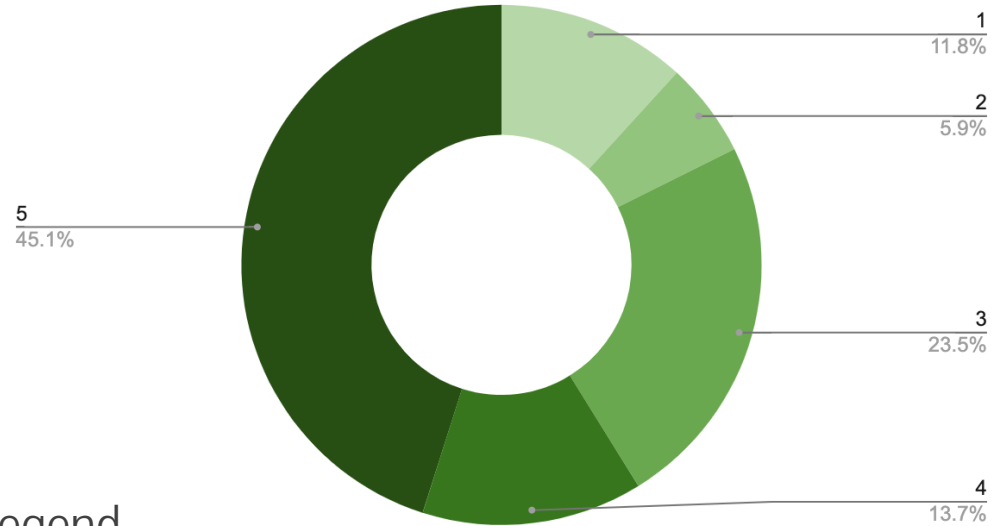


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# Survey Results

How Much do You Think that Trees Lower Energy Costs?



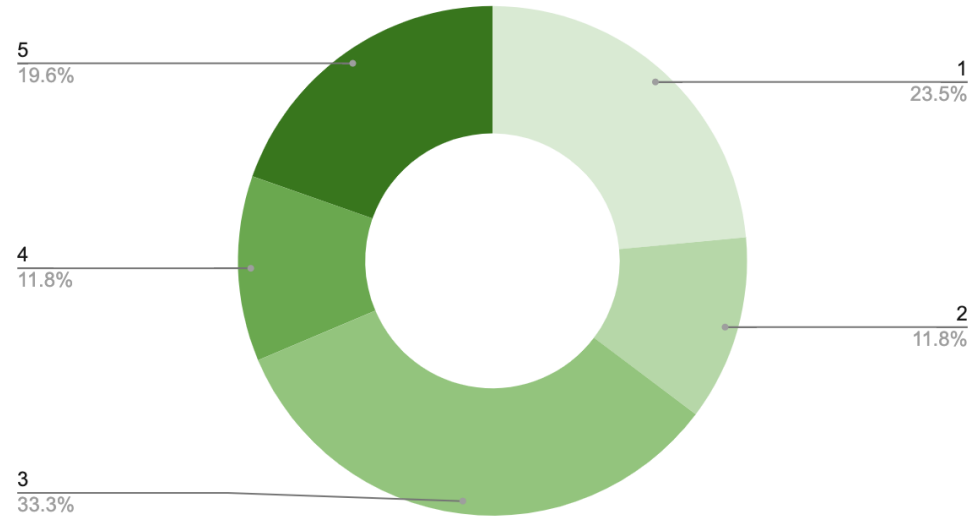
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1 2 3 4 5

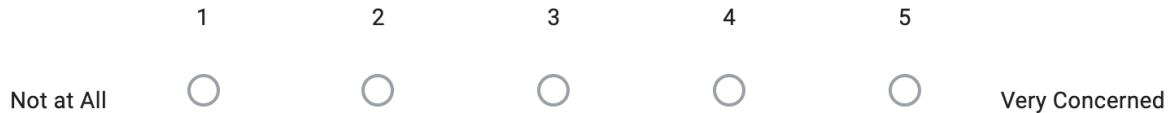
Not at All ○ ○ ○ ○ ○ Significantly

# Survey Results

How Concerned are You with Tree-Related Damage?



★ Legend





# Population Health Advocacy





# Outdoor Rx



- Collaboration between Appalachian Mountain Club's (AMC) and Boston's healthcare providers.
- Outdoors Rx gives healthcare professionals tools for **prescribing outdoor activity**, including a prescription for the outdoors and a map showing local green spaces for families to explore. The program provides an online resource with ideas for nearby outings and offers **local guided programs** which are free.
- Funded by grants since 2013 from Blue Cross Blue Shield of Massachusetts, Boston Medical Center, and others.



# Leaders, Bring Outdoor Rx to Springfield!

- We need your help! We ask that Baystate Medical Center, which serves a majority of residents in Springfield, **collaborate** with the environmental groups in the area to **encourage & enable** children as well as adults to **actively explore the outdoors** through the foundation of OutdoorRx.
- *Funding* on the city, state, & federal levels with *community engagement* by clinicians is necessary for the **health of our community.**





What did we learn?



# To Summarize...

- Many local organizations work *behind the scenes* to improve aspects that affect **physical** and **psychological well-being** of the residents of Springfield.
- Interacting with residents has helped provide us a sense of **what they need**, what they are **expecting of their community leaders**, and **how to communicate** with them effectively, like including programs like OutdoorRX.
- Similarly, identifying social and environmental injustices that these residents and future patients experience provides us with more **empathy and understanding** as clinicians and enable us to **advocate** for them appropriately.
- The ability to interact **interprofessionally** and observe other interprofessional teams has given us a greater sense of the importance of **cooperativity** and **appreciation** for the skills we each bring to the table.



## Our Survey

If you're interested in exploring our methods & taking our survey for yourself, scan this QR code with your smartphone camera.



# Acknowledgements

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# Thanks!

ANY QUESTIONS?

