
Environmental Justice

Session 9: Introduction to Environmental Justice



Group Agreements



One Mic

Only one person should be speaking at a time!



Challenge Ideas, Not People

Try to question and critique the ideas being presented, rather than the person presenting them, so everyone can engage without feeling shut down.



Listen with Empathy

Everyone has different experiences and perspectives - try to avoid judgement and seek understanding.



Step Up, Step Back

If you are usually quiet challenge yourself to take more space, and if you usually talk a lot be mindful to leave room for quieter voices.



Land the Plane

Out of respect for our limited time, please try to get to the point of your comment or question as concisely as possible.



An Incomplete Picture

Every lecture here is an incomplete picture of the topic we are about to discuss. I invite folks with classroom, professional, or lived experiences with the topic to participate and share those experiences, whether they align or conflict with the narrative i present.



PUBLIC UTILITY
LAW PROJECT
OF NEW YORK, INC.



NEED HELP PAYING YOUR UTILITY BILLS?



ENERGY BILL ASSISTANCE WORKSHOP & TEACH-IN

Join our workshop to explore ways to reduce your utility bills, get help applying for programs that make energy more affordable, and discover policies aimed at securing clean, affordable energy for all New Yorkers.

We'll help you select and apply for programs such as:



Home Energy
Assistance Program
(HEAP)



Energy Affordability
Program (EAP)



Emergency Cash
Assistance



"One Shot Deal"



Community Solar



Heating Equipment
Repair

Flip over for more
information on these
programs ->



Riverside Church
490 Riverside Dr
Room MLK 411



December 12th
5:30 - 8 pm



Dinner & child
care provided

What to bring?

To determine program eligibility and support your application process, please bring the following documents to the workshop:

- ✓ Copy of most recent utility bill
- ✓ Benefit Awards Letter from the last 12 months (approval letter provided for public assistance programs such as SNAP, Medicaid, SSI, etc.)



Sign up using the QR code here:



For any questions, please contact annie@weact.org

WE ACT QUICK GUIDE: GET HELP NOW

ENERGY AFFORDABILITY PROGRAM DETAILS



Home Energy Assistance Program (HEAP)

Who? Have a family member under age 6, over 60, or disabled, plus income level

What? May help pay for heating/cooling costs, even if included in rent (eligibility varies)

When? Applications open Nov 1; Emergency HEAP opens Jan 2, 2025

How? <https://access.nyc.gov/programs/home-energy-assistance-program-heap/>



Energy Affordability Program (EAP)

Who? Low-income with ConEd for power

What? Discount on monthly energy bill

When? No deadline; if receiving benefits like HEAP/SNAP, may already be enrolled

How? Log in to ConEd account or submit application or visit ConEd walk-in centers



Cash Assistance (SNA or FA)

Who? Low-income singles & families

What? Twice-a-month cash up to 5 yrs, more available if you add family member, face an emergency, get pregnant, etc.

When? No deadline

How? Call 311, ask for "Cash Assistance"
<https://access.nyc.gov/programs/cash-assistance/>



"One Shot Deal" (ESNA)

Who? Facing an emergency, eviction, shut off utilities, domestic violence, etc.

What? One-time cash loan that must be paid back

When? No deadline, note the benefit is facing long wait times

How? Must submit app and do an interview
Call DSS OneNumber @ 718-557-1399



Community Solar

10% discount off ConEd electricity bill by signing up online for solar



Heating Equipment Repair

Money to help replace or repair your furnace, boiler, etc. if you're a homeowner

ACT NOW & LEARN MORE

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01

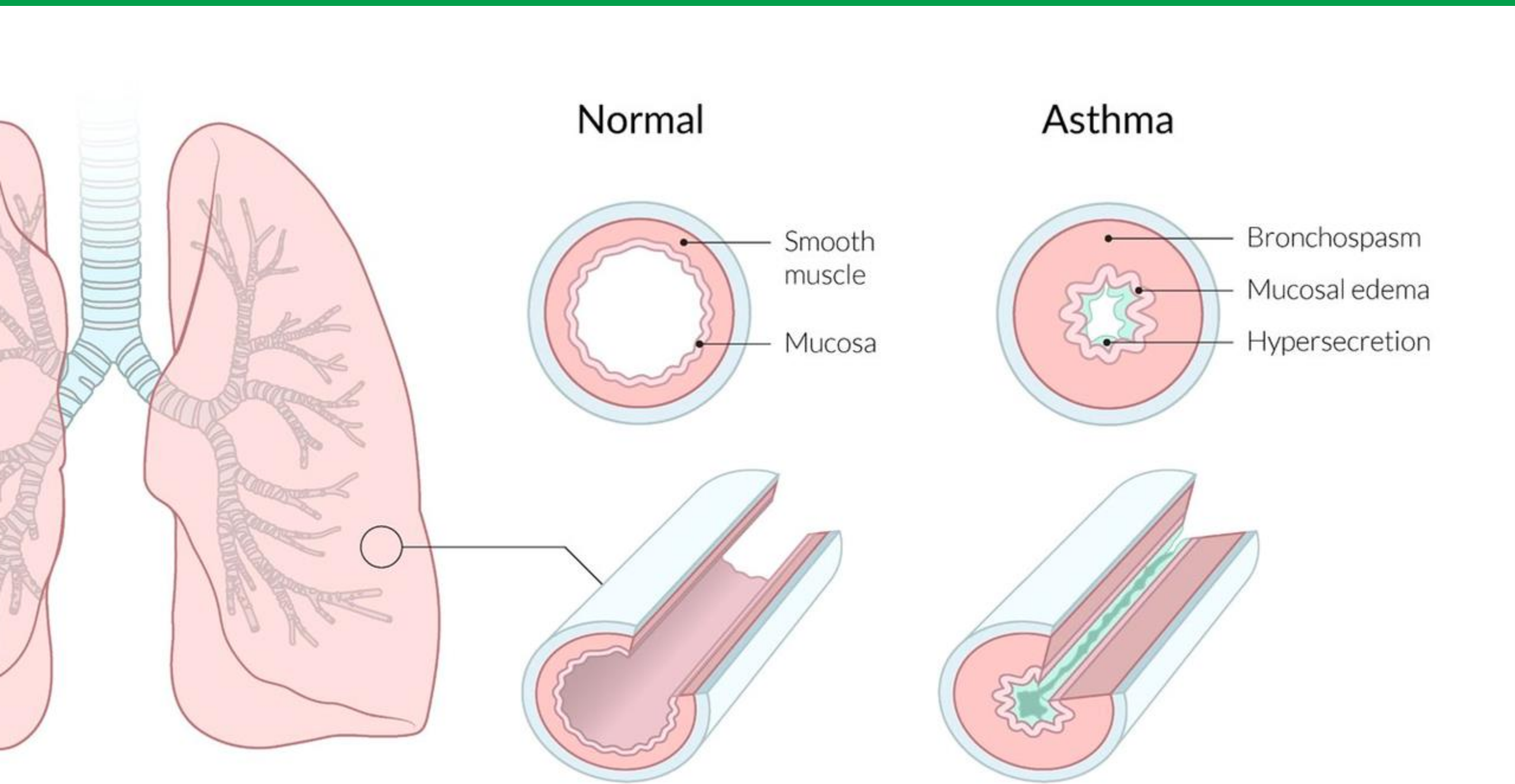
What is Asthma?





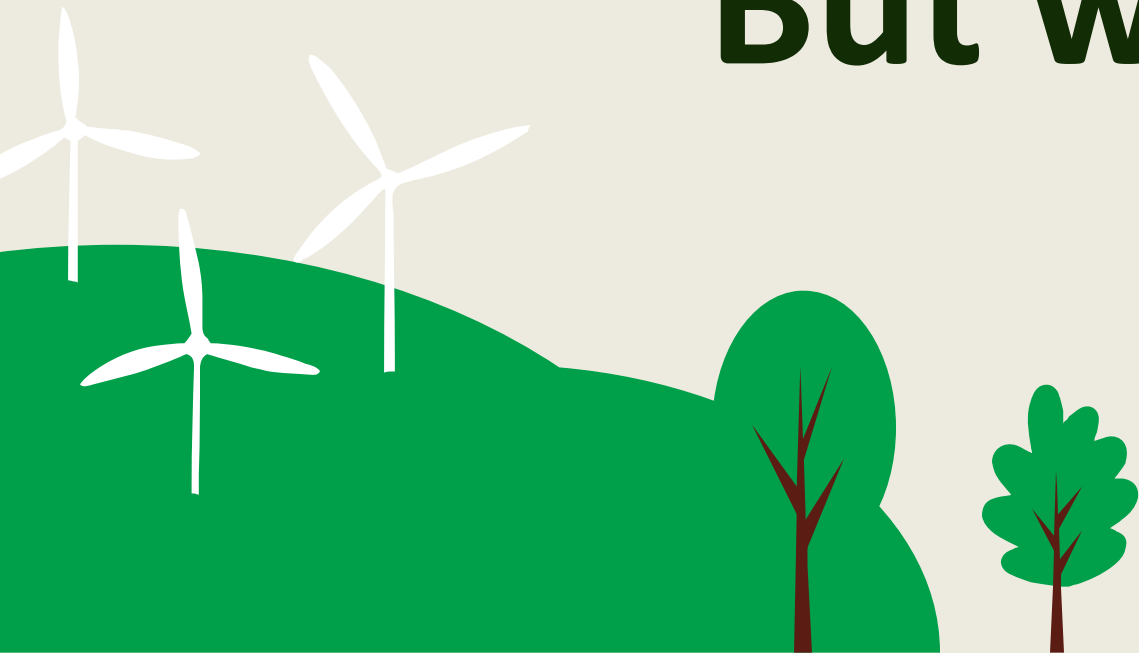
01

WHAT IS ASTHMA?



Processes: Bronchoconstriction, Airway inflammation, & Airway hyperresponsiveness

But why asthma?



HEALTH BURDEN OF ASTHMA



Affects more than 3.5 million children and 22 million adults in the United States:

- 1.8 million emergency department visits
- 14 million physician office visits
- \$3 billion in missed school and work days
- \$22 billion in healthcare costs

Turn to a Neighbor:

What are some of the risk factors and triggers you understand to be associated with asthma?



RISK FACTORS & TRIGGERS

*Family History of
Asthma*

Viral Infections & Colds

Exercise

Allergies

Eczema

Rodents & Roaches

Pet Dander & Fur

*Changes in
Temperature*

Mold

*Lack of Access to
Healthcare*

Dust

Workplace Chemicals

Poverty

Pollen

Emotional Stress

A close-up photograph of a middle-aged man with a mustache, wearing a brown and white checkered shirt. He is using a medical device, specifically a nebulizer mask over his nose and mouth, and holding a white nebulizer cup. The background is slightly blurred, showing a desk with some papers and a computer mouse.

02

ASTHMA DISPARITIES

CENTRAL HARLEM

AIR CONDITIONING (percent of households)



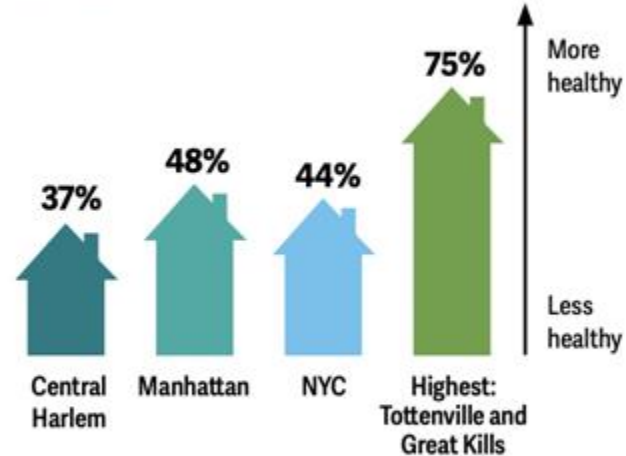
Source: NYC Housing and Vacancy Survey, 2014

AVOIDABLE HOSPITALIZATIONS AMONG ADULTS (per 100,000 adults)



Source: New York State Department of Health, Statewide Planning and Research Cooperative System, 2014

HOMES WITHOUT MAINTENANCE DEFECTS (percent of renter-occupied homes)



Note: Maintenance defects include water leaks, cracks and holes, inadequate heating, presence of mice or rats, toilet breakdowns or peeling paint.

Source: NYC Housing and Vacancy Survey, 2014

HOMES REPORTING COCKROACHES (percent of households)



ASTHMA DISPARITIES IN NYC

Black patients overall are:

2.5x

more likely to have asthma-related hospitalizations, and

5x

more likely to die from asthma than white patients

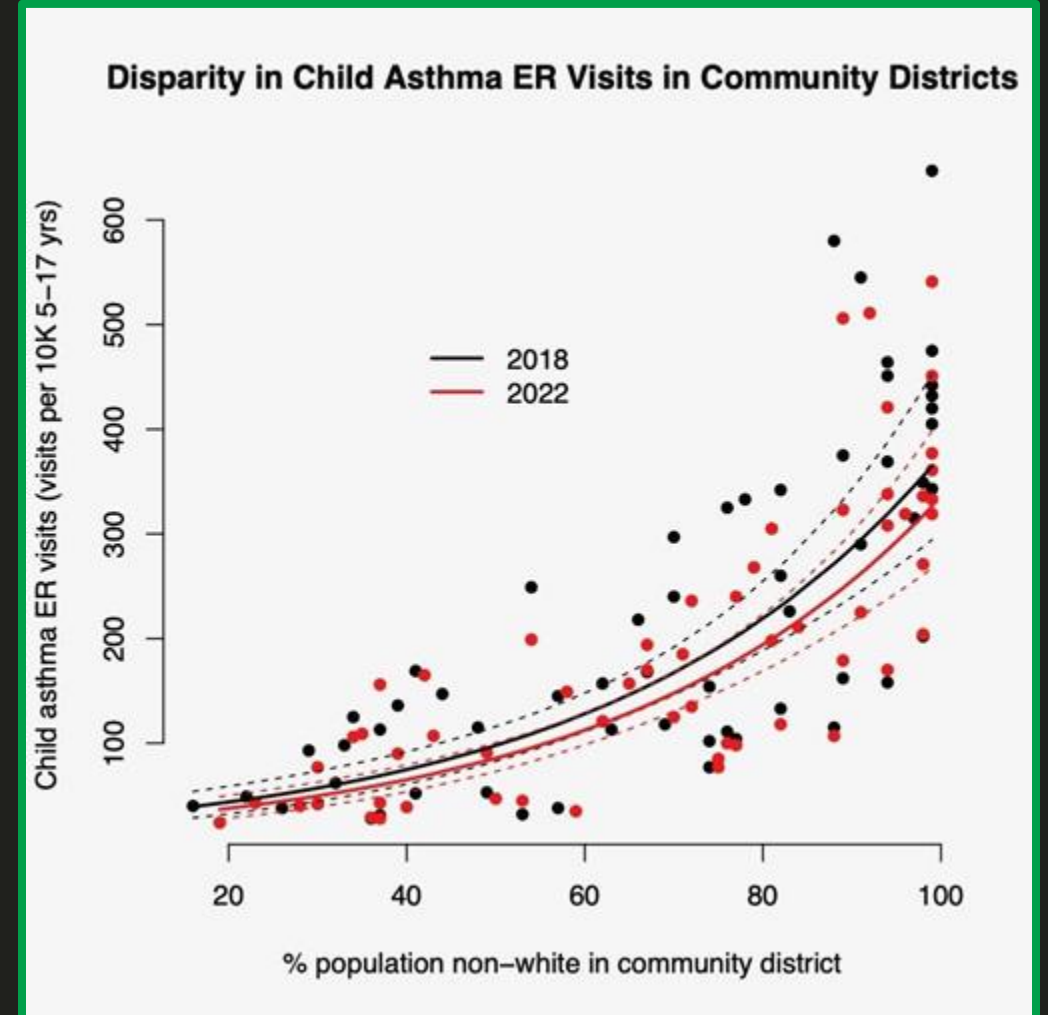
Black CHILDREN are:

4.5x

more likely to have asthma-related hospitalizations, and

8x

more likely to die from asthma than white children



ASTHMA DISPARITIES

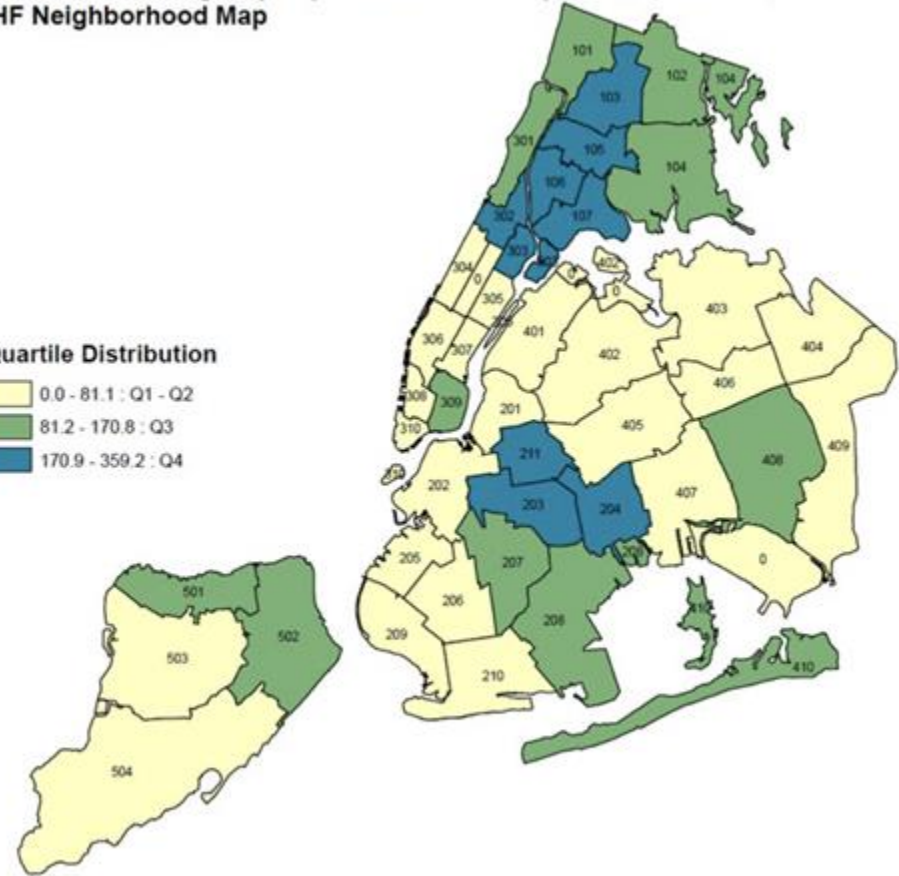
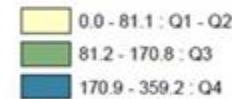
IN NYC

Asthma is concentrated in a few neighborhoods:

- **The Bronx:** *Fordham, Crotona, Tremont, High Bridge, Morrisania, Hunts Point, Mott Haven*
- **Manhattan:** *Central Harlem / Morningside Heights, East Harlem*
- **Brooklyn:** *Bed Stuy, Crown Heights, East New York, Williamsburg, Bushwick*

Total asthma emergency department visit rate per 10,000 for NYC, 2016
UHF Neighborhood Map

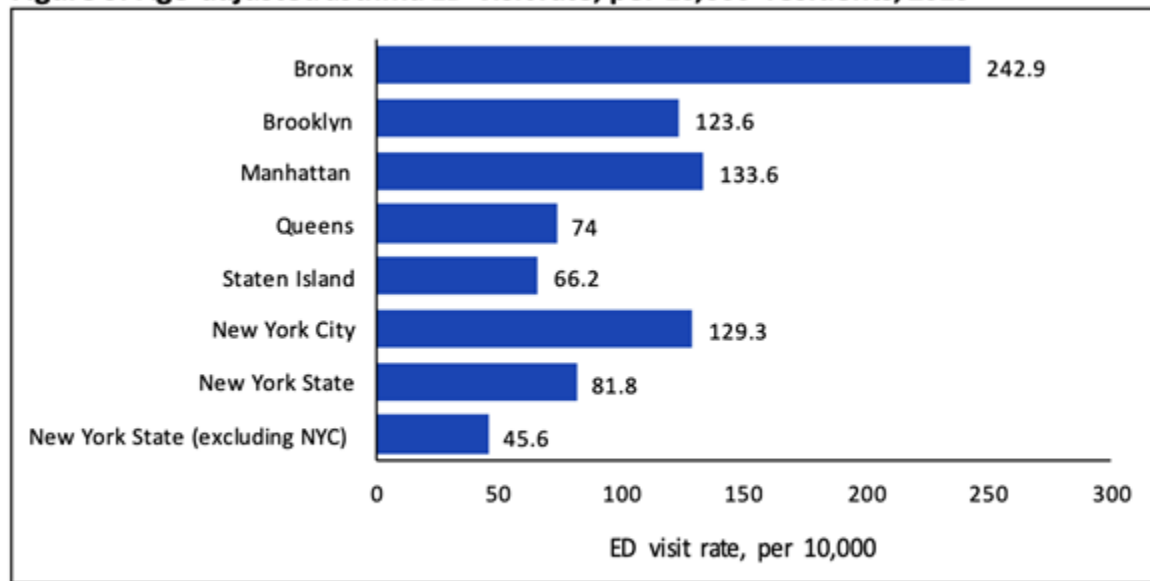
Quartile Distribution



ASTHMA DISPARITIES

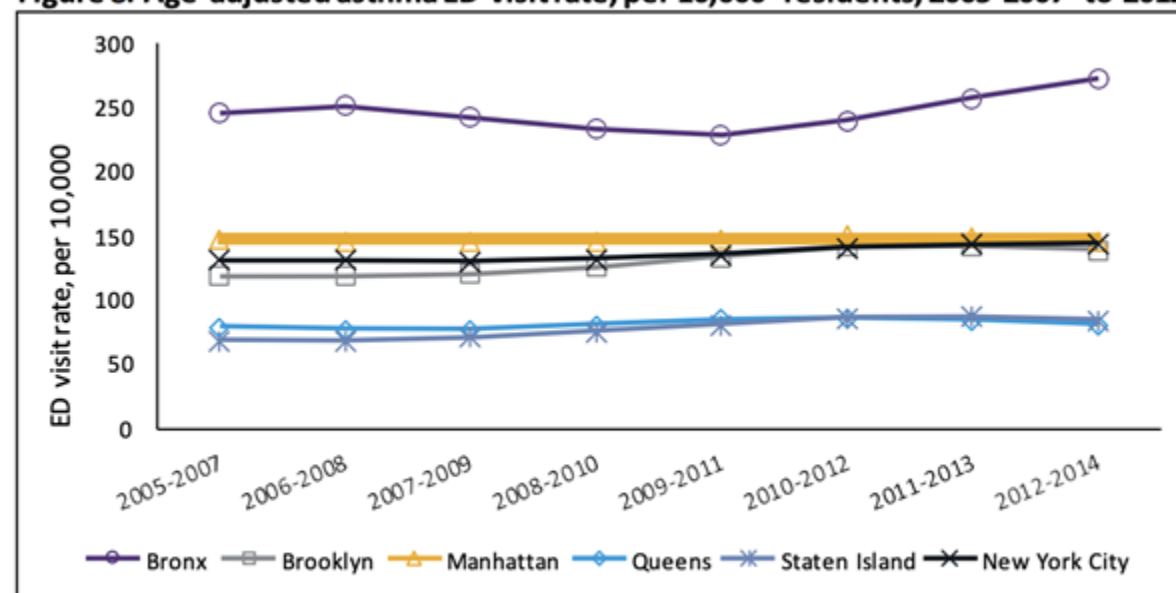
IN NYC

Figure 9. Age-adjusted asthma ED visit rate, per 10,000 residents, 2016



Data source: Statewide Planning and Research Cooperative System (SPARCS)

Figure 8. Age-adjusted asthma ED visit rate, per 10,000 residents, 2005-2007 to 2012-2014



Data source: Statewide Planning and Research Cooperative System (SPARCS)

ED Visits and hospitalizations in the Bronx are almost 2X as high as the city overall, and almost 3X of New York State

ASTHMA DISPARITIES

IN NYC

43.5

*Deaths per million
residents, the Bronx (2009)*

36.8

*Deaths per million
residents, the Bronx (2016)*

18.9

*Deaths per million
residents, NYC (2016)*

*The asthma mortality rate for the Bronx has declined, but is still almost twice
the rate of New York City overall*

ASTHMA DISPARITIES IN NYC

*Asthma patients with COPD
are:*

3.6x

*more likely to be
hospitalized than patients
without COPD*

*Asthma patients with COPD
have:*

2x

*greater hospital costs than
those without*

Elderly patients are:

5x

*more likely to die from
asthma than younger
patients*

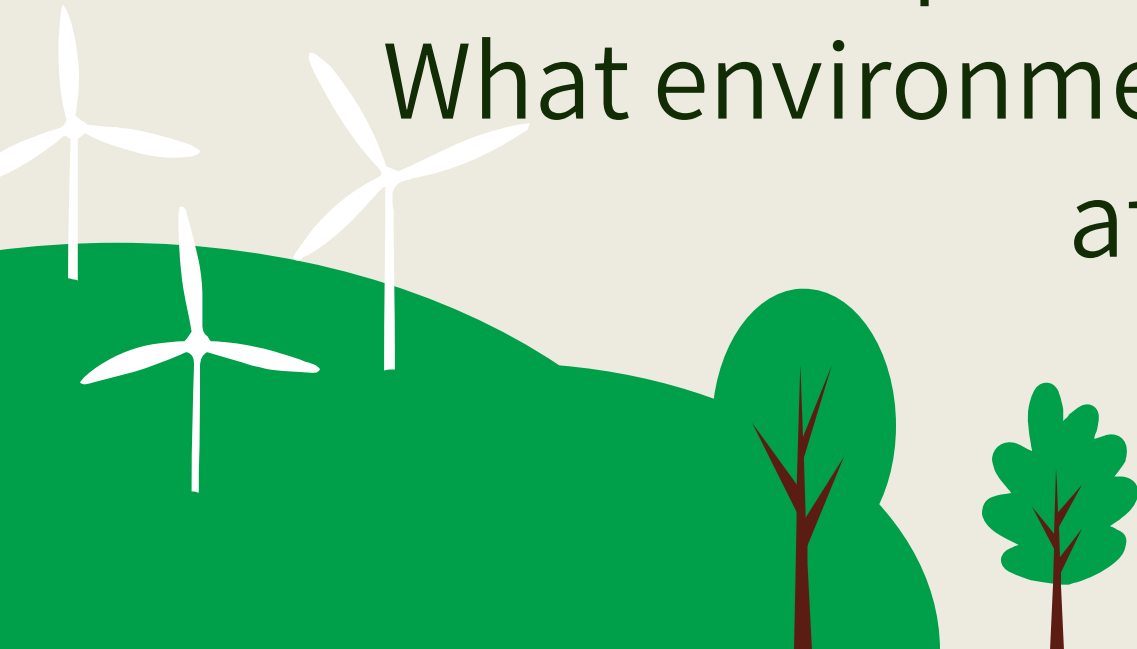
03

AUTHORIZED
PERSONNEL
& VEHICLES
ONLY

ENVIRONMENTAL FACTORS

Turn to a Neighbor:

Imagine you were a community health worker responsible for a child with asthma. What environmental factors would you look at to reduce their symptoms?



ENVIRONMENTAL FACTORS



Indoor Environmental Contributors

- Excess Moisture, Damp, Mold
- Poor Housing Quality / Maintenance (Including NYCHA/ Public Housing)
- Pests (Roaches / Rodents)
- Smoke (Tobacco, etc.)
- Workplace / Occupational Exposures
- Household Exposures (Gas Stoves)

Outdoor Environmental Contributors

- Air Pollutants
- Emitting Facilities & Cumulative Impacts
- Traffic
- Pollen
- Urban Heat Island Effect
- Climate & Weather

ENVIRONMENTAL FACTORS

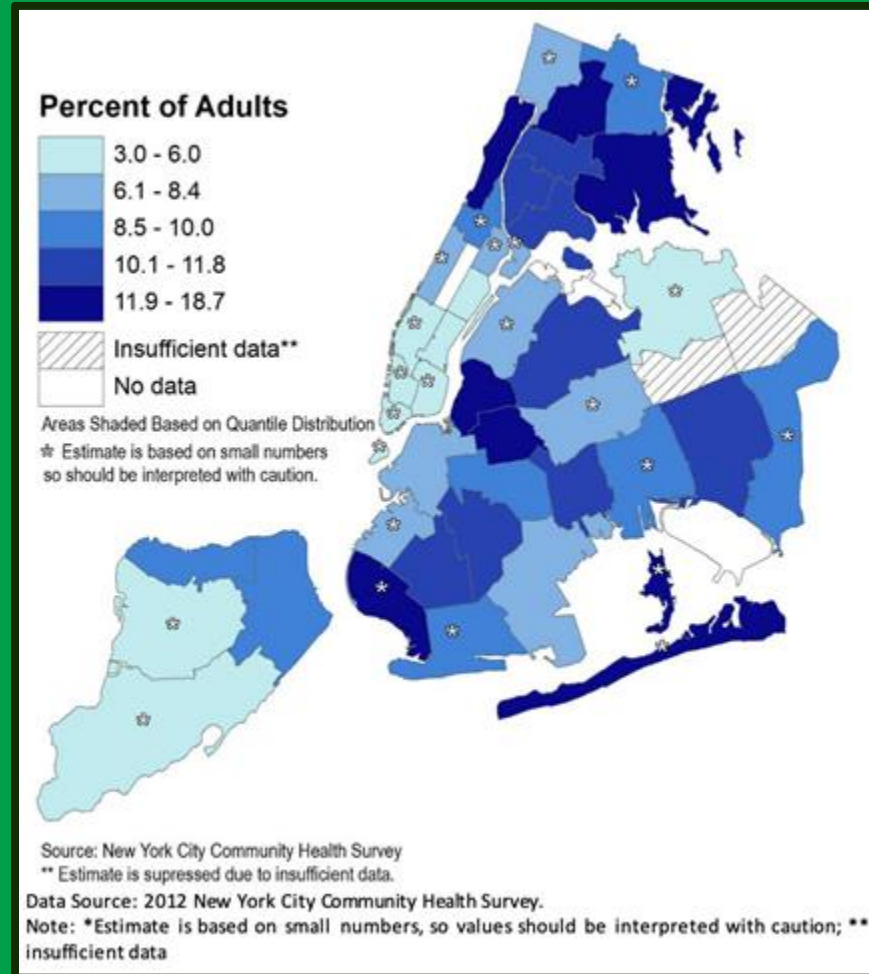
On average, Americans spend about

87%

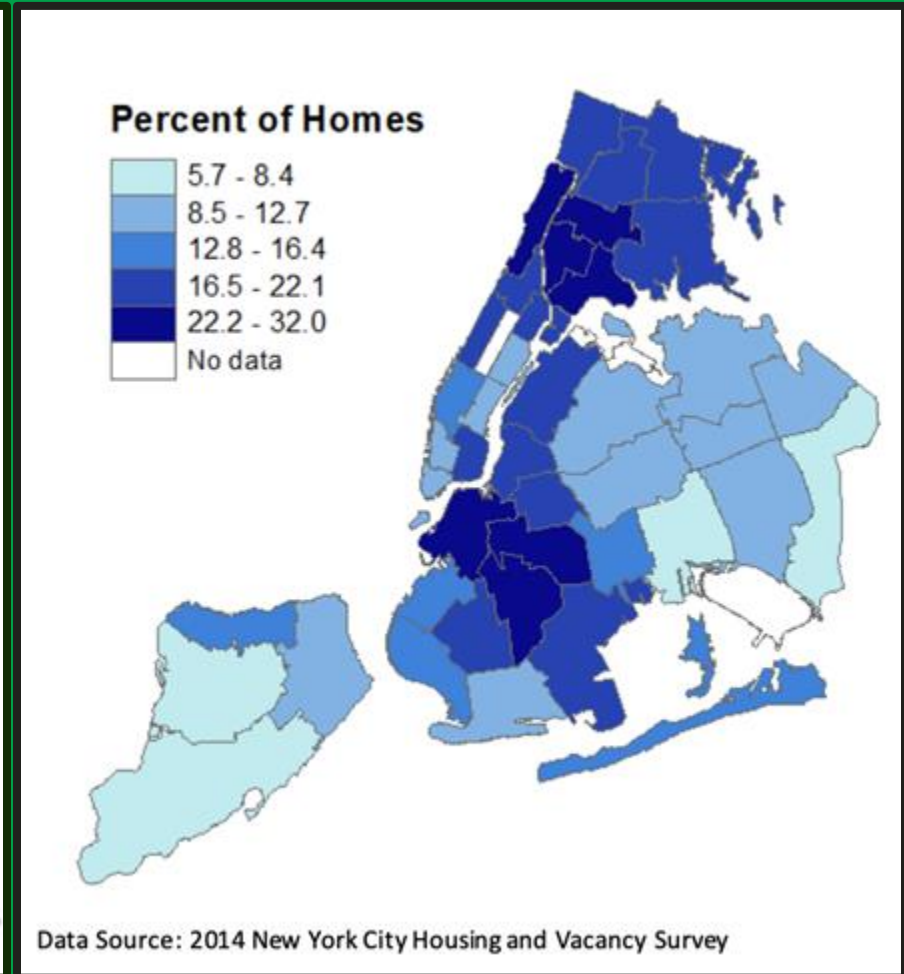
of their time indoors, and another 6% in a vehicle

WATER LEAKS & MOLD

- Damp & moldy buildings increase the asthma and infection risk
- Water leaks can cause dampness - contributing to bacterial and fungal growth
- Bacterial and mold spores can trigger or worsen asthma



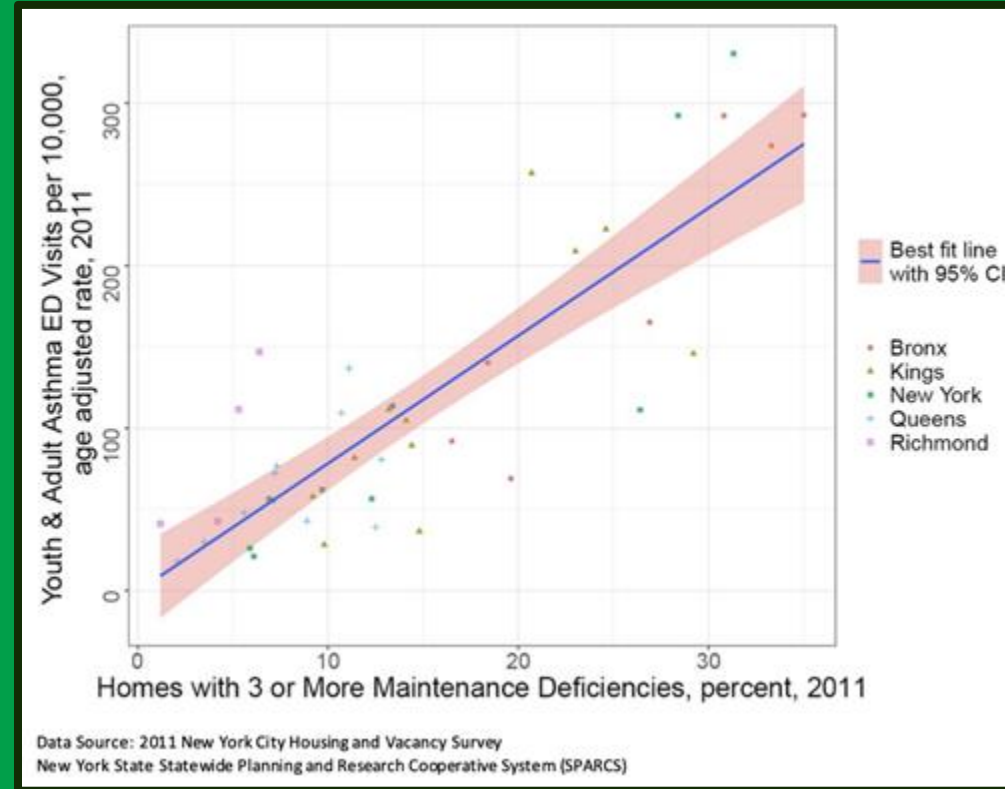
Percent of homes with mold by UHF neighborhood, 2014



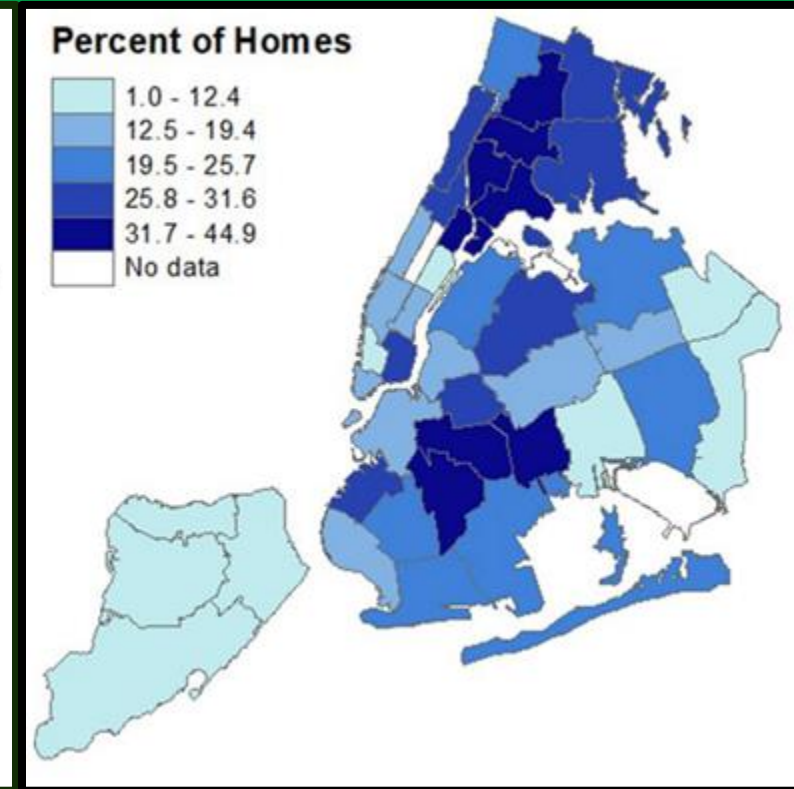
Percent of homes with leaks by UHF neighborhood, 2014

HOUSING QUALITY & PESTS

- Residents with poor housing quality have higher rates of asthma
- Maintenance issues have been linked to more asthma triggers
- Cockroach debris and rodent allergens can trigger or worsen asthma symptoms



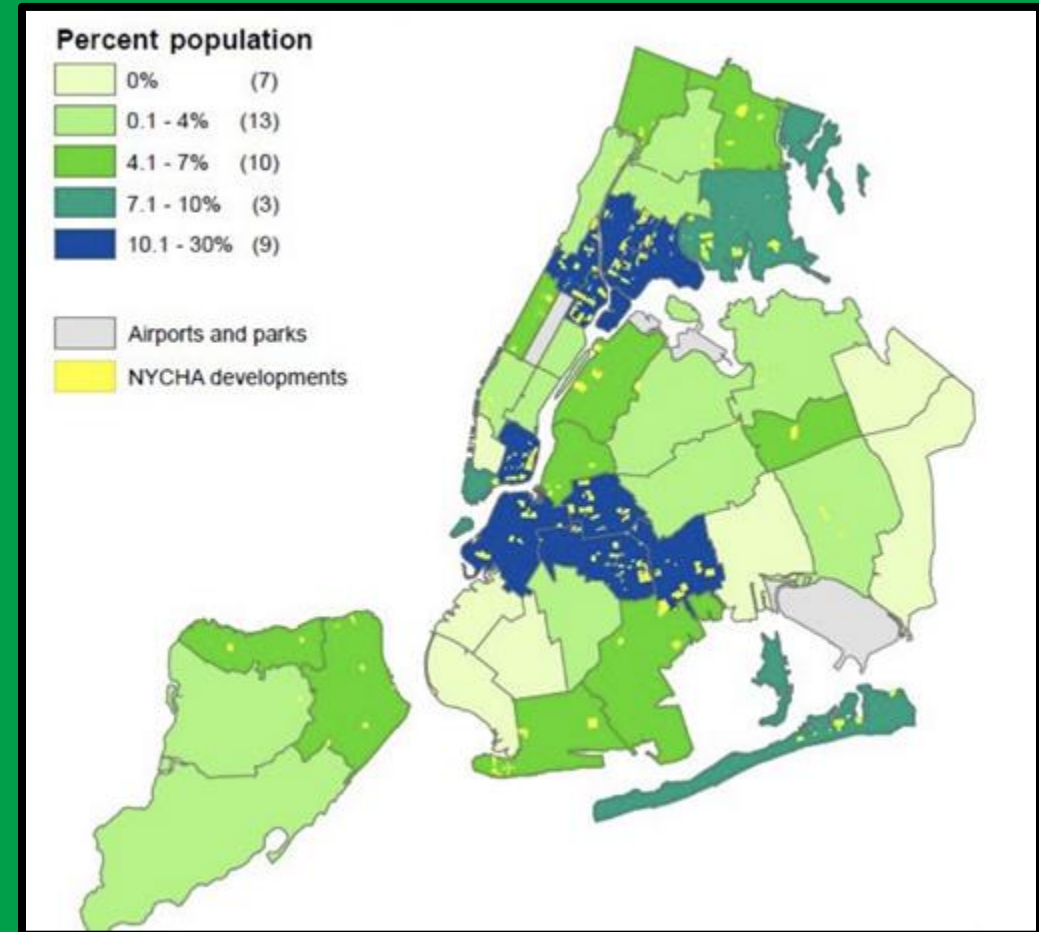
Homes with 3 or more Maintenance Deficiencies by Asthma Rate, 2011



Percent of Homes with Cockroaches, 2014

PUBLIC HOUSING & NYCHA

- Public housing is linked to poor indoor housing quality
- Rates of asthma among public housing and rental assistance residents was twice as high as non-residents
- More than a third of NYCHA residents reported having at least one child with asthma, vs 13% for NYC overall
- Hospitalization rates for asthma are higher among public housing residents



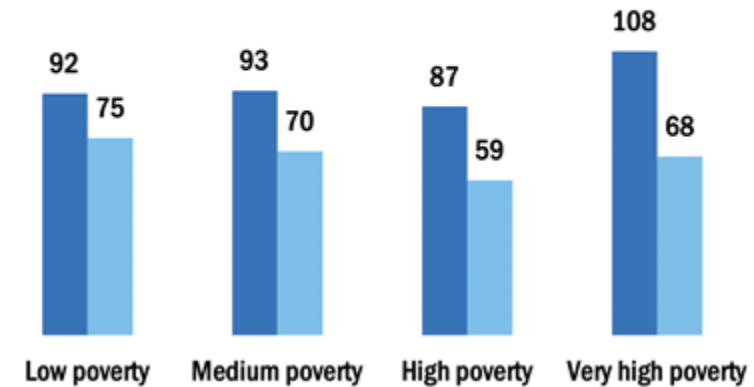
Percent of neighborhood population living in NYC Housing Authority assisted housing, 2016

SMOKING & ASTHMA

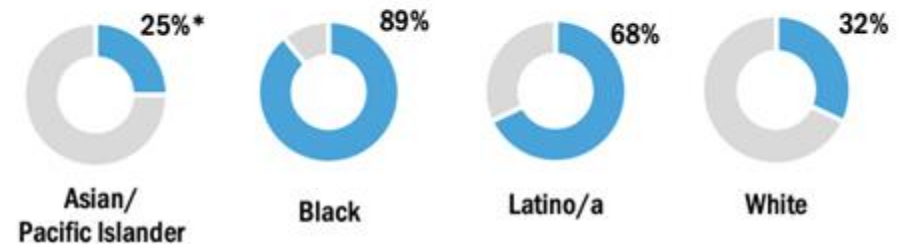
- Tobacco smoke is the 2nd largest cause of asthma attacks
- Smokers with severe asthma have poorer asthma control and more unscheduled healthcare visits
- Kids with asthma who are exposed to secondhand smoke at home are twice as likely to be hospitalized due to attacks
- Although smoking rates have decreased citywide, the tobacco industry still targets Black and Latine communities

Licensing caps in New York City led to decreases in tobacco retailer density between 2018 and 2021

Tobacco licenses per 100,000 population by neighborhood poverty level



Tobacco industry marketing has been shown to target Black and Latino/a communities; in 2020, among New Yorkers who smoke, Black and Latino/a adults were more likely than other adults to smoke menthol cigarettes



OCCUPATIONAL ASTHMA



- Occupational asthma is the most common work-related lung disease in developed countries
- Diagnosed by confirming asthma diagnosis, and identifying a relationship to work
- Certain jobs are at elevated risk of occupational asthma due to common exposures they encounter

OCCUPATIONAL ASTHMA

Workers at Risk	Agents
Animal Handlers	Animal urine, dander
Bakers	Enzymes, flour/grain dust/mites
Carpenters	Acrylate, amines, diisocyanates, epoxy resins, wood dusts
Cleaners/Janitors	Cleaning materials, dusts, molds
Daycare providers	Cleaning materials, dusts, latex (natural), molds
Electronic workers	Amines, colophony, metals, soldering flux
Farmers	Animal urine, dander, grain dusts, mites, insects
Hairdressers	Henna, persulfate
Health care workers	Formaldehyde, glutaraldehyde, latex, methyldopa, penicillins, psyllium
Laboratory workers	Animal urine, dander, feathers, enzymes, formaldehyde, glutaraldehyde, insects, latex
Machinists/Tool setters	Metal working fluids, oil mists
Office workers	Cleaning materials, dusts, molds
Pharmaceutical workers	Cephalosporins, pancreatin, papain, pepsin, psyllium
Photographers	Complex amines
Plastic/Rubber workers	Anhydrides, diisocyanates
Sawmill workers	Wood dusts
Seafood processors	Crabs, prawns
Teachers	Cleaning materials, dusts, molds
Textile workers	Dyes, gums
Welders	Welding fumes

OUTDOOR AIR POLLUTION

The EPA monitors the air quality for six pollutant types:

Carbon monoxide

Lead

Nitrogen dioxide

Ozone

Sulfur dioxide

Particulate matter

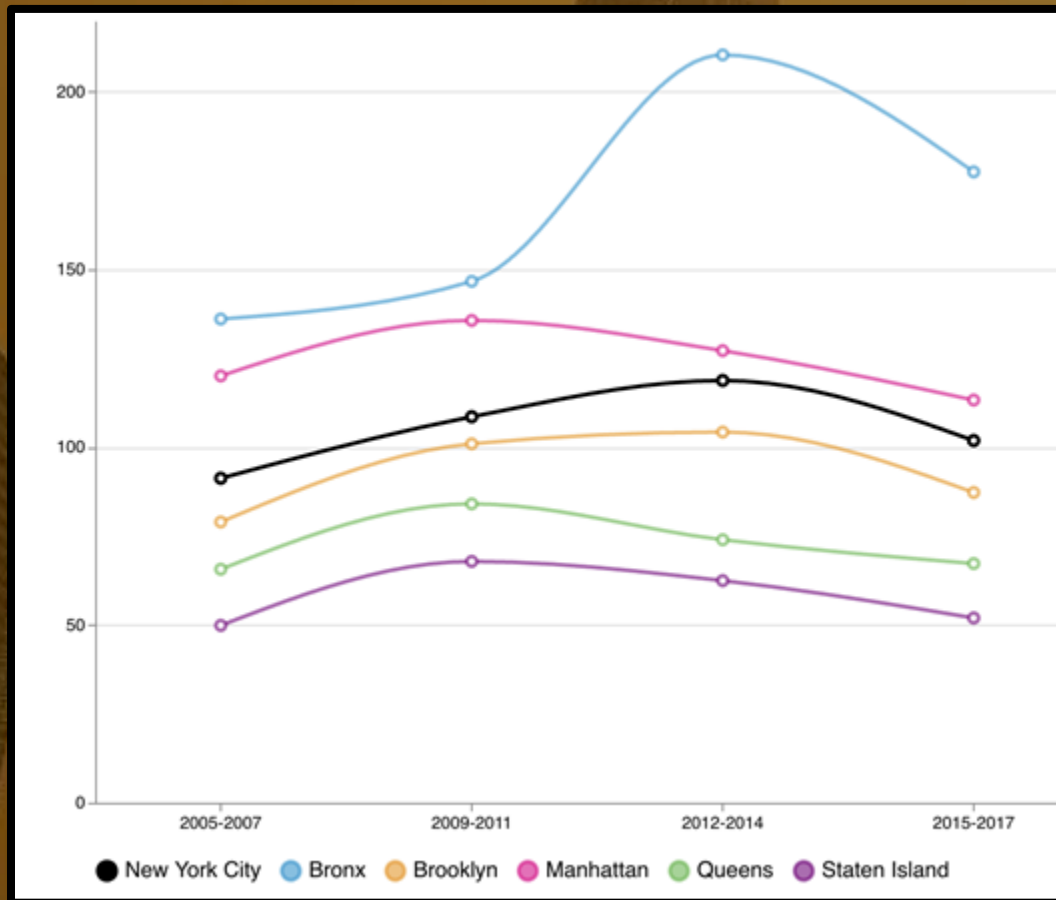
*NYC air quality has improved over the past 20 years, but
particulate matter pollution alone still causes :*

2000 deaths

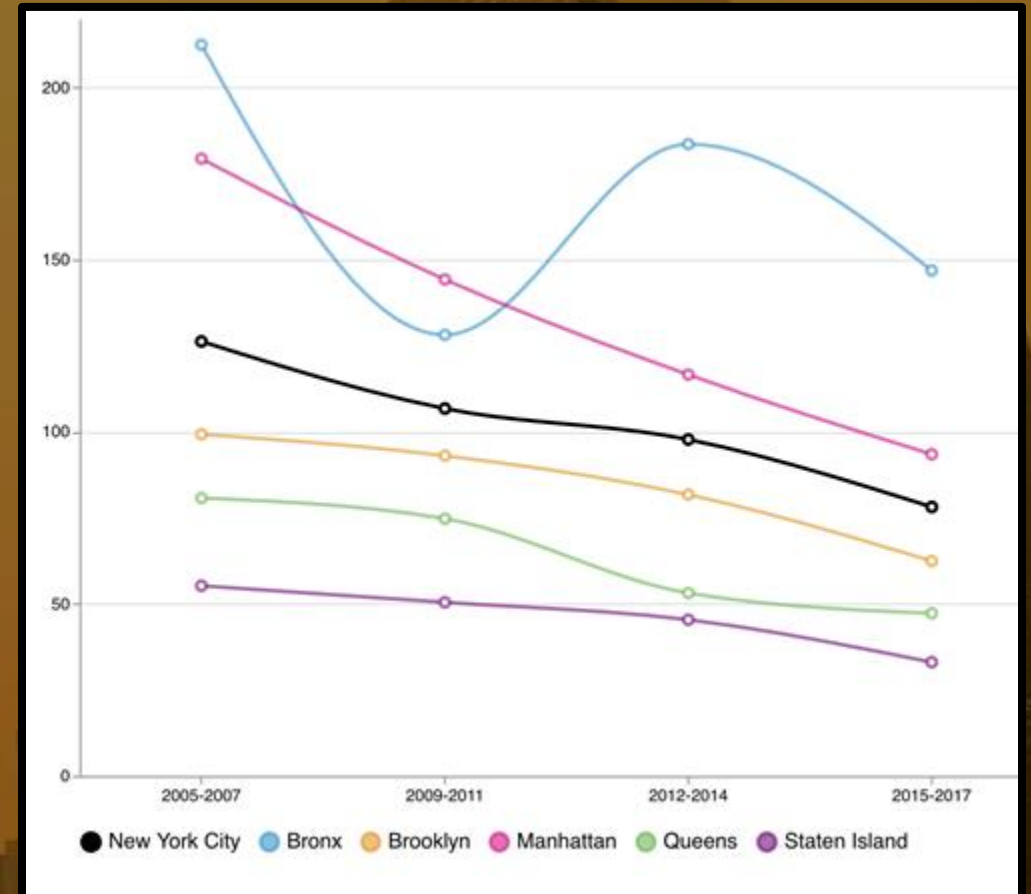
1,400 hospital admissions

3750 emergency department visits

OUTDOOR AIR POLLUTION



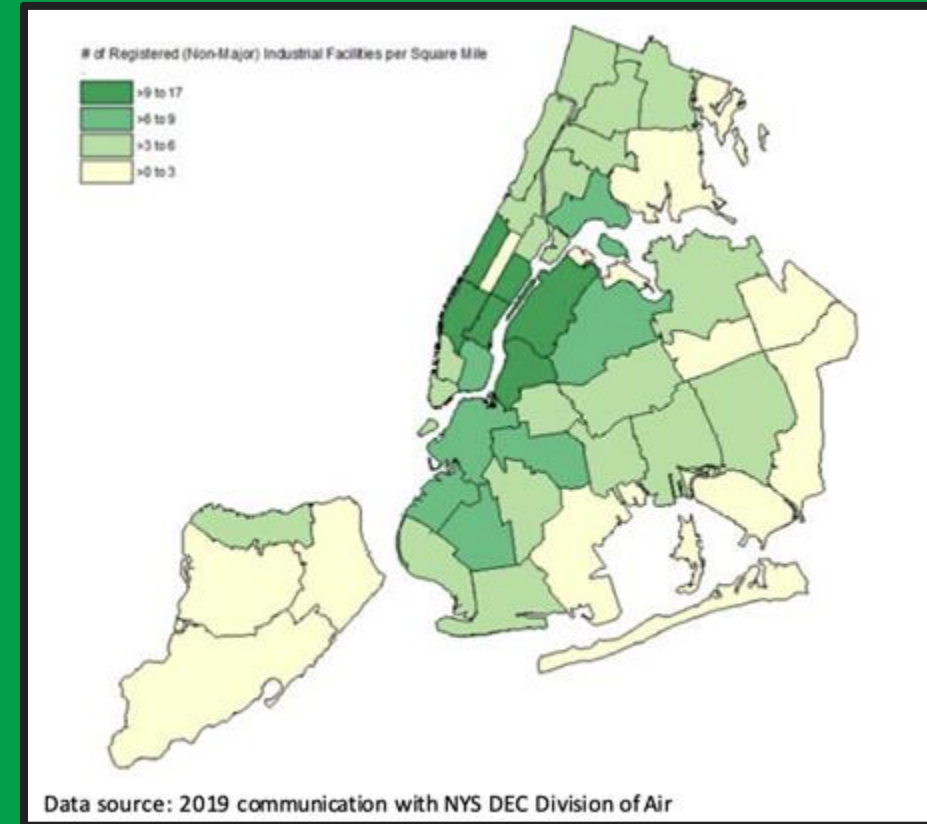
Asthma emergency department visits due to ozone, by borough



Asthma emergency department visits due to PM2.5, by borough

POLLUTING FACILITIES

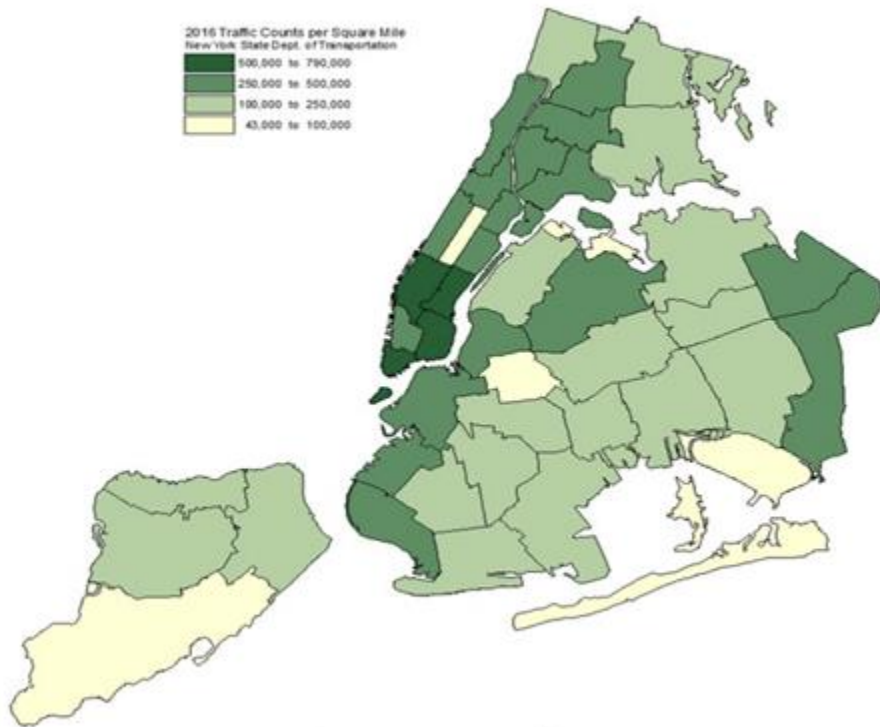
- EPA categorizes 2 primary types of polluting facilities:
 - Major facilities - emit 100+ tons per year of a criteria pollutant, or 10+ tons per year of a hazardous pollutant
 - Non-major facilities - emit less than the threshold amount for criteria or hazardous pollutants
- Major facilities are subjected to stricter requirements (air pollution controls, track and monitor emissions, etc)
- Non-major facilities include dry cleaners, auto shops, apartment buildings, hospitals, etc.
- High density of non-major facilities does not correlate with asthma rates



Registered non-major facilities per square mile, by neighborhood

TRAFFIC & ASTHMA

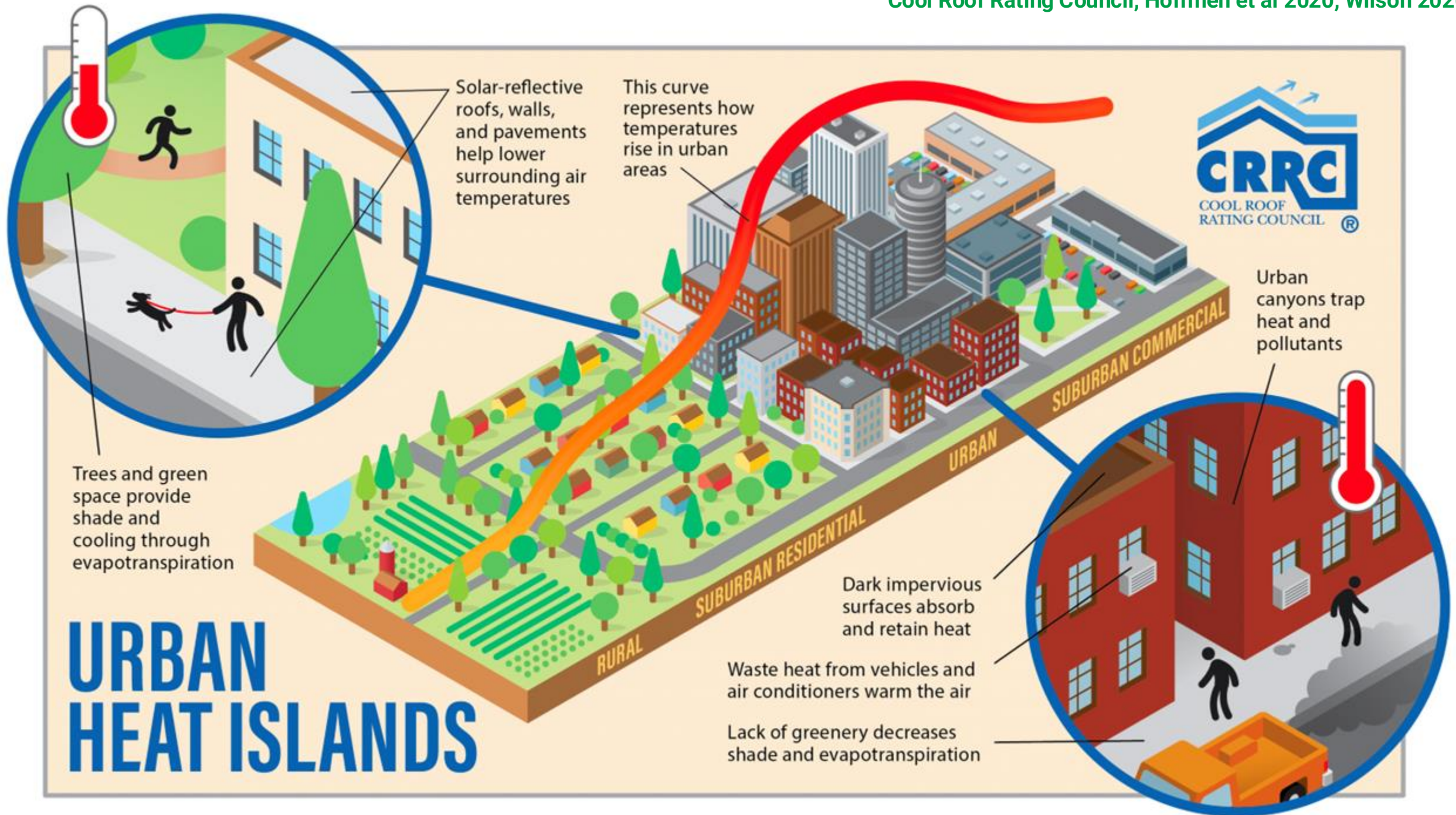
Figure 30 – Traffic counts per square mile, by UHF-42 neighborhood, in New York City, 2016



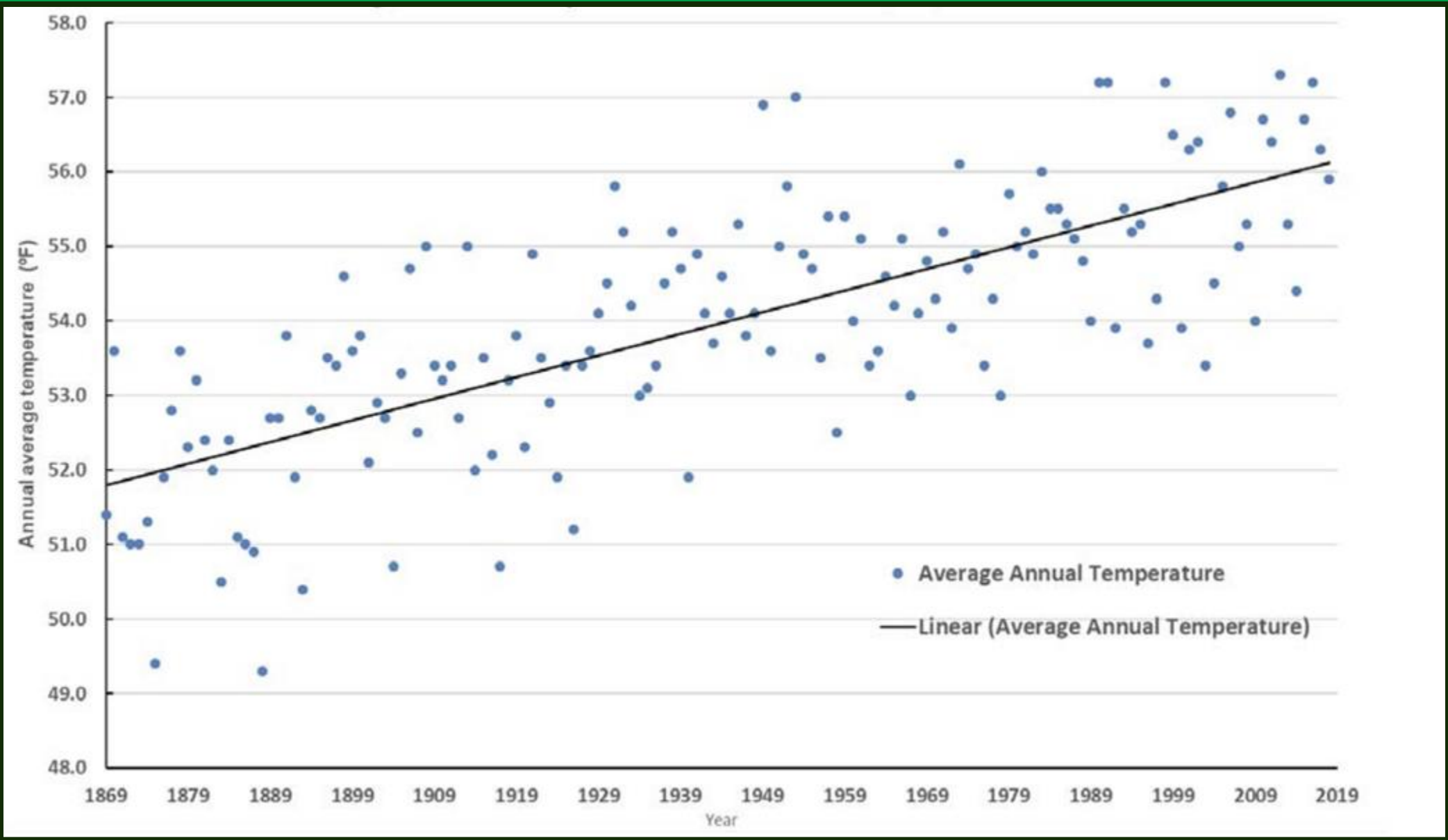
Source: New York State Department of Transportation

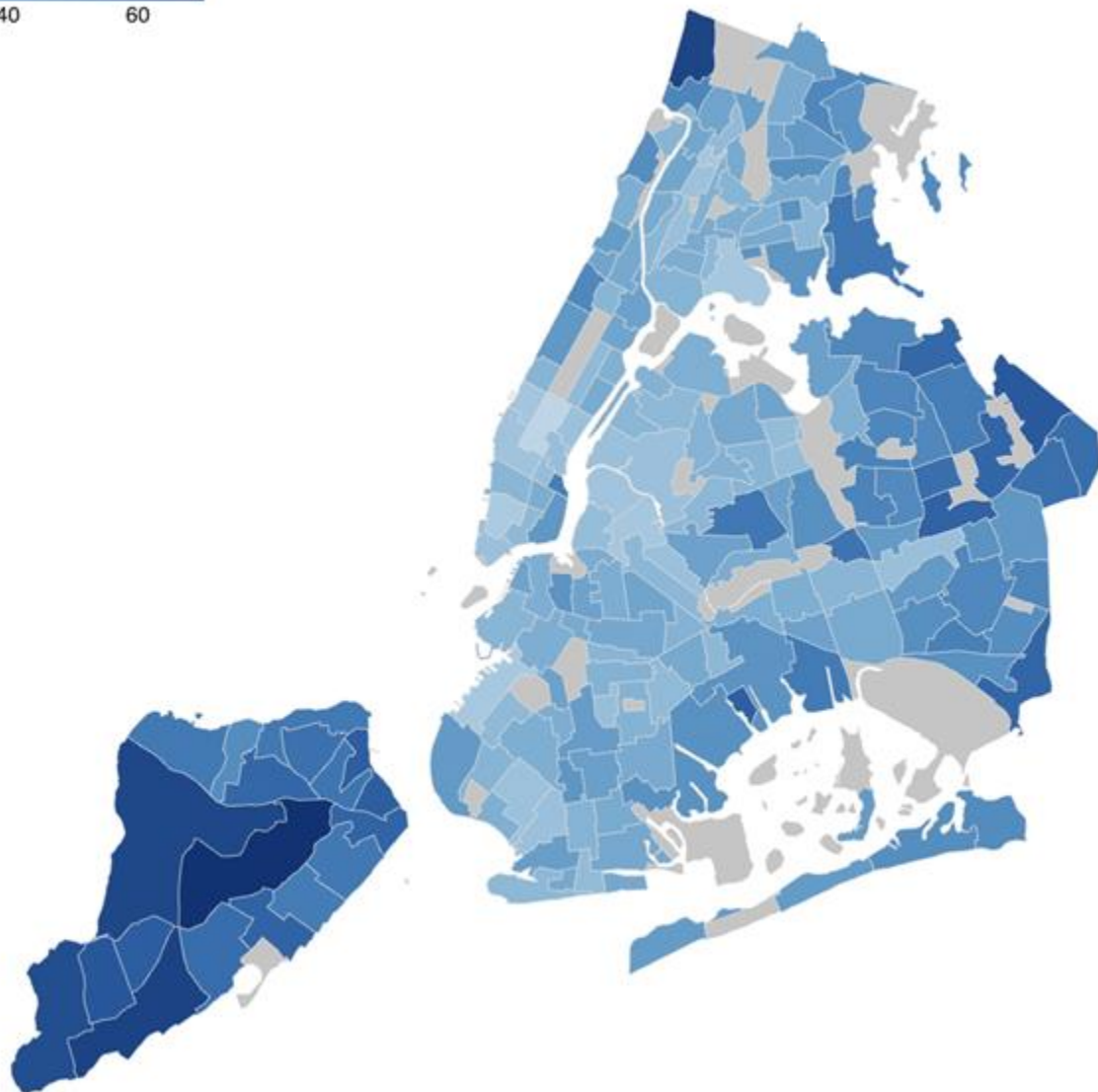
- Traffic is a significant contributor to ambient air pollution
- Pollutants from traffic include carbon dioxide, carbon monoxide, particulate matter, nitrogen oxides, black carbon, benzene, and ozone
- Trucks and buses contribute the most to emissions
- Although the health effects of traffic related air pollution are difficult to study, exposure to traffic pollution is linked to asthma development and exacerbation

Traffic counts per square mile by neighborhood

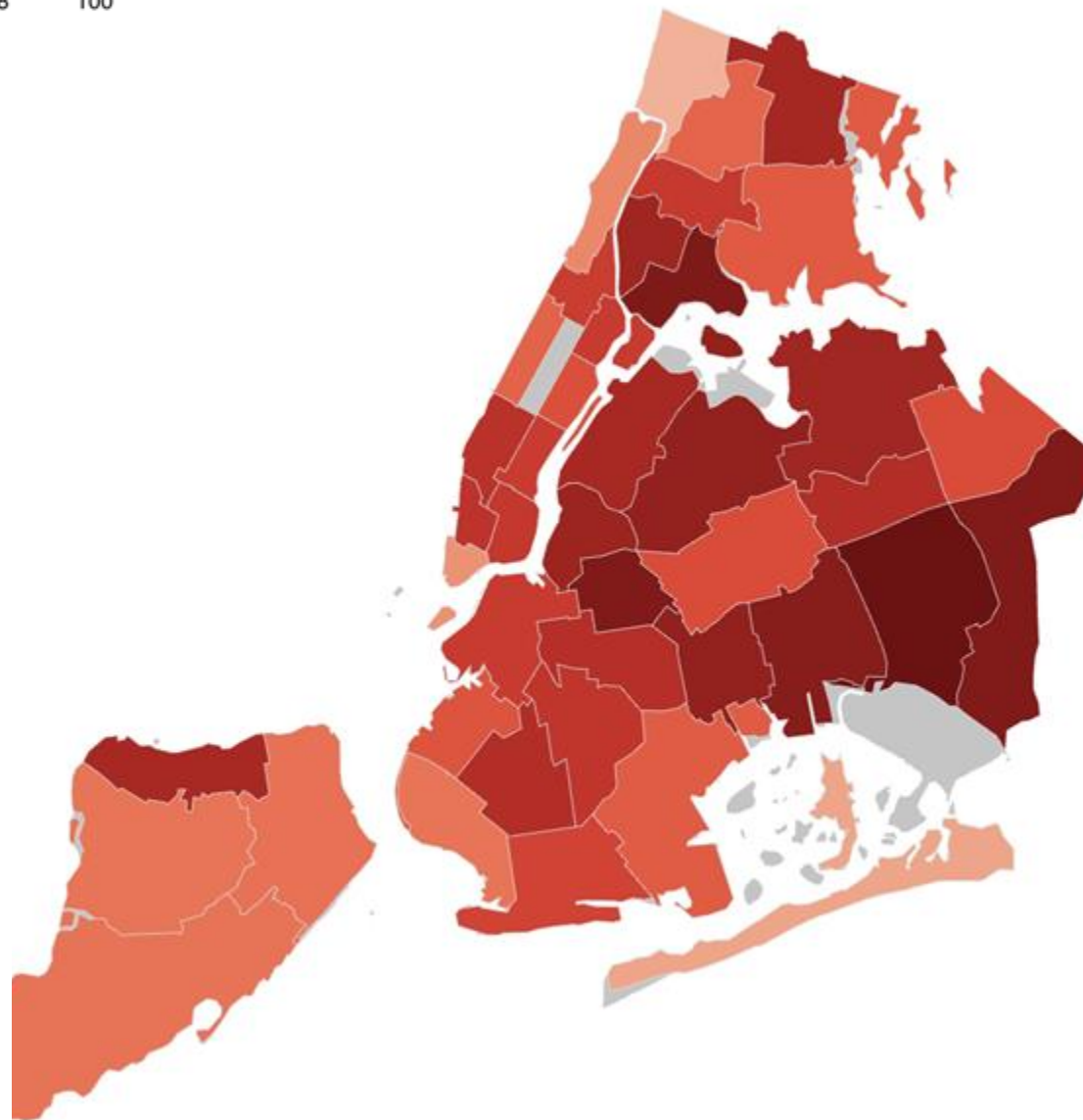


Average Annual Temperature in Central Park, 1869 - 2018



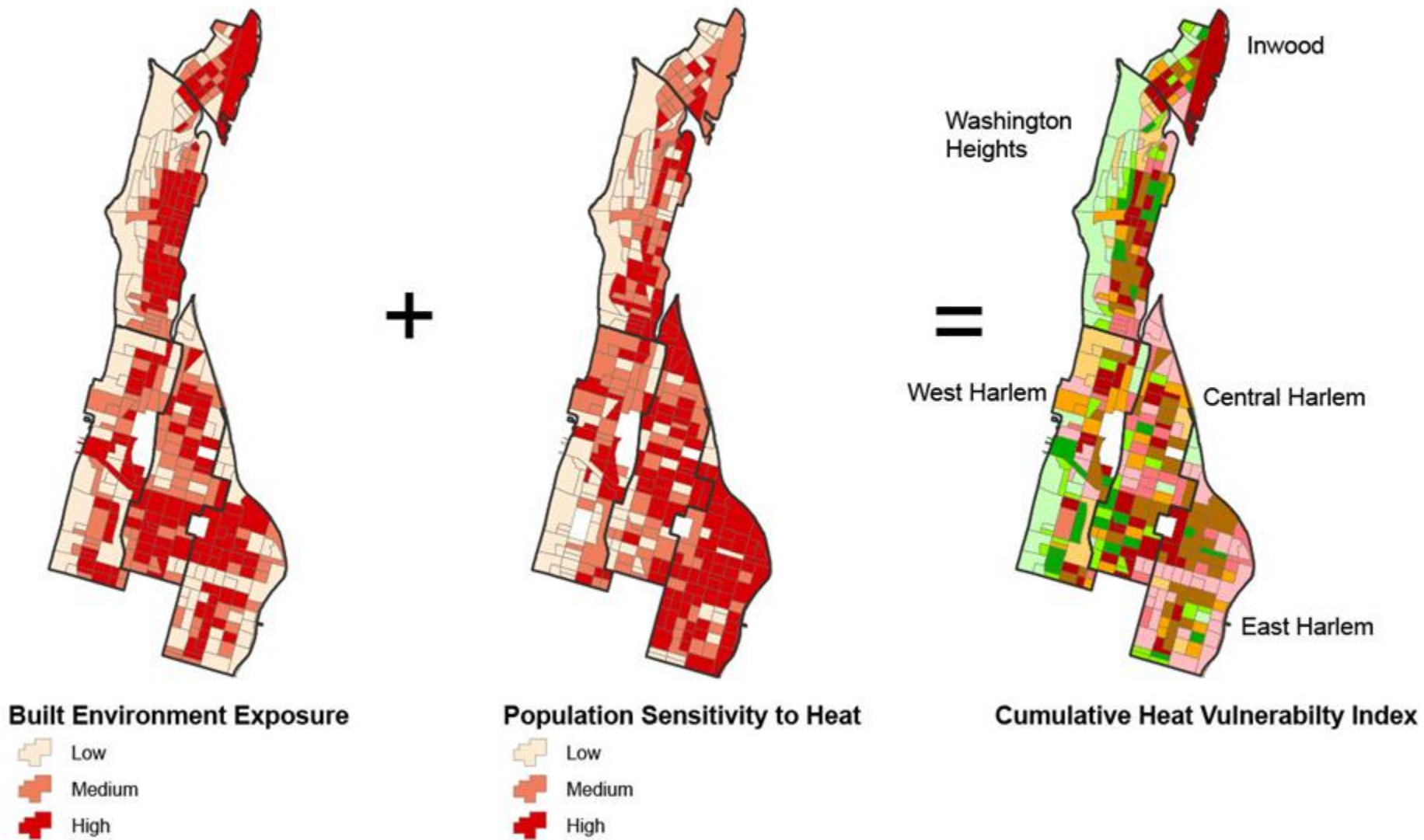


Vegetative Cover by Neighborhood, 2017



Daytime Summer Surface Temperatures by Neighborhood, 2018

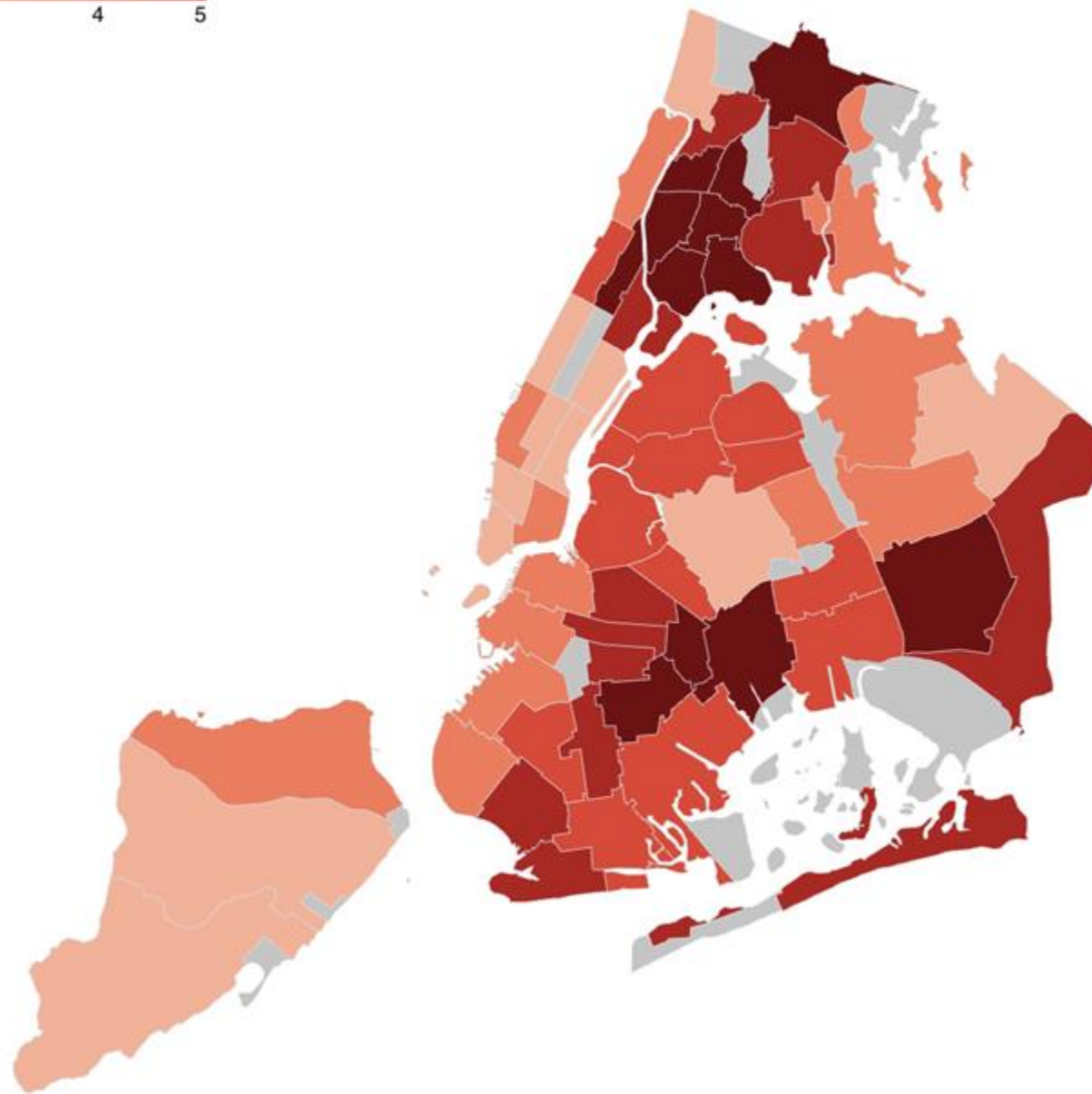
BUILT ENVIRONMENT EXPOSURE TO HEAT (LEFT MAP) AND POPULATION SENSITIVITY TO HEAT (CENTER MAP) COMBINE TO CREATE A CUMULATIVE HEAT VULNERABILITY INDEX (RIGHT MAP) IN CENSUS BLOCK GROUPS IN NORTHERN MANHATTAN





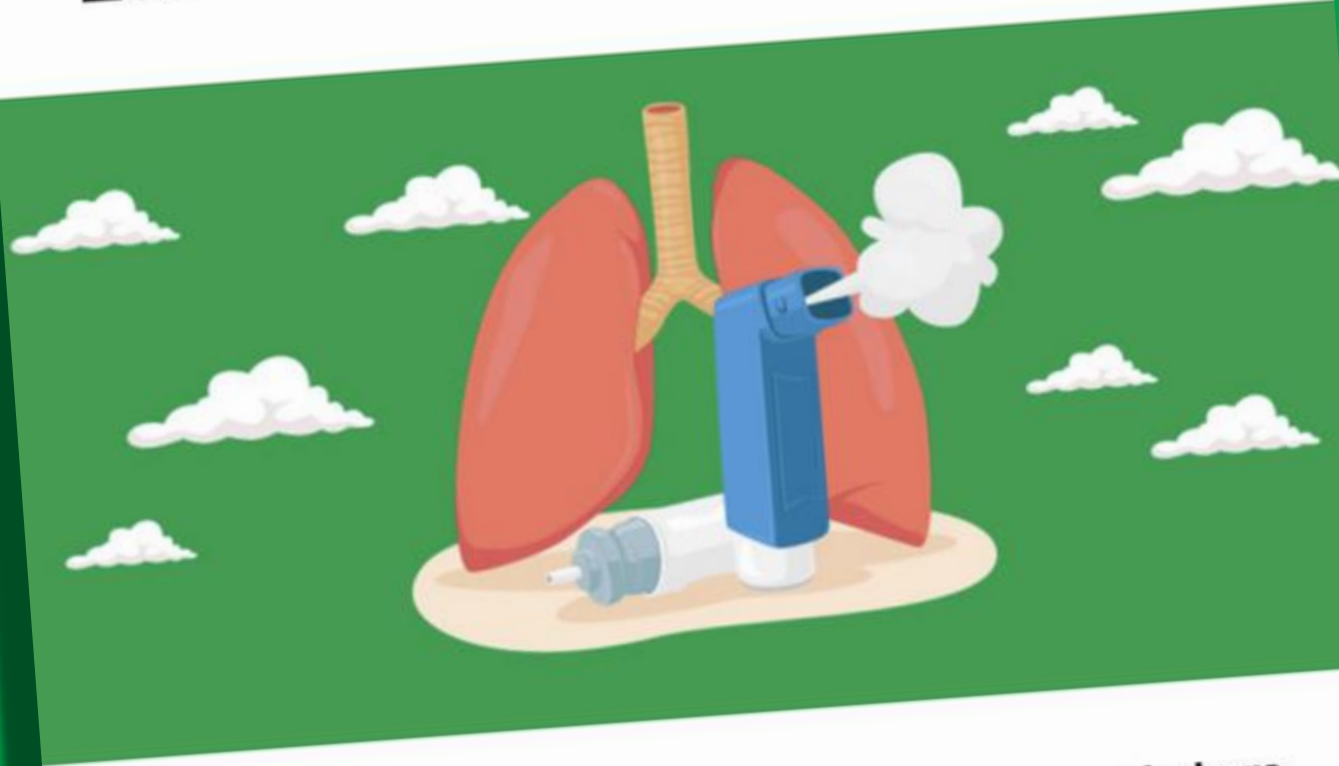
The HVI shows the risk of community-level heat impacts, like deaths, due to extreme heat events.

It is made up of data on surface temperature, green space, air conditioning access, median income, and Black population (the population most excluded from heat resources).





2024 ASTHMA POLICY AGENDA



Recommendations to Protect Vulnerable New Yorkers
from Asthma and Other Respiratory Health Risks

04

In your groups:

Imagine you were a city executive tasked with
reducing asthma incidence and severity.
What sort of policies or programs would you
propose?



INCREASING TREE COVERAGE

Encourage Non-Pollenizing Trees

- Counteracts urban heat islands
- Promotes cooling through shade and evaporation
- Less likely to worsen asthma symptoms
- Alleviate food insecurity and food deserts



JUST ENERGY TRANSITION



Peaker Plants

Fossil-fueled peaker power plants are built to provide occasional power when regular power plants cannot meet customer electricity needs during times of exceptionally high demand.



High Demand

Weather-related incidents (heat waves or extreme cold) and other factors can put excessive demands on the grid, particularly in constrained areas like NYC. If the grid cannot deliver enough power to meet localized demand peaks, it must call on peaker power plants.



Dirty Energy

Peaker power plants in NYC are fueled by natural gas, oil, or even kerosene. When these costly and inefficient peaker plants are turned on, they expel harmful pollutants, like NO_x and SO_x and particulates, into the surrounding communities.



Big Money

Because peakers are paid to be available but are rarely called on to produce energy—often running no more than a few hundred hours each year—peaker plants are the most expensive sources of electricity in the power system.



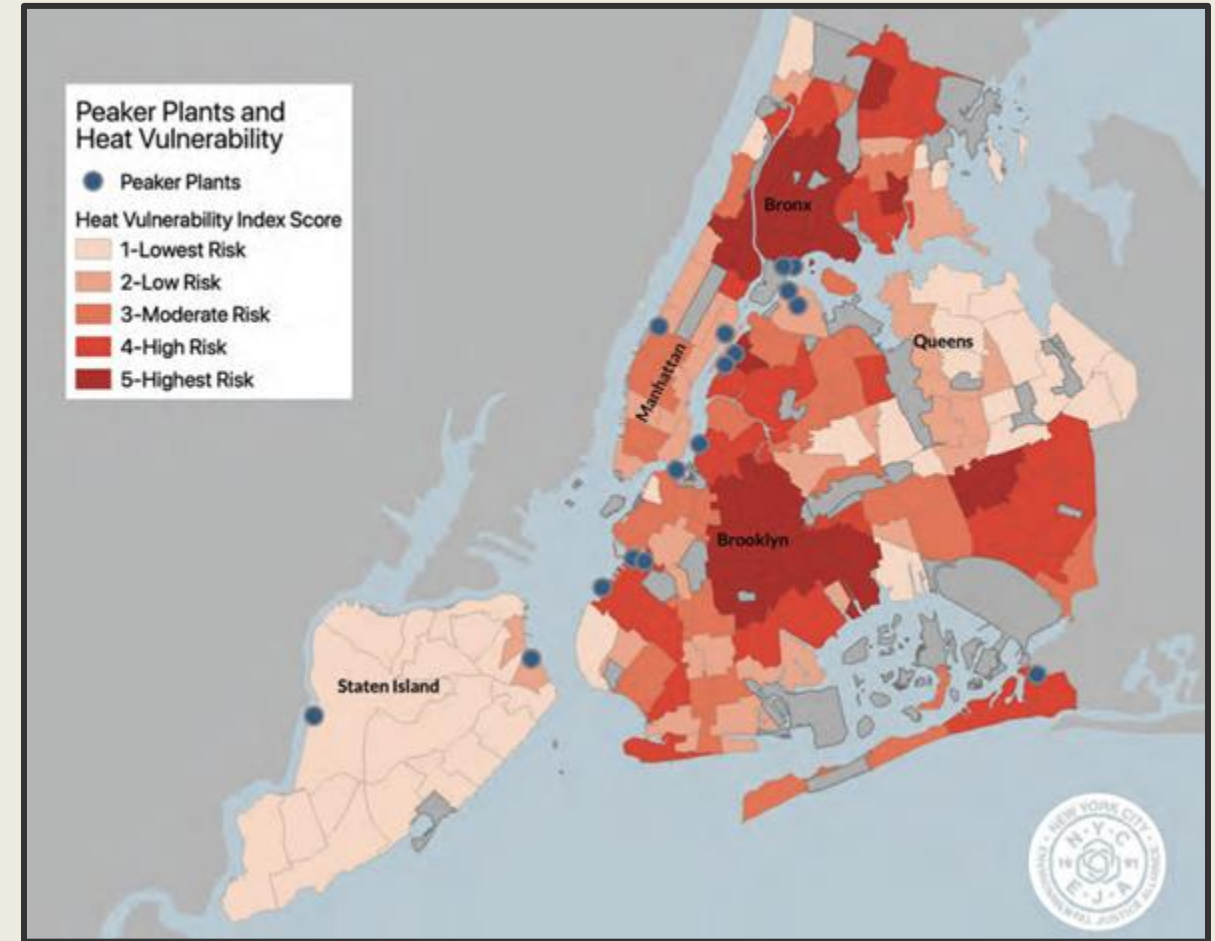
Sit and Wait

When they are not needed, peakers are paid hundreds of millions of dollars each year to sit and wait for peak energy demand events. Plant owners make most of their money through ratepayer-funded capacity payments, even when peakers are not producing energy.

JUST ENERGY TRANSITION

Just Energy Transition Act (JETA)

- **Peaker plants are mostly located in already vulnerable communities**
- **Would direct NYSERDA, DEC, and Public Service Commission to replace peaker plants by 2030**
- **Would particularly impact the Bronx and East Harlem**



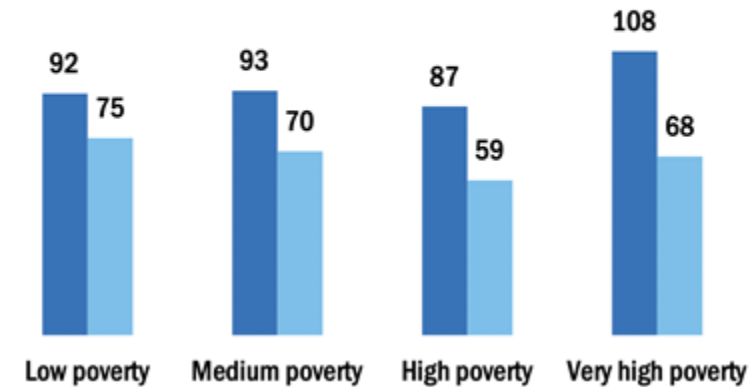
Map of New York City Peaker Plants and Neighborhoods Prone to Heat Vulnerability

SMOKING & ASTHMA

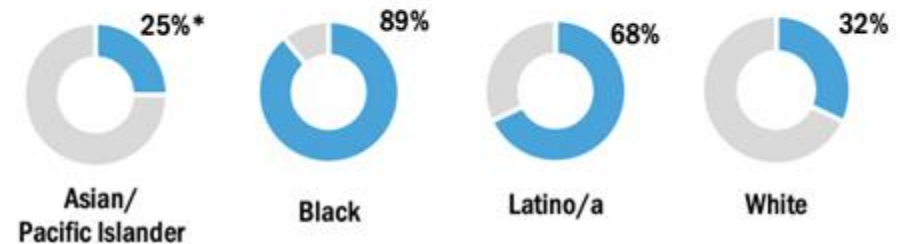
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SMOKING & ASTHMA

Expand the Ban on Flavored Tobacco Products

- Menthol cigarettes can make smoking less harsh and more addictive
- Menthol cigarettes are aggressively marketed to communities of color



ELIMINATING BARRIERS

- Barriers to patients accessing asthma medication include
 - prior authorization restrictions
 - copays, coinsurance, and out-of-pocket costs
 - refill limitations
- Eliminating these barriers would make life-saving asthma medications easier to access for all NYers



ELIMINATING BARRIERS

PROPOSALS:

- 1. Create an asthma medication copayment assistance program**
- 2. Reform prior authorization process for asthma and other medications**
- 3. Permit emergency refills of asthma / COPD medications.**
- 4. Cap monthly cost of asthma inhalers.**
- 5. Pass S.4889 Rivera/A.9826 Reyes**
 - Would ensure that every health insurance policy includes asthma equipment and supplies for covered children if prescribed**

Discussing Final Group Projects



Next Week's Assignment:

Conduct a literature review for your environmental justice policy proposal (no more than 5 pages)

Students are encouraged (but not required) to contact and conduct interviews with subject matter experts to fulfill this assignment

