



# NORTH TEXAS

## ASTHMA SUMMIT

### POWER OF PARTNERSHIPS

June 12, 2024

616 Six Flags Drive, Center  
Point II, Arlington, TX 76011





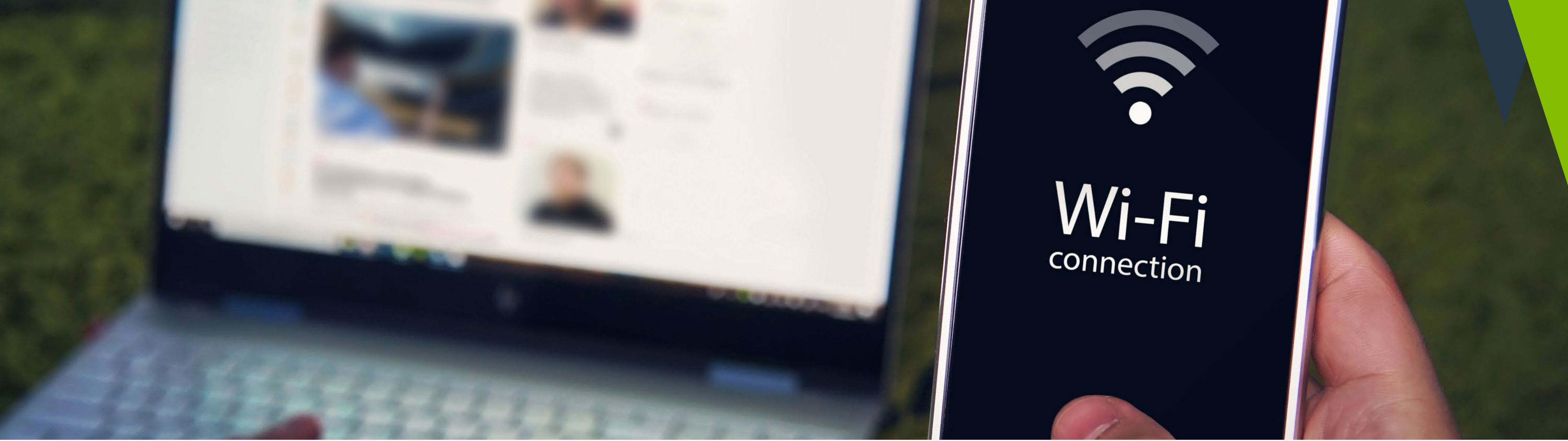
## THINGS TO NOTE:

- Restrooms
- Lunch Location
- Resources Table
- Recorded for Virtual Audience
- Water and Coffee



SCAN QR CODE  
TO DOWNLOAD  
THE AGENDA!





Wifi Username: **NCTCOG Guest Secured**  
Password: **rangers**

# THANK YOU TO OUR PARTNERS!





# WELCOME!

Dr. Leslie Allsopp  
MSN, MPH, PhD

SaferCare Texas  
Asthma 411 Faculty Partner



# Keynote Speaker

Dr. Barry S. Lachman,  
MD, MPH

President, Lachman  
Community Development  
and Consulting Services





# Health Disparities and the Environment

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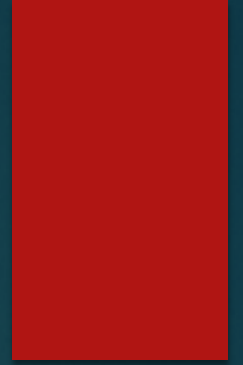
# Equity, Social Determinants, Racism, Disparities



- ▶ Equity -- fairness or justice in the way people are treated including freedom from bias
- ▶ Social determinants are the **conditions in which people are born, grow, live, work and age**. They include factors like socioeconomic status, education, neighborhood and physical environment, employment, and social support networks, as well as access to services.
- ▶ Racism prejudice, discrimination, or antagonism directed against a person or people on the basis of their membership in a particular racial or ethnic group.
- ▶ Disparity --a situation in which two or more things are not equal or similar, especially when this is thought to be unfair:



# Dallas and Equity



- ▶ According to Urban Institute, Dallas is the worst city in the United States in Neighborhood Income Inequity
- ▶ South Dallas stands out has the epicenter of inequality in Dallas
- ▶ Texas ranks among worst states in the most indicators of social disparities
- ▶ Dallas has developed and adopted an Equity Plan and a number of supporting efforts



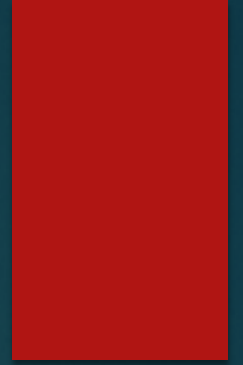
# Dallas and Environmental Justice



- ▶ In 2020 developed a Comprehensive Environmental Action Plan (CECAP)
- ▶ The Dallas Environmental Commission consists of 15 voting members one for each City Council District and the Mayor, six non voting content experts and other citizen member with expertise
- ▶ Each major goal in the CECAP has an action plan



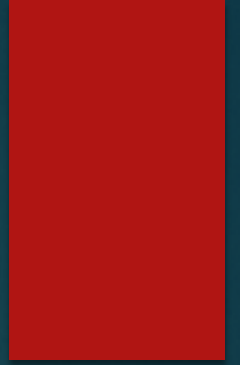
# History and Equity



- ▶ Texas was a slave state and member of the Confederacy
- ▶ Texas passed its first Jim Crow laws just after the end of the Civil War
- ▶ Dallas started in what is now downtown Dallas spreading in all directions but as it grew South it absorbed Freedman's towns like Bonton, Tenth Street, Joppa and the Bottom. However due to discrimination, services like sewers and paved streets were not provided until after the end of segregation
- ▶ Dallas like other urban areas used Freeway construction to fence in minority communities along with red lining and discriminatory home lending policies (see the book *The Color of Law: How Our Government Segregated America* by Richard Rothstein)



# Dallas County Needs Survey



- ▶ Parkland Hospital with last update 2021
- ▶ Also interview data from Parkland Center for Clinical Innovation Accountable Health Communities interviews with over 15000 low income individuals in Dallas County
- ▶ The big four
  - ▶ Food Insecurity
  - ▶ Affordable Housing
  - ▶ Healthcare Access
  - ▶ Transportation



# Asthma in Children --the Effect of Poor Housing on Children

- ▶ Children's Hospital Alliance for Child Health and Wellness asthma initiative identified that Dallas City Housing Code had not been updated in 20 years
- ▶ Dallas Area Interfaith community organizing efforts in the Bachman Lake Area identified unsafe and substandard housing as a concern of families
- ▶ A walking tour of 11 housing complexes showed horrific conditions
- ▶ Based on efforts of DAI Dallas City Council passed the toughest housing code in the US by a 13-1 vote with the one against asking for stricter changes
- ▶ One white child in 10 in Dallas has asthma. Among black children, the number is 1 in 8.



# The Evidence Basis 1



- ▶ **Asthma Is a Major Cause of Health Disparity in Inner City Dallas**
- ▶ Studies done on inner city populations based on asthma percentage show about double the prevalence in inner city areas compared to the general population. Data from number of cities based on health history place the prevalence at about 15% in children. In the Parkland Community Health Plan Medicaid population using claims data and the State and Territorial Epidemiologists definition of asthma about 13% of the child population (about 26,000 children) have asthma. The average child with asthma on Medicaid in the Dallas Area has almost 1 ER visit or admission per year.



# Evidence Base 2

- ▶ **Asthma Contributes to Public Health Care Costs**

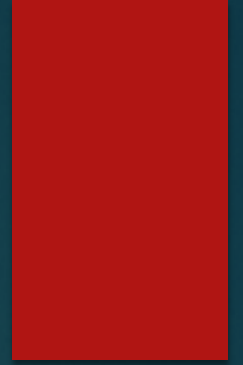
- ▶ The average cost of an asthma ER visit is over \$700 per visit. The average child admission (about .2 per asthmatic child per year) costs about \$6500 per admission. The Medicaid cost of asthma from ER visits and admissions in 2013 is estimated at over 7 million dollars in Dallas County.

- ▶ **Moisture Is the Root Cause**

- ▶ Two studies from the Inner City Asthma Study specifically point to excess moisture in Dallas as the main culprit asthma morbidity in inner city Dallas. In a study with Dr. Peyton Eggleston from Johns Hopkins as lead author links indoor air quality to positive allergy skin tests in asthmatic children. Molds (alternaria and Penicillium) were the most frequent allergens with a positive skin test. Analysis of the data in this article suggest that at least 40% of the positive tests were attributable to biologic growth from moisture related allergens. Another Inner City Asthma Study paper authored by Dr. Rebecca Gruchalla, the head of Allergy at UTSouthwestern Medical School contains Dallas specific data indicating that indoor moisture as being a bigger problem in Dallas than any other city. Dallas was third highest in cockroach sensitivity. Although cockroach sensitivity is correlated with high rise housing, there is no high rise housing in the Dallas sample. Dallas had the highest indoor air humidity at over 58% with no other city above 30%. This suggests that moisture related biologic growth resulting is the root cause of allergen sensitivity in Dallas inner city housing, reinforcing the high moisture related environments as a driver of allergic asthma in inner city Dallas.



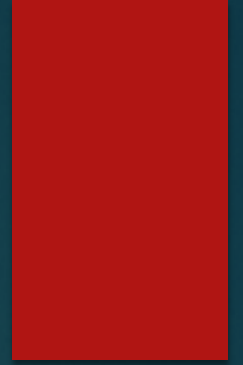
# Asthma in Children Data on Effect of Housing on Asthma



- ▶ Parkland Community Health Plan (PCHP) is the Medicaid HMO owned by Parkland
- ▶ PCHP at the time of this work had 225,000 members with 92% under age 18
- ▶ PCHP began home visits to educate families of severe asthmatics in 2006
- ▶ PCHP developed a predictive model with the Parkland Center for Clinical Innovation that predicted which children with asthma would have an ER visit or be admitted to the hospital with 70% accuracy
- ▶ PCHP deployed the model to primary care providers for children in PCHP cutting ER visits by over 30% and hospital admissions by over 50%. Total asthma costs were reduced over 6 million dollars. Results were sustained for at least 8 years



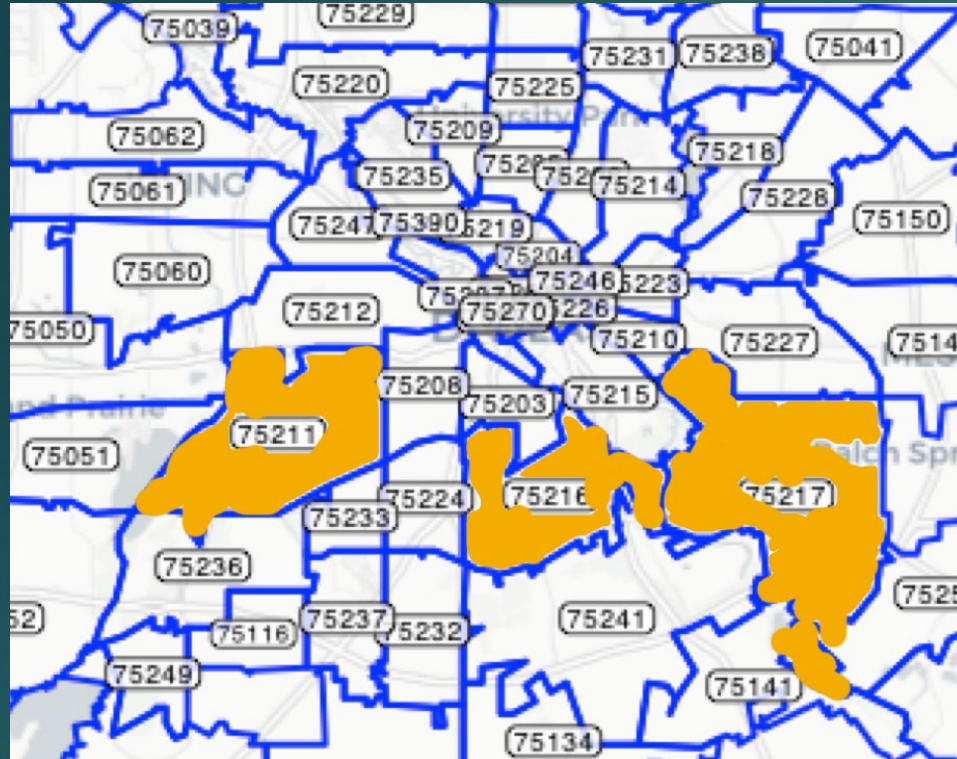
# Asthma in Children Data on Effect of Housing on Asthma



- ▶ At the request of the PCHP Medical Director, PCCI geomapped the children in the two highest risk categories
- ▶ There were 8 zip codes with more the 50 members in the highest risk categories.
- ▶ There were three of the eight zip codes in South Dallas over 10% of total population of PCHP member children in the high risk categories. The percentage should have been 3%. The Mesquite zip code had 1.7%
- ▶ Analysis of a key paper from the Inner City Asthma Study suggested that excess indoor air humidity might produce conditions that expose children to moisture driven allergens specifically cockroach and mold



# Asthma Severity by Zip Code



	Hi/Vhigh	total members	%total VHH
75216 Cedar Crest	863	6,487	13.3%
75217 South Dallas	954	9,103	10.5%
75211 OakCliff	688	6,598	10.4%
75228 East Dallas	520	5,711	9.1%
75165 Waxahatchie	181	2,623	6.9%
75212 West Dallas	86	3,215	2.7%
75060 Irving	133	4,337	3.1%
75149 Mesquite	51	4,006	1.3%
	3476	42,080	



# Asthma in Children Data on Effect of Housing on Asthma

- ▶ PCHP in cooperation with the EPA Regional Office and with City of Dallas Code Enforcement developed and implemented an environmental assessment at part of asthma home visits
- ▶ In the first 125 home visits over 80% of the environmental assessments showed Housing Code violations that would effect the child's asthma

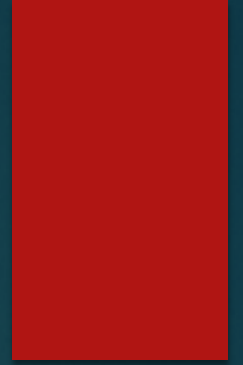


# Grow South – The Six Pillars

- ▶ Food Security – community gardens at churches, schools and in affordable housing complexes. Nutrition education and food distribution
- ▶ Safe and Affordable Housing – Development of a variety of owned housing for low and low middle income communities
- ▶ Health Care Access – Primary care enhancement by development of communityclinics . Chronic disease management and use of new digital health solutions. Extensive use of community health workers. Health and Wellness centers in affordable housing and church partners for the communities served
- ▶ Transportation to support all pillars including use of share
- ▶ Economic development and education – mentoring, job development in all pillars, small business development. Financial literacy. Career ladder approaches. Job training
- ▶ Biosafety – broad based immunization efforts, biosafety measures to limit disease spread and environmental improvement. Mitigation of outdoor and indoor air quality risks including PM2.5. Lead and heavy metal abatement.



# Housing Affordability and Environmental Health



- ▶ Flipping Complexes
- ▶ Allowing aging properties to deteriorate
- ▶ Avoiding enforcement
- ▶ Raising rents
- ▶ Health and public safety hazards due to property neglect
- ▶ Solutions for communities



# Affordable Housing in the Bottom



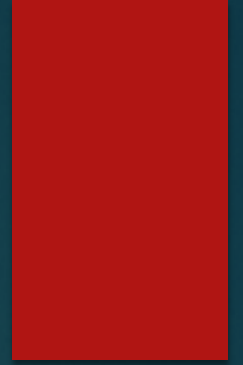


# Tiny Houses





# Particulate Matter and Health Outcomes



- ▶ The size of particles is directly linked to their potential for causing health problems. Small particles less than 10 micrometers in diameter pose the greatest problems, because they can get deep into your lungs, and some may even get into your bloodstream.
- ▶ Exposure to such particles can affect both your lungs and your heart. Numerous scientific studies have linked particle pollution exposure to a variety of problems, including:
  - premature death in people with heart or lung disease
  - nonfatal heart attacks
  - irregular heartbeat
  - aggravated [asthma](#)
  - decreased lung function
  - increased respiratory symptoms, such as irritation of the airways, coughing or difficulty breathing.
  - Lung Cancer
  - Preterm Birth
  - Breast cancer
- ▶ People with heart or lung diseases, children, and older adults are the most likely to be affected by particle pollution exposure.
- ▶



Overall, Black Americans are  
three times as likely to die  
from particulate air pollution  
as the overall population.

▶ New England Journal of Medicine

June 29, 2017

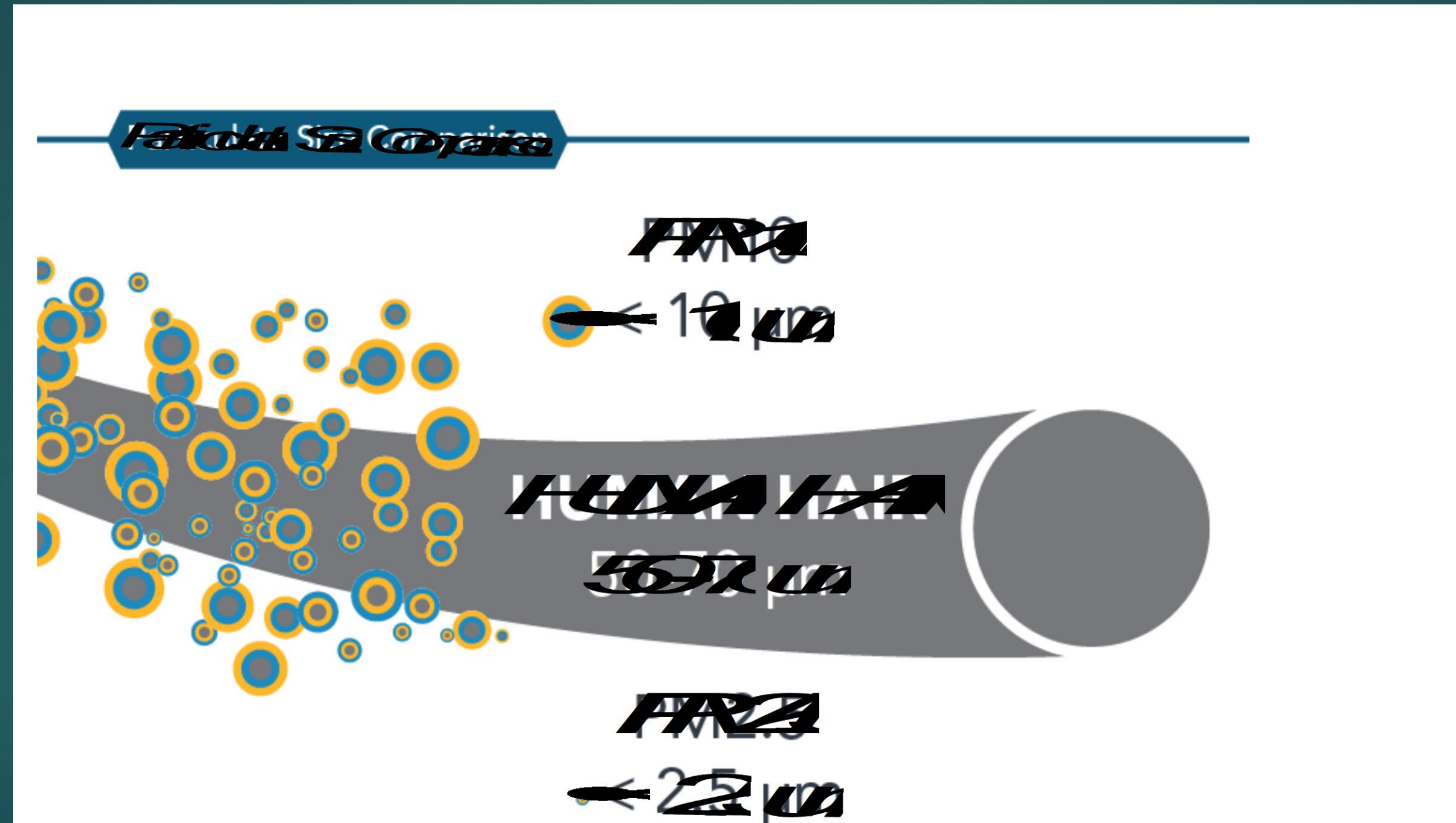


# Particulates and diabetes

**Particulate pollution  
is responsible for  
150,000 cases  
of type II diabetes  
in the United States.**

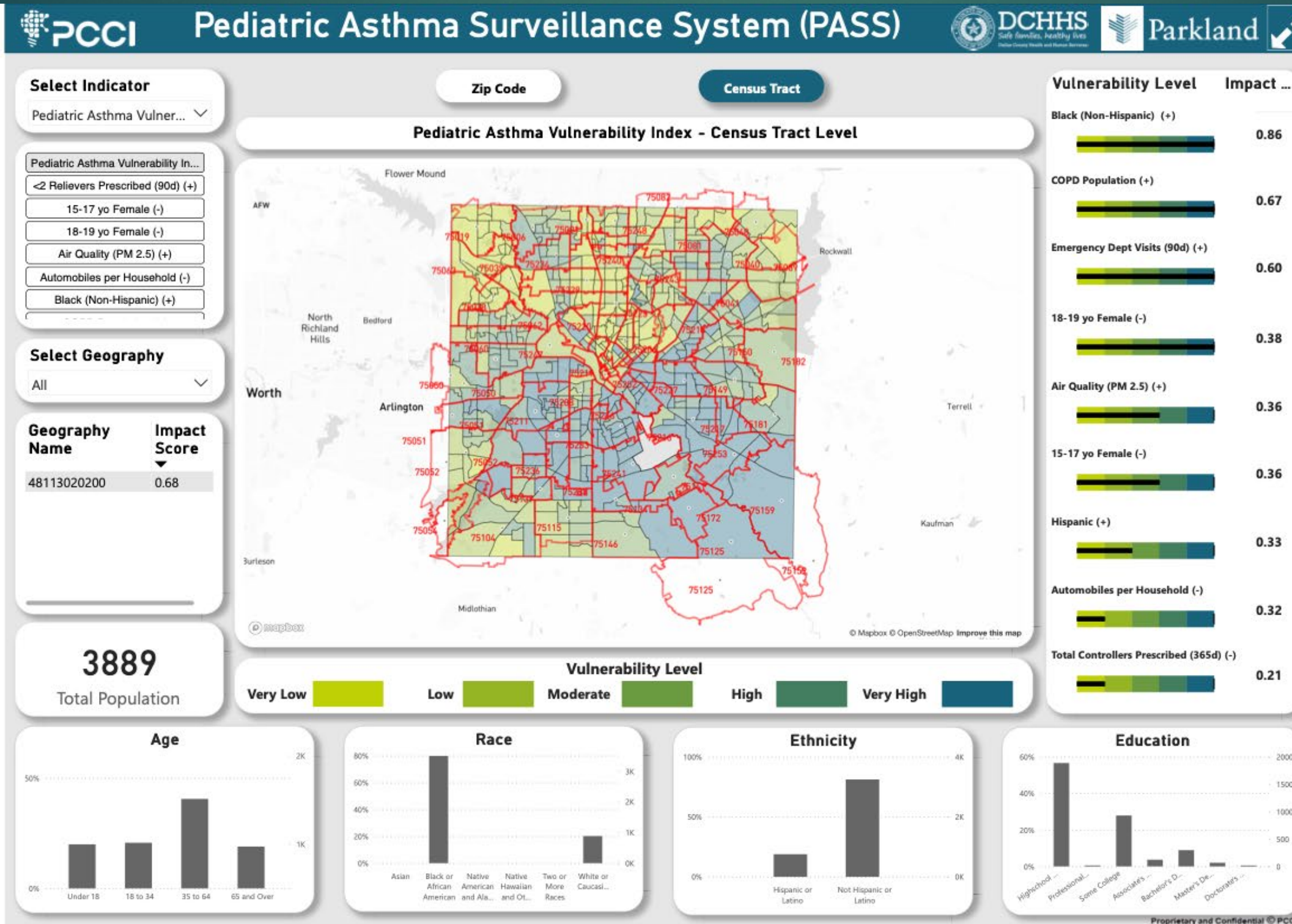


# How Small Is PM2.5?



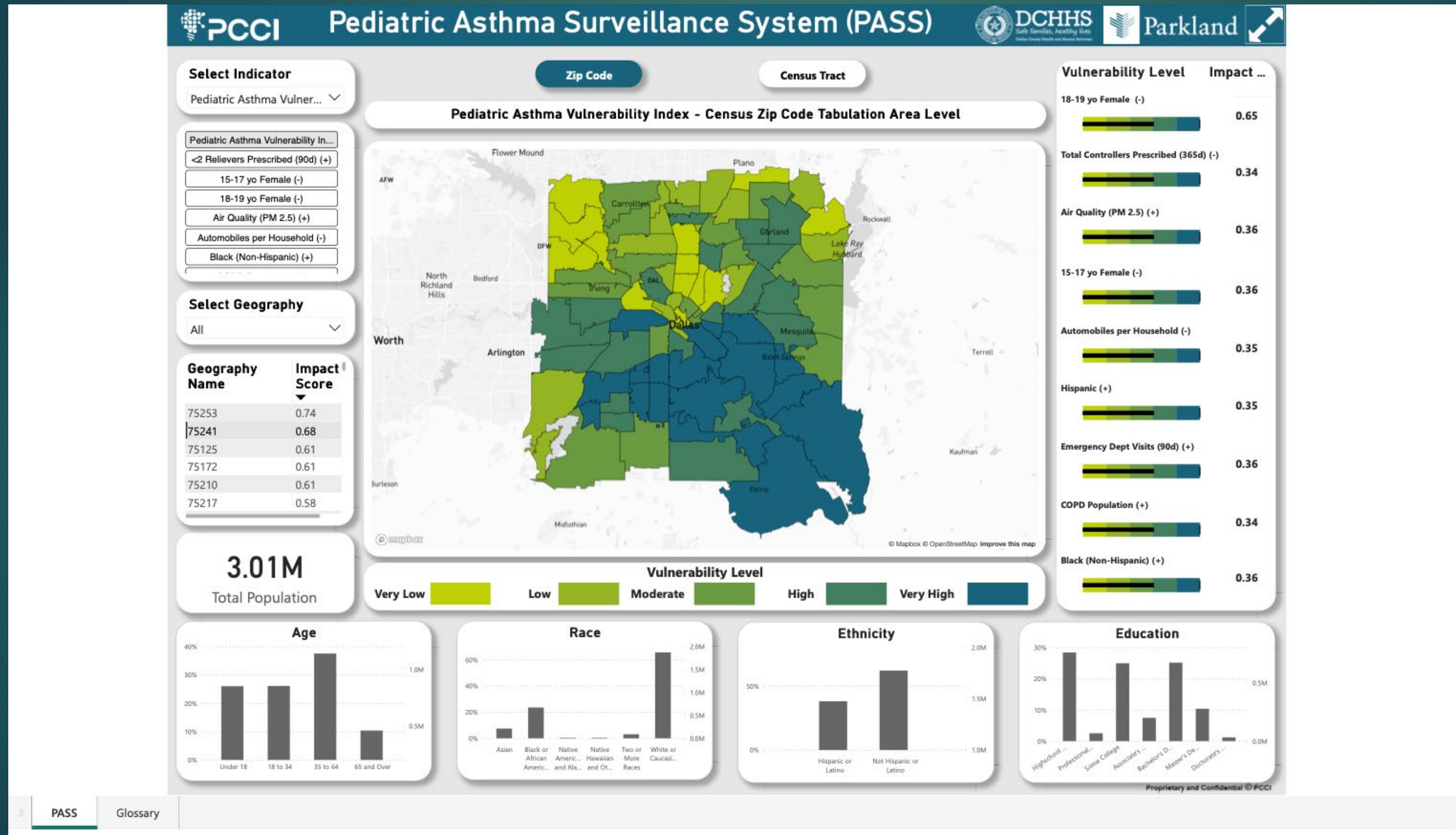


# PM 2.5 and Asthma Disparity





# Asthma Severity Census Tract Data





# Sources of Particulate Outdoor Air Pollution in Dallas



- ▶ Concrete batch plants and other industries in residential areas with concentrations in South and West Dallas
- ▶ Gasoline powered lawn equipment
- ▶ Motor Vehicles



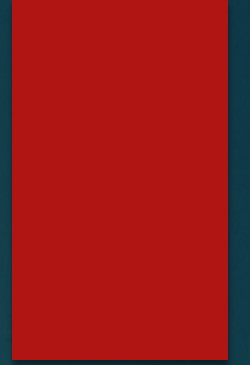
# Rental Housing Racket in Dallas



- ▶ Bachman Lake area multifamily housing complexes are being allowed to deteriorate and “flipped” by real estate management entities
- ▶ 12 of 14 surveyed owned by groups outside Dallas
- ▶ Rents are being inflated (source tenants)
- ▶ Properties not being maintained
- ▶ When Dallas Code Enforcement intervenes properties are sold to another real estate group usually 2-3 years
- ▶ Flipping properties and inflated rents are a national issue (source Joy Reid MSNBC – The Reid Out)



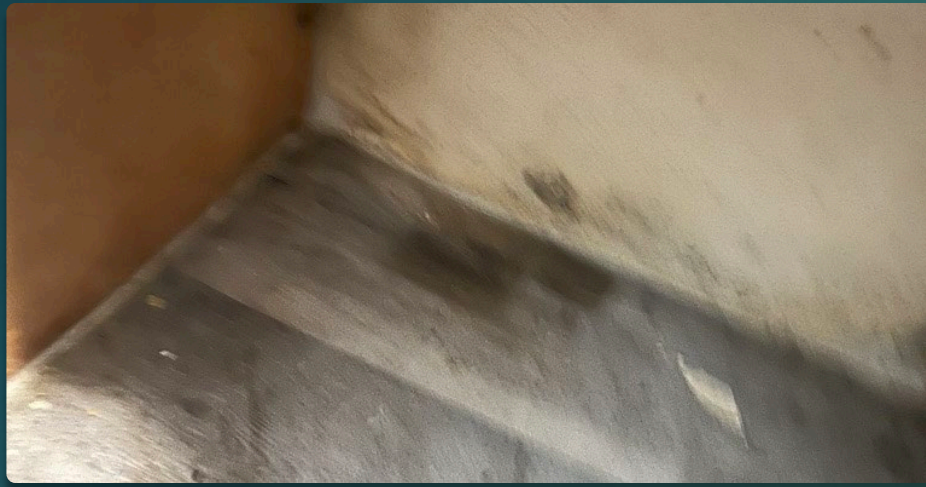
# Asthma and the Housing Scam



- ▶ Moisture from leaks and poor air conditions facilitate allergens including mold and cockroach
- ▶ Landlords are slow or no responsive to maintenance issues
- ▶ Particulates in apartments with poor maintenance are higher than ambient air even though ambient air exceeds EPA standards
- ▶ The conditions in these multi family complexes for both this and other reasons are public health and public safety hazard as well as a threat on many levels to those living in deplorable conditions
- ▶ These complexes meet the conditions for being a public nuisance
- ▶ The exposure of children in these conditions could meet definition of child endangerment



# Kendall Villas Apartments



Under the sink

Mold



Mold

Vwnt just painted over



Speaks for Itself



# What You Can Do

- ▶ Advocate for code enforcement changes with local government and media
- ▶ Identify and develop organizations fostering food security and housing solutions in your area
- ▶ Promote and encourage urban agriculture efforts
- ▶ Join efforts at addressing local and State initiatives for environmental health equity in children
- ▶ Advocate with TCEQ for strict enforcement of particulate standards





15 MINUTE  
STRETCH AND COFFEE BREAK





# JOIN OUR FIRST QUESTION!

What 3 drivers of poor asthma outcomes  
do you think are most important?



Examples:

- Indoor air quality – and triggers in the home
- Outdoor air quality and triggers
- Lack of access to medical services
- Inability to afford medication
- Cultural Barriers
- Language Barriers



# Dallas County Community Health Needs Assessment

Dr. Cesar Termulo, MD

Associate Medical Director

COPC Central and East

Regions, Parkland Health





# **Breathe for Life and Learn for Life** **(Community Health Needs Assessment** **Asthma Collaboration)**

**Cesar Termulo, Jr MD**

**General Pediatrics**

**Hatcher Station Health Center**

**Associate Medical Director COPC Parkland Health**



**Parkland**



**Per CDC (2021 data) -**

- **> 4.6 million children with asthma nationally**
- **> 7% of the population under 18**
- **145 children died**
- **1.8 million in Texas (adult and children)**
- **295 deaths in Texas (adult and children)**
- **DISD 9.5% of students have asthma**



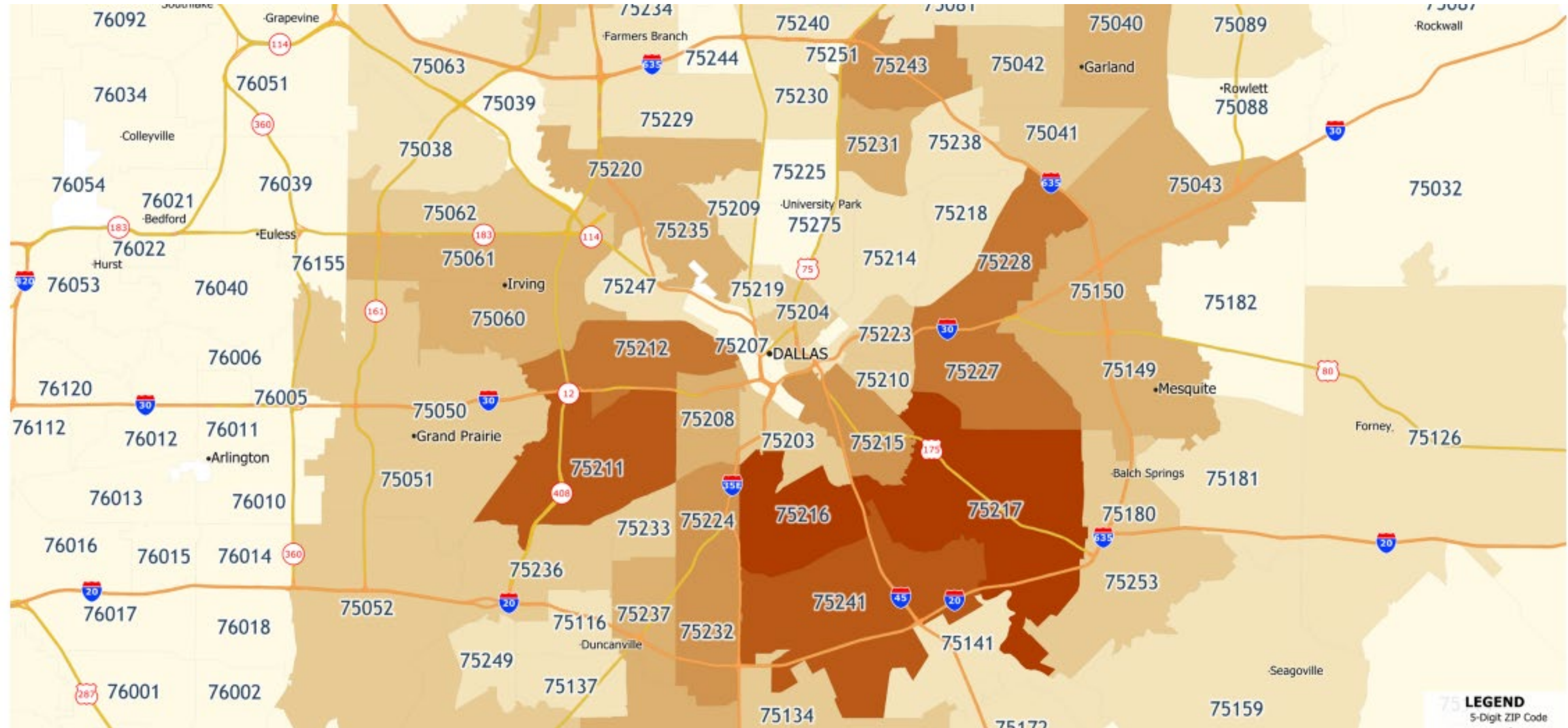
## **Per CDC (2021 data) –**

- **3.8 million in US live less than 100% poverty threshold (adult and pediatric)**
- **Asthma-related emergency department (ED) visits are nearly five times as high for Black patients compared to white patients.**
- **78 Black children died (compared to 36 white NH children)**

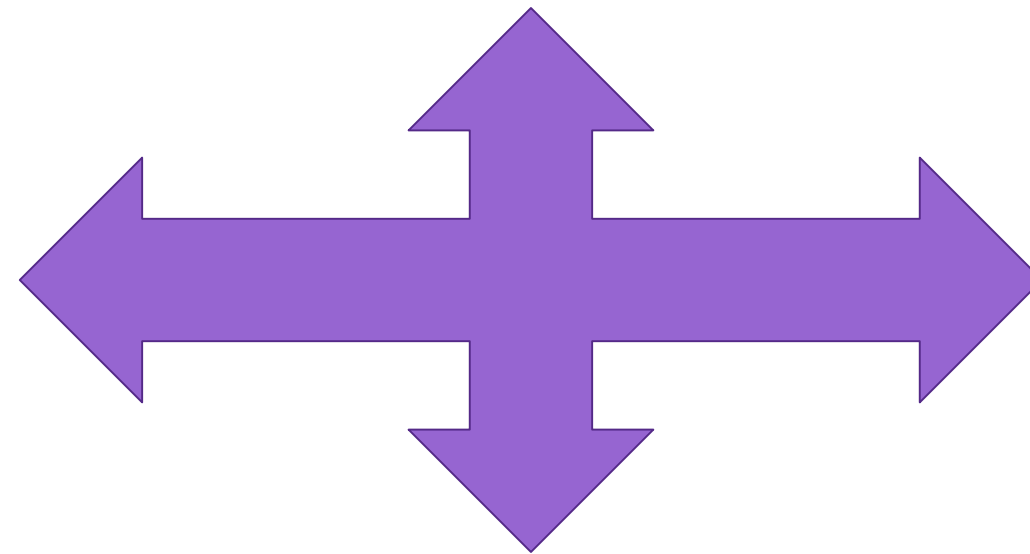


- **First Community Health Needs Assessment in 2016**
- **CHNA subsequent reports in 2019, 2022**
- **Initiatives created towards**
  - **Access To Care & Coverage**
  - **Pediatric Asthma**
  - **Behavioral Health**
  - **Breast Health**
  - **Cultural Competency**
  - **Diabetes**
  - **extending Maternal Care After Pregnancy**
  - **Hypertension**
  - **Sexually Transmitted Diseases**













Parkland

Positive Breathing







# Parkland

## Community Outreach



Location	Address	Days	Times
Inspired Vision Compassion Center	2019 N. Masters Dr., Dallas, TX 75217	Every Tuesday	10 a.m. - 4 p.m.
CitySquare	1610 S. Malcolm X Blvd., Dallas, TX 75226	Every Wednesday	9 a.m. - noon
Catholic Charities: Marillac Community Center	2483 Lapsley St., Dallas, TX 75212	Every Friday	9 a.m. - 1 p.m.
Oak Cliff Farmers Market	907 E. Ledbetter Dr. Dallas, TX 75216	TBD - Spring 2024	TBD - Spring 2024



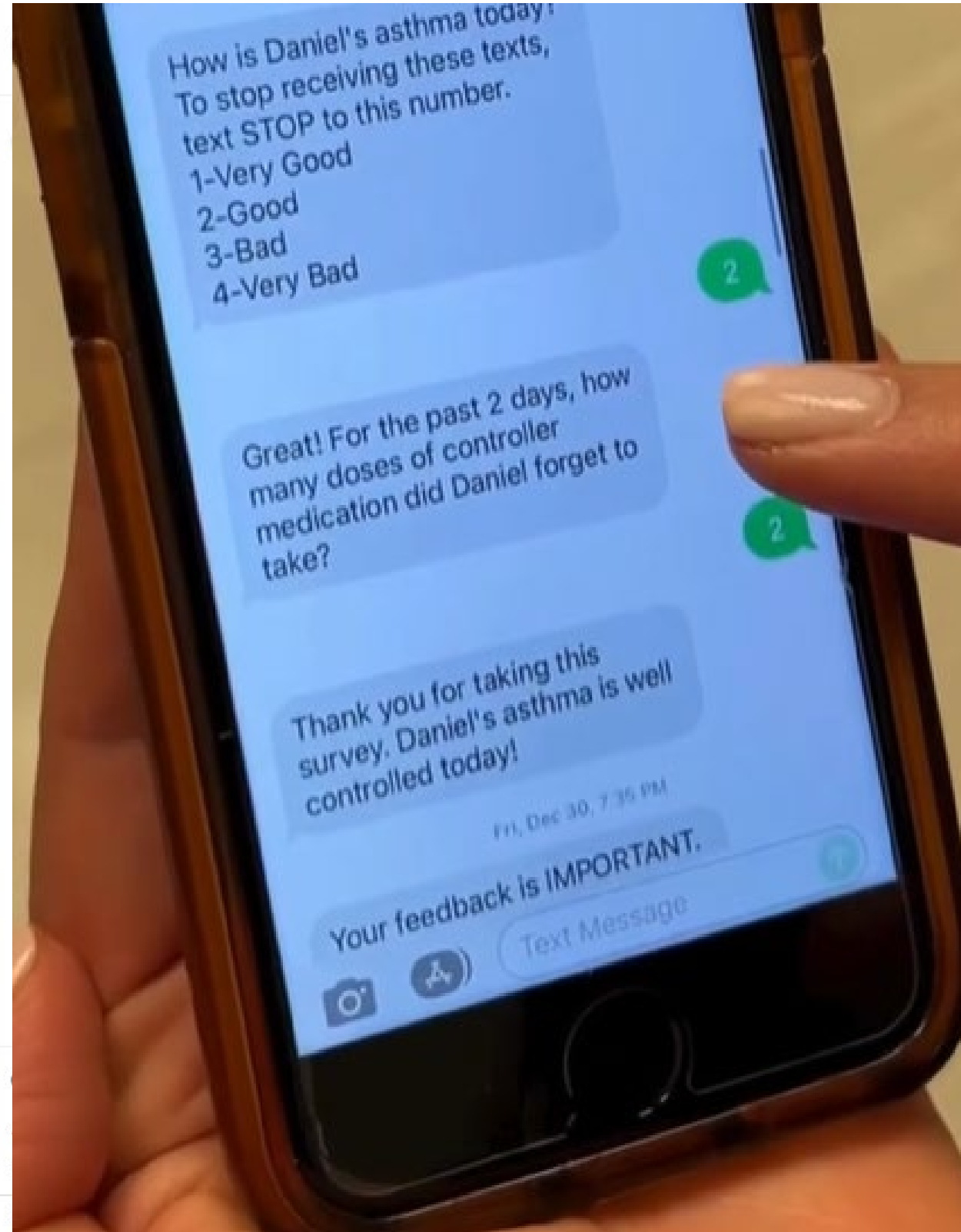
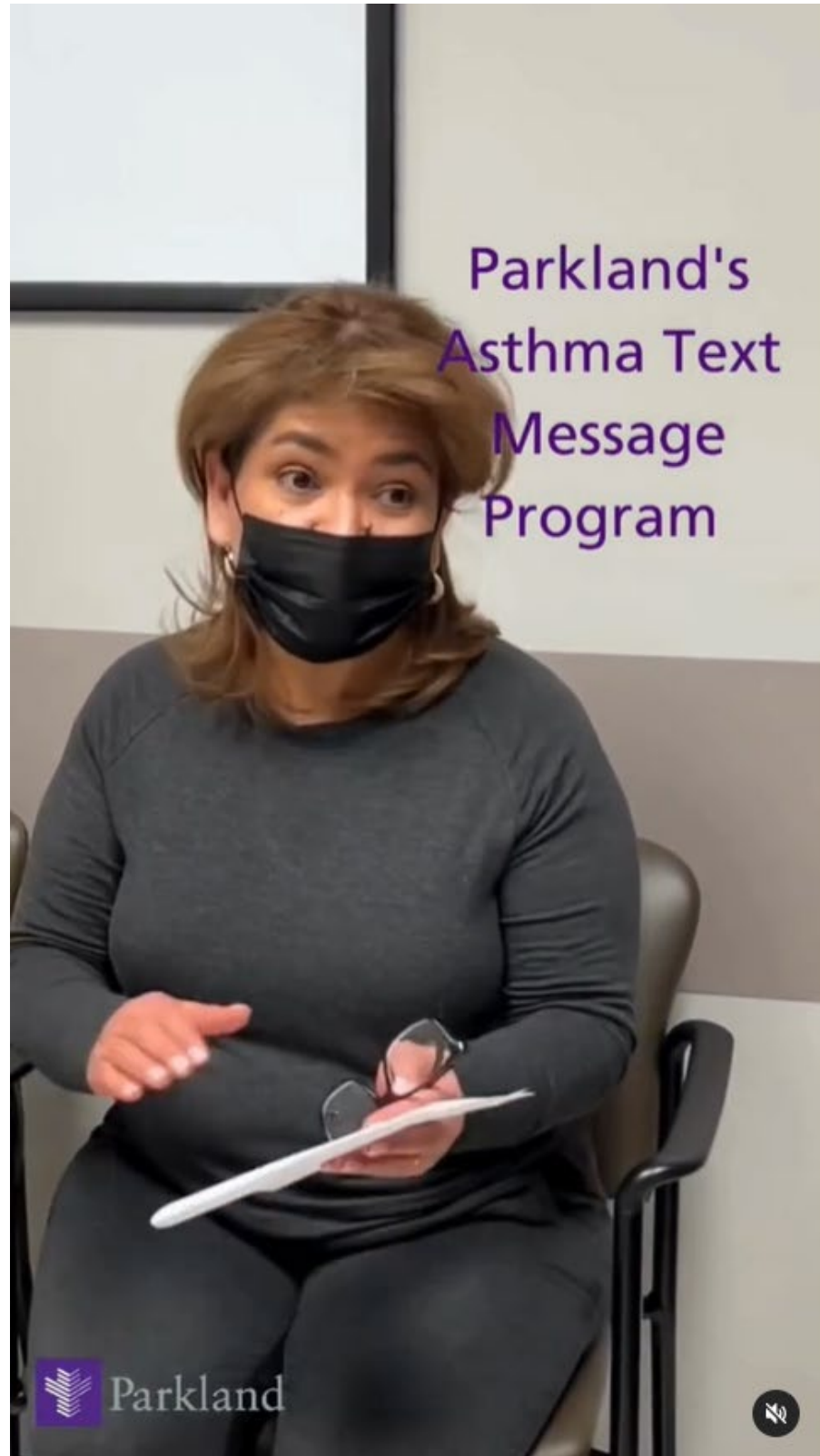
## Our Asthma Care Program is Uniquely Focused on Vulnerable Populations

<b>Risk Prediction Model</b>	<ul style="list-style-type: none"> <li>• Focus on outpatient and safety net settings</li> <li>• Predicts 90-day asthma ED visit or hospitalization</li> <li>• Clinical, utilization, &amp; SDOH</li> <li>• Robust PPV &amp; sensitivity (16% &amp; 52% respectively)</li> </ul>
<b>Monthly Risk Reports Updates</b>	<ul style="list-style-type: none"> <li>• Risk profile sent to population health, case management, &amp; frontline teams</li> <li>• Multifaceted &amp; multistakeholder interventions</li> </ul>
<b>Clinical Workflow Integration</b>	<ul style="list-style-type: none"> <li>• Evidence-based interventions, e.g., targeted medication management &amp; visit scheduling, trigger mitigation, EHR integration – POC alerts</li> </ul>
<b>Patient Engagement Through Risk-Driven Text Messaging</b>	<ul style="list-style-type: none"> <li>• Education and remote symptoms monitoring</li> </ul>

## Parkland AI/ML Asthma Risk Model Framework







- Reports created from text responses
- Biweekly reports sent to Parkland
- See video here:







Parkland



**DCHHS**  
Dallas County Health and Human Services  
Healthy People · Healthy Communities  
Health and Social Equity



## Asthma Control Program

- **Virtual visits starting with highest risk patients from PCCI Asthma Monthly Risk Report**
- **Administer Asthma Control Test**
- **Education on asthma and asthma action plan**
- **Referral as needed to Parkland**
- **Follow up at 6 months and 12 months**
- **>1000 visits completed**



**PCHP (Claims): Launched in 2016**

**Dallas County CHNA (EHR): Launched in 2019**

- Robust Outcomes Monitoring
  - **PCHP** claims & **DFWHCF** regional dataset for CHNA, good capture of outcomes across health systems
  - Qualitative feedback (Text messaging)
- Measurable Impact **within Year 1**

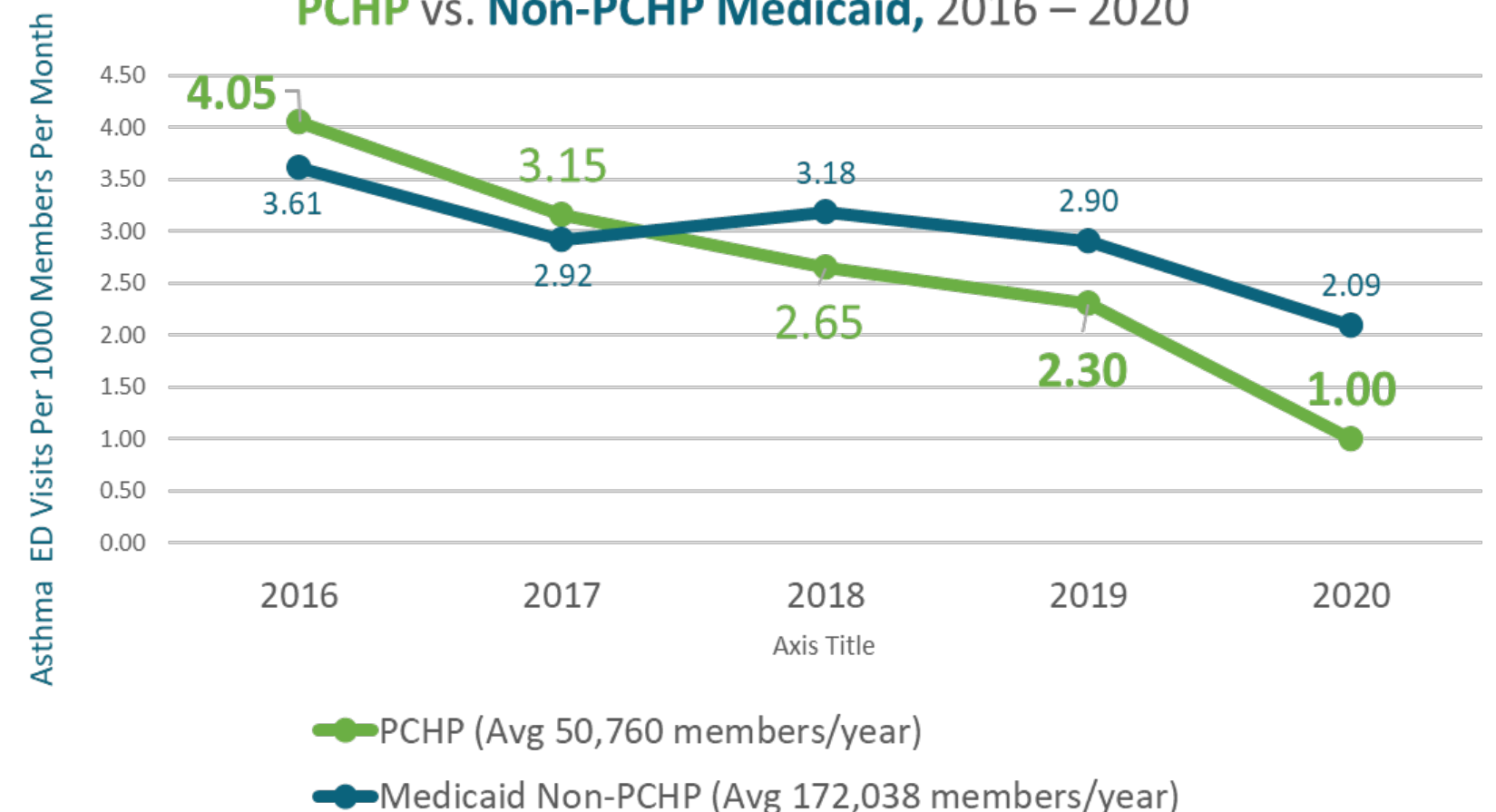
Participants vs. Non-Participants:

  - **PCHP: 42%** less asthma ED visits, sustained over 5 years
  - **CHNA: 36%** less asthma ED visits, **59%** less systemic steroids use, **60%** less asthma hospitalizations
  - **Text Messaging: 90%** "would recommend program to friends & family"

**Parkland EHR AI/ML Asthma Risk Prediction Model Performance**

	Overall	Predicted Risk Category			
		Very High	High	Medium	Low
<b>Risk Probability Percentile</b>	All	Top 2.5%	2.5%-12.5%	12.5%-30%	Bottom 70%
<b>PPV</b>	13%	30%	16%	10%	7%
<b>Sensitivity</b>	52%	8%	18%	20%	55%

**Asthma-Related EDV per 1,000 Members per Month, PCHP vs. Non-PCHP Medicaid, 2016 – 2020**





## Kaiser Permanente Awards Funding for Healthcare AI, ML Research

Kaiser Permanente's AIM-HI has awarded funding to five healthcare organizations researching how AI and ML tools can improve diagnostic decision-making.



Source: Getty Images

 By Shania Kennedy

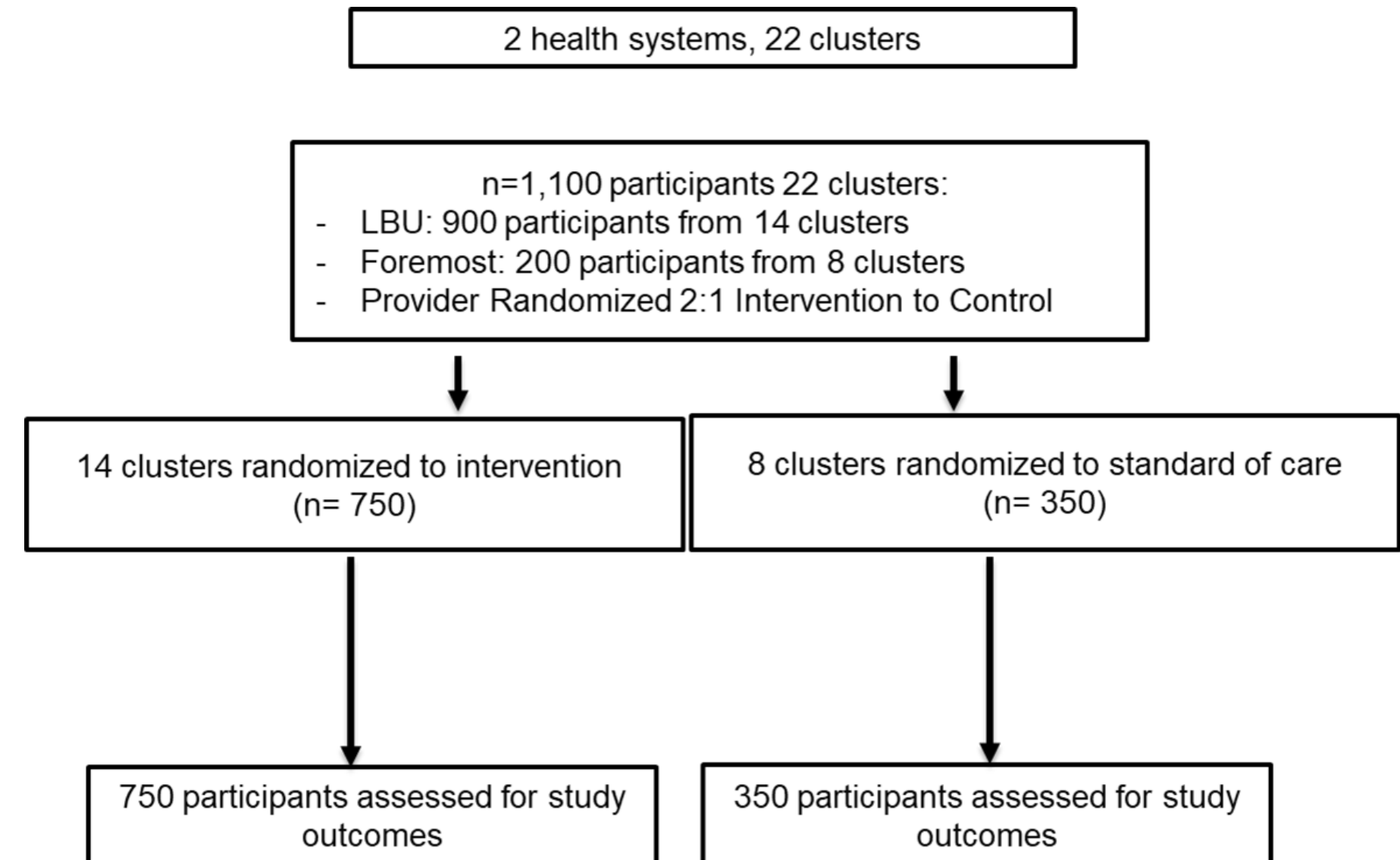
December 21, 2023 - The Kaiser Permanente Augmented Intelligence in Medicine and Healthcare Initiative (AIM-HI) Coordinating Center has **awarded** grant funding to five projects that explore how artificial intelligence (AI) and machine learning (ML) can improve patient care.



## From Large Public/Academic Setting to Smaller Safety Net Providers (FQHCs)

<b>Test, Retrain, and Calibrate Model</b>	<ul style="list-style-type: none"> <li>• Expand to other underserved communities</li> <li>• Monitor for biases and adjust accordingly</li> </ul>
<b>Multistakeholder Engagement</b>	<ul style="list-style-type: none"> <li>• Clinical, population health, managed care, leadership</li> </ul>
<b>Rigorous Scientific Design</b>	<ul style="list-style-type: none"> <li>• Pragmatic RCT – context-adapted interventions</li> </ul>
<b>Clinically Relevant Impact Metrics</b>	<ul style="list-style-type: none"> <li>• Asthma ED visits/hospitalizations, medication &amp; systemic steroid use</li> <li>• Subset analyses by race/ethnicity</li> </ul>
<b>Long-Term Sustainability</b>	<ul style="list-style-type: none"> <li>• Cost analysis &amp; sustainability framework</li> </ul>

## Consort Diagram

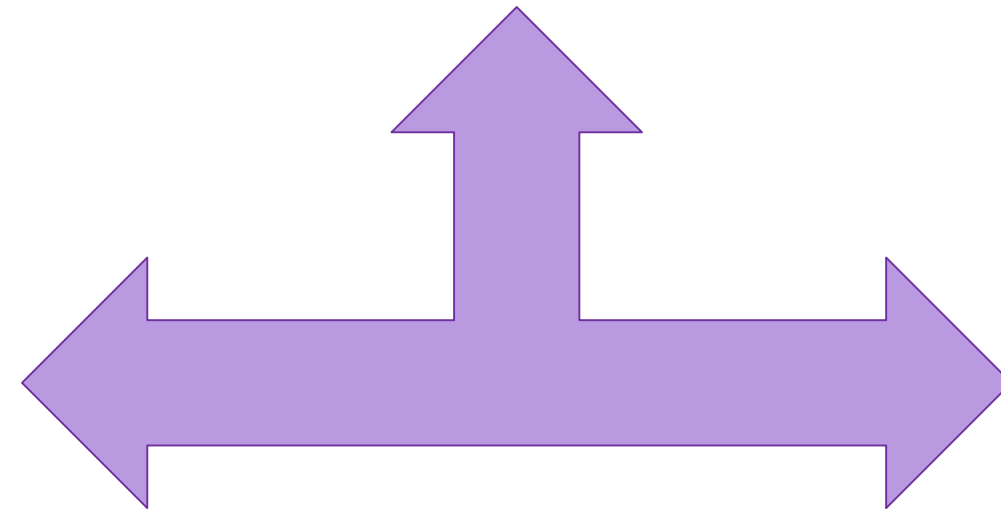






6.1 million children are affected by asthma.

Asthma 411 is an innovative, evidence-based program designed to keep kids in school.







- **Importance of reaching out into the community**
- **Importance of collaboration**
- **Importance of understanding misconceptions of asthma**
- **Importance of leveraging technology**



# PCCI- Pediatric Asthma Surveillance System – Measures and Indicators

Dr. Yolande Pengetnze  
MD, MS, FAAP

Pediatrician, Physician Scientist and  
VP of Clinical Leadership, Parkland  
Center for Clinical Innovation  
(PCCI)







**PCCI**

*Pioneering New Ways to Health*

**Pediatric Asthma Surveillance System: Artificial Intelligence / Machine  
Language-Driven Chronic Disease Surveillance Blueprint**

*Yolande Pengetnze, Yusuf Tamer, Teresita Oaks, Woldu Ameneshoa, Lance Rather, Cesar Termulo.*

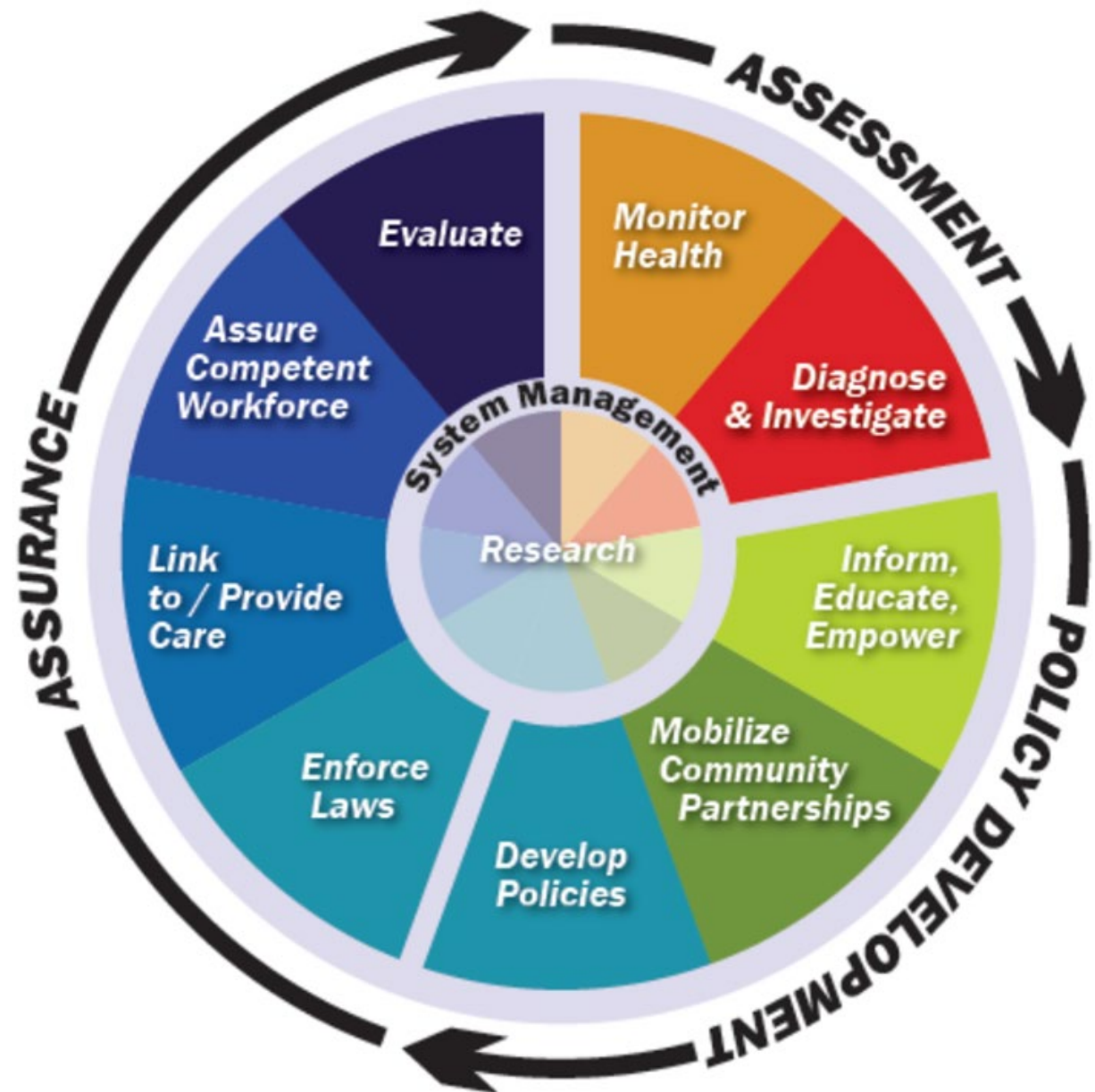
**June 2024**



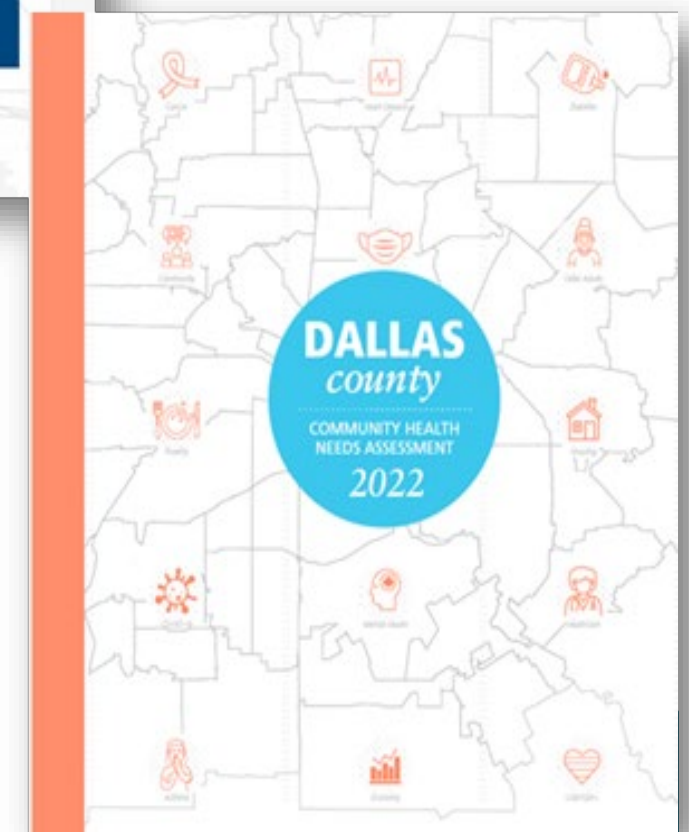
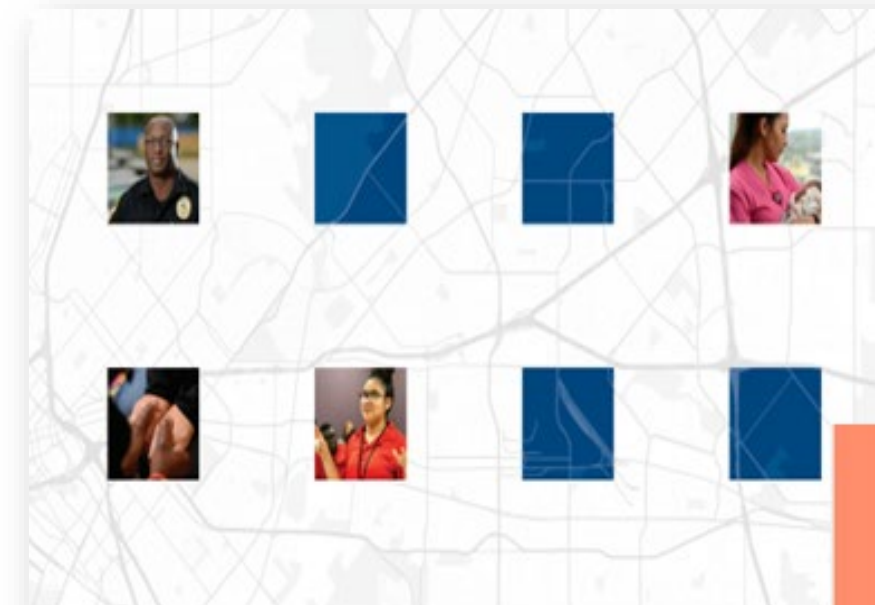
# Background



## Public Health Core Functions



- Monitor Health
- Diagnose & Investigate





# Background



## Pediatric Asthma

- >6 million US Children affected
- Highest burden among minority and low-income families
  - By Race/Ethnicity: Black **12%**, Latinos 7% vs. White 6%
  - By Income level: <100% FPL **11%** vs. ≥450% FPL 7%
- Among US children with asthma:
  - 50% have uncontrolled asthma
  - 42% have ≥ 1 asthma attack every year
- **>200** US children died from asthma in 2020
  - ~**8-fold higher for** NH Black (**10.8**/Million) vs. NH White (**1.4**/Million)





# Background



## Asthma is a Key Driver of Pediatric Morbidity in Dallas County

Dallas County 2019 and 2023 Community Needs Assessment (CHNA)

- Southern regions most affected
- CHNA implementation plan
- Six (6) target zip codes
- Risk prediction model / data-driven clinical and community interventions, Text messaging & remote symptoms monitoring

2019 CHNA Implementation Challenges/ Lessons Learned

- **Lack of** communitywide **consensus** on asthma risk & drivers
- **Lack of data integration** between Public Health and health services providers
- Uncoordinated & siloed interventions
- **Need for communitywide dashboard** – common source of truth for asthma risk monitoring





# The Pediatric Asthma Surveillance System - PASS



## A Novel Community-Facing Dashboard for Pediatric Asthma Risk Monitoring

- Communitywide single source of truth
  - Combines **clinical and social risk** insights
- Two primary components:
  - **Pediatric Asthma Risk Index**
  - **Clinical and Social Risk Drivers**
- Data at microgeographic level:
  - Zip Code and Census Tract
  - Updated every month
- **Accessible to All** Community Stakeholders
  - Community-Facing
  - Hosted on DCHHS website







## Identifying Risk Drivers & Building The Pediatric Asthma Risk Index



### *Design & Approach*

- Predicts 90-day risk for asthma-related ED visits/hospitalizations
- At Zip Code & Census Tract Level
- Using clinical & social risk variables
- Index normalized between 0 – 100



### *Data Sources*

- American Community Survey/ CDC Places/ Housing & Transportation Dataset
- Parkland Health EHR / DFW Hospital Council Foundation
- Open Weather API



### *Statistical Analysis Plan*

- Multivariable logistic regression – LASSO
- Precision and Recall validation





# PASS– Community Rollout



## Access by Broad Range of Stakeholders & Cross-System Partnerships



### *Engage and Train Key Stakeholders*

- Public Health Department
- Health systems frontline and Population Health teams
- School systems
- Community-based organizations
- City and County public policy & advocacy stakeholders/leaders
- Corporate social responsibility



### *Monitor Website Access and Utilization*

- Website access audit
- Traditional and social media mentions
- Stakeholder reports



### *Update PASS with Stakeholder Feedback*

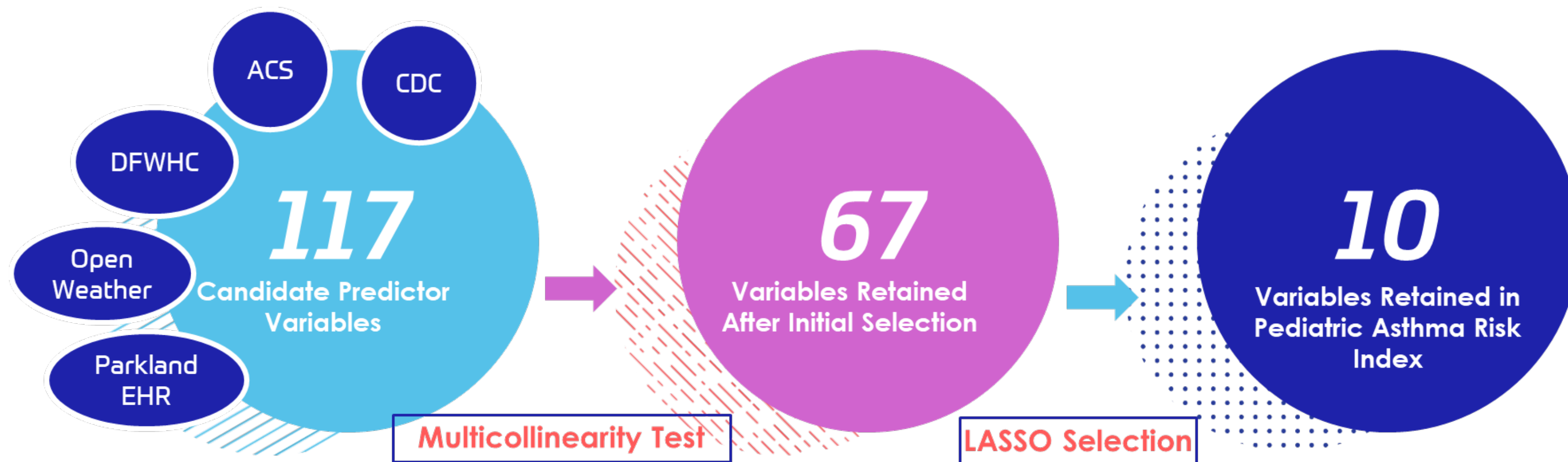
- UI/UX & content modifications
- Contact information on PASS dashboard/website



# PASS – Results



## Data Collection & Features Selection



**Social & Clinical Variables**

ED Visits, Visit Cancellation, Medication Use, Transportation, etc.

**Minimize Collinearity**

**Optimal Performance**

Precision and Recall





# PASS – Results



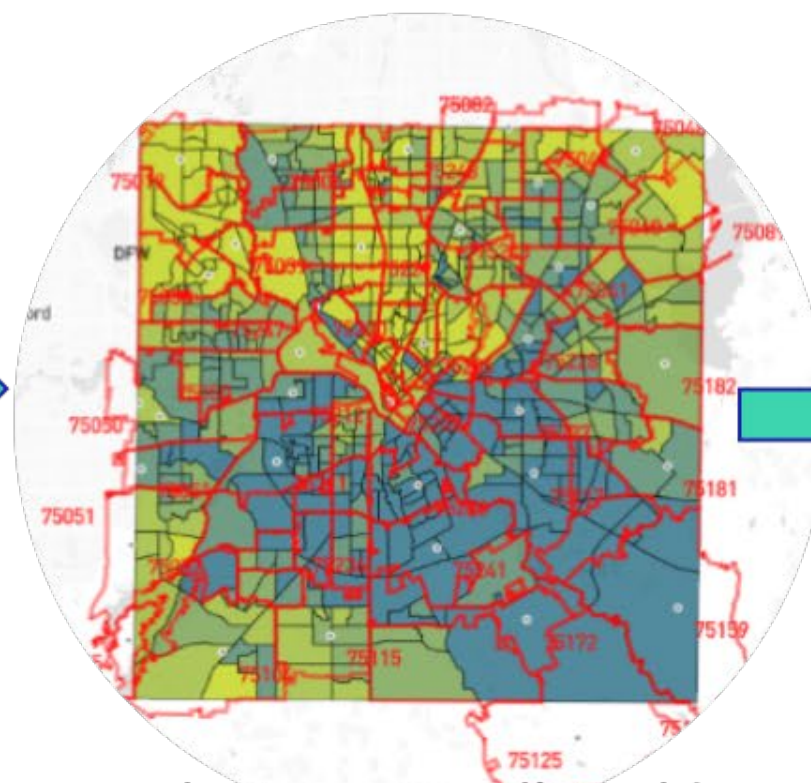
## Pediatric Asthma Risk Index Development & Reporting



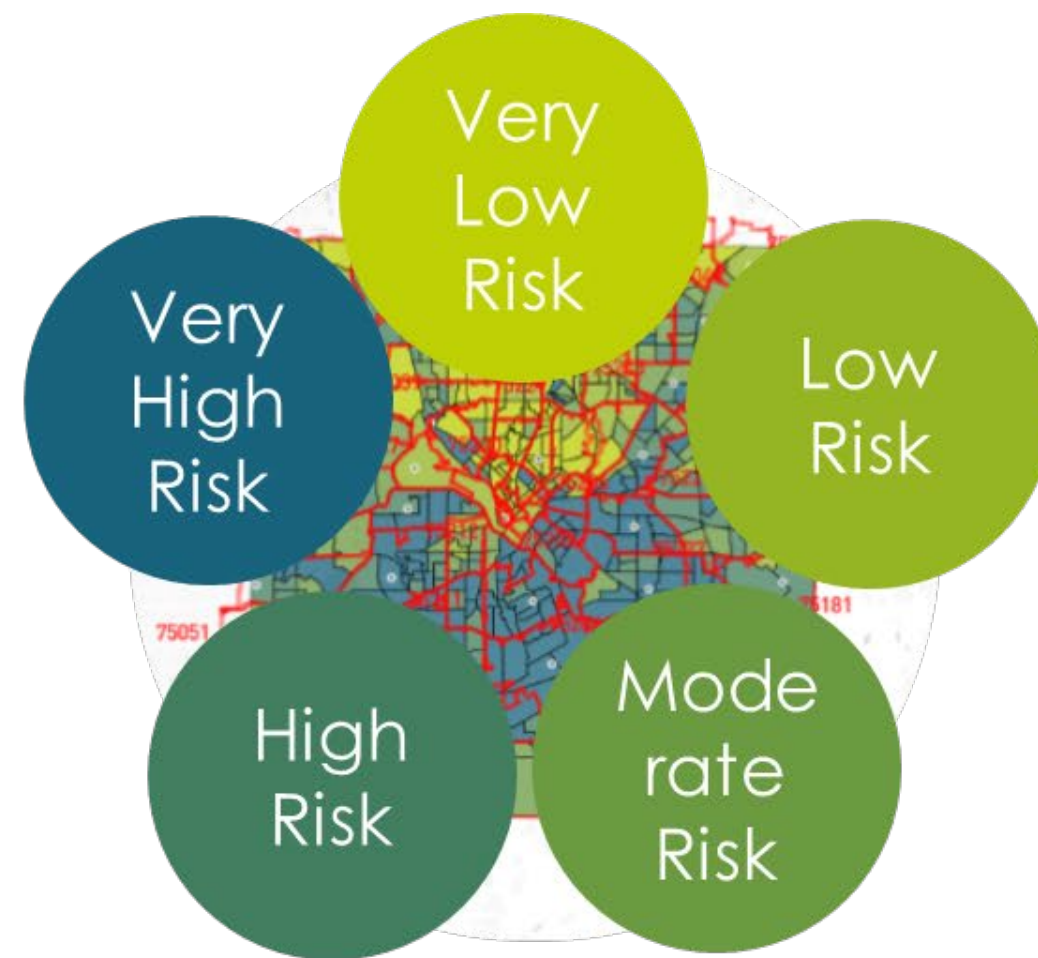
**Clinical and Social risk** insights combined.



Regression based model built With OOS-R<sup>2</sup>: 0.633



Index normalized to **Dallas County**



Standardized Risk Index split to **quintiles**

# PASS – Results



## Ten Actionable Indicators (Model)

	Measure (+/-)*	Description
1	Total Controllers Prescribed (365d) (-)	Estimated number of patients prescribed an asthma controller in the last 365 days
2	Automobiles per Household (-)	Number of automobiles per household
3	15-17 yo Female (-)	Proportion of female population age 15 to 17
4	18-19 yo Female (-)	Proportion of female population age 18 to 19
5	Air Quality (PM 2.5) (+)	Average across 4 weeks for highest measure of particulate matter smaller than 2.5 microns
6	Hispanic (+)	Proportion of Hispanic population
7	<2 Relievers Prescribed (90d) (+)	Estimated number of patients with less than two relievers prescribed in the last 90 days
8	Emergency Dept Visits (90d) (+)	Estimated all-cause ED visit counts in last 90 days in the pediatric asthma population
9	COPD Population (+)	Proportion of adults with COPD in the population
10	Black (Non-Hispanic) (+)	Proportion of Black (non-Hispanic) population

## Seven Other Indicators (Insights)

	Measure (+/-)*	Description
1	Median Household Income (-)	Median household income
2	Affordable Housing + Transport (-)	Proportion of affordable housing and transportation
3	Depression Population (+)	Proportion of adults with depression in the population
4	<19 yo Health Insurance Coverage (+)	Proportion of individuals uninsured and below 19 years old in the population
5	Single Parent Household (+)	Proportion of single parent family households
6	Smoking Population (+)	Proportion of adults who smoke in the population
7	Food Insecurity (+)	Proportion of households receiving food stamps / SNAP benefits in the last 12 months



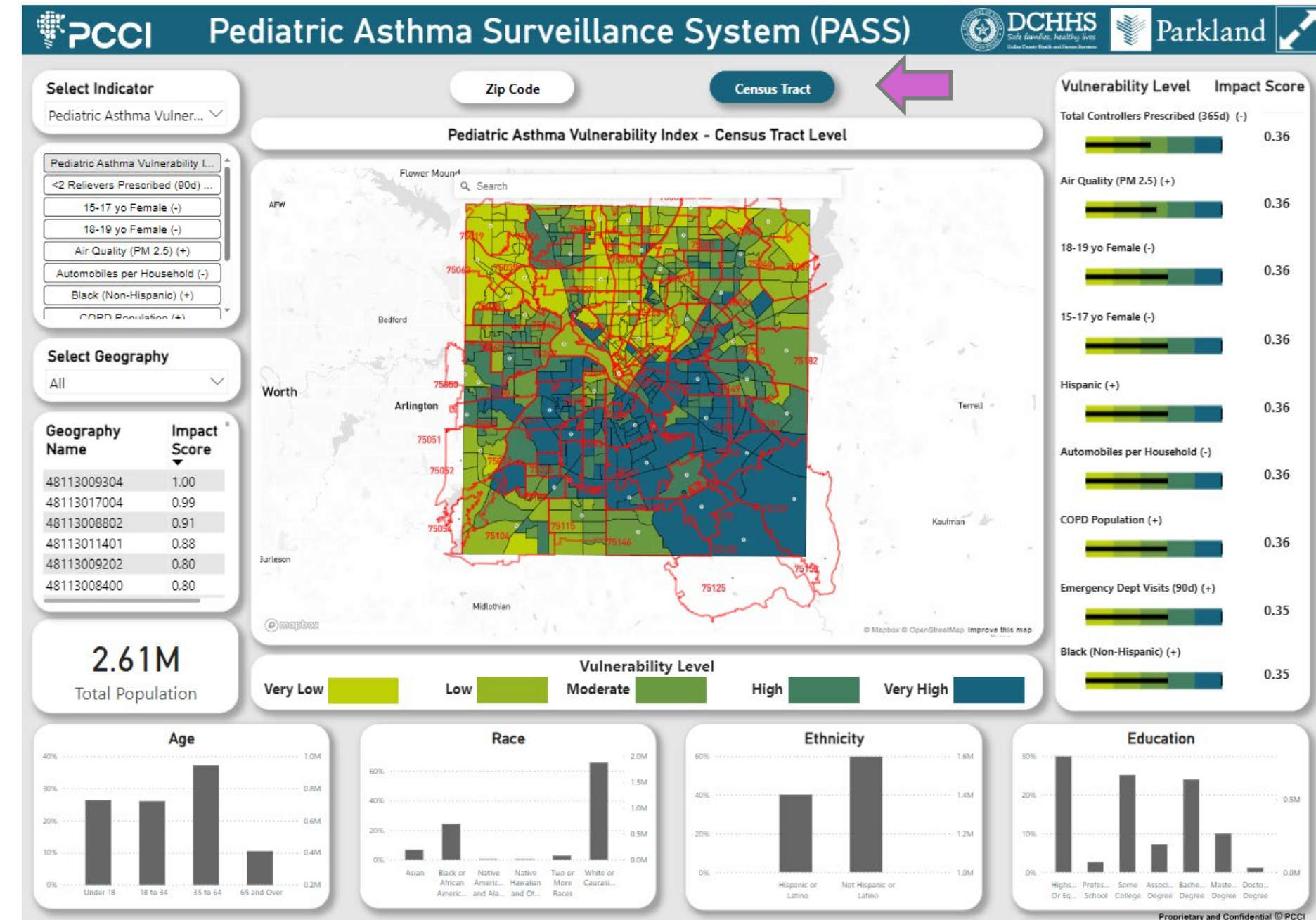
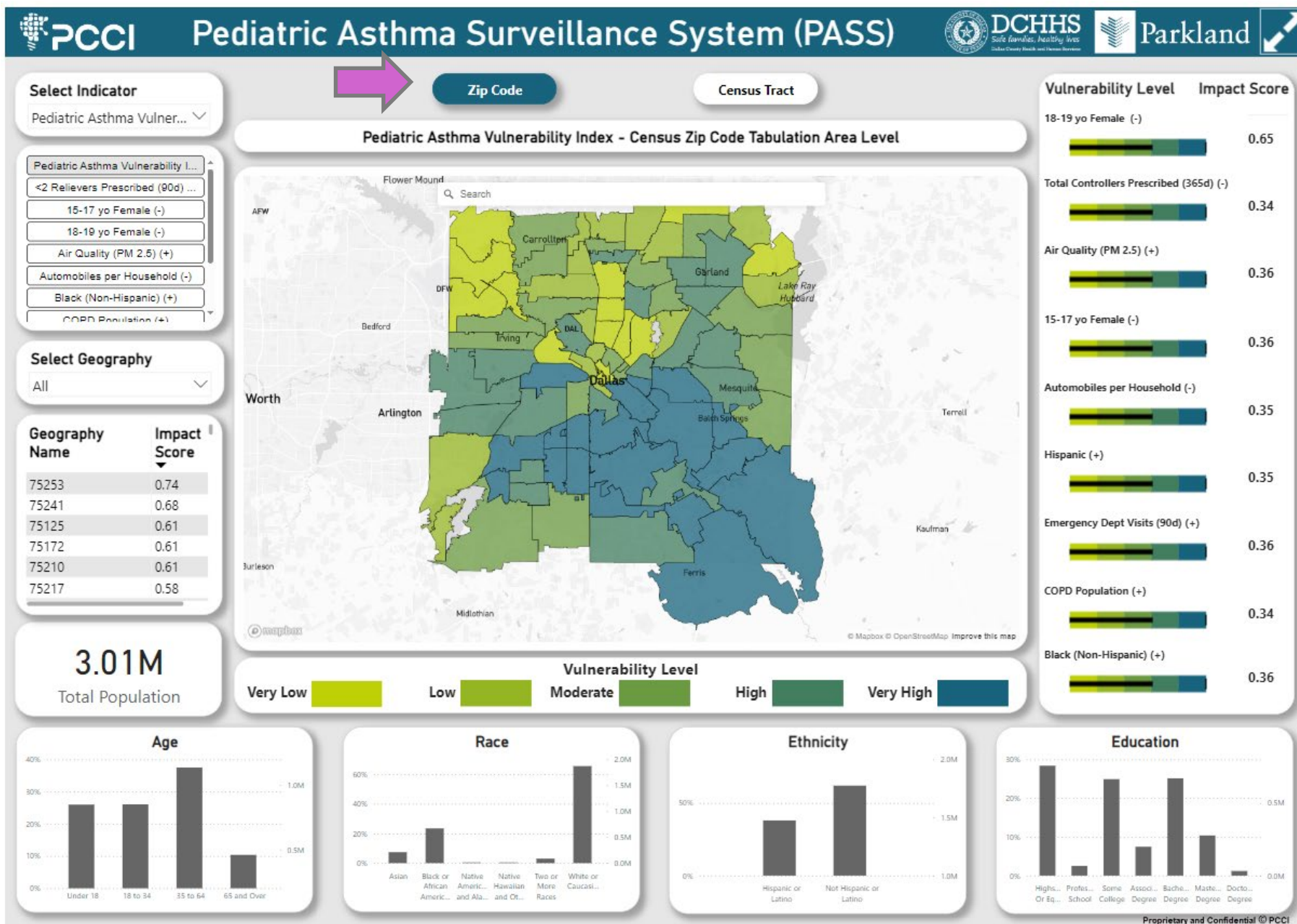
# PASS – Dashboard & Maps



Available at Zip Code Level

&

Census Tract Level



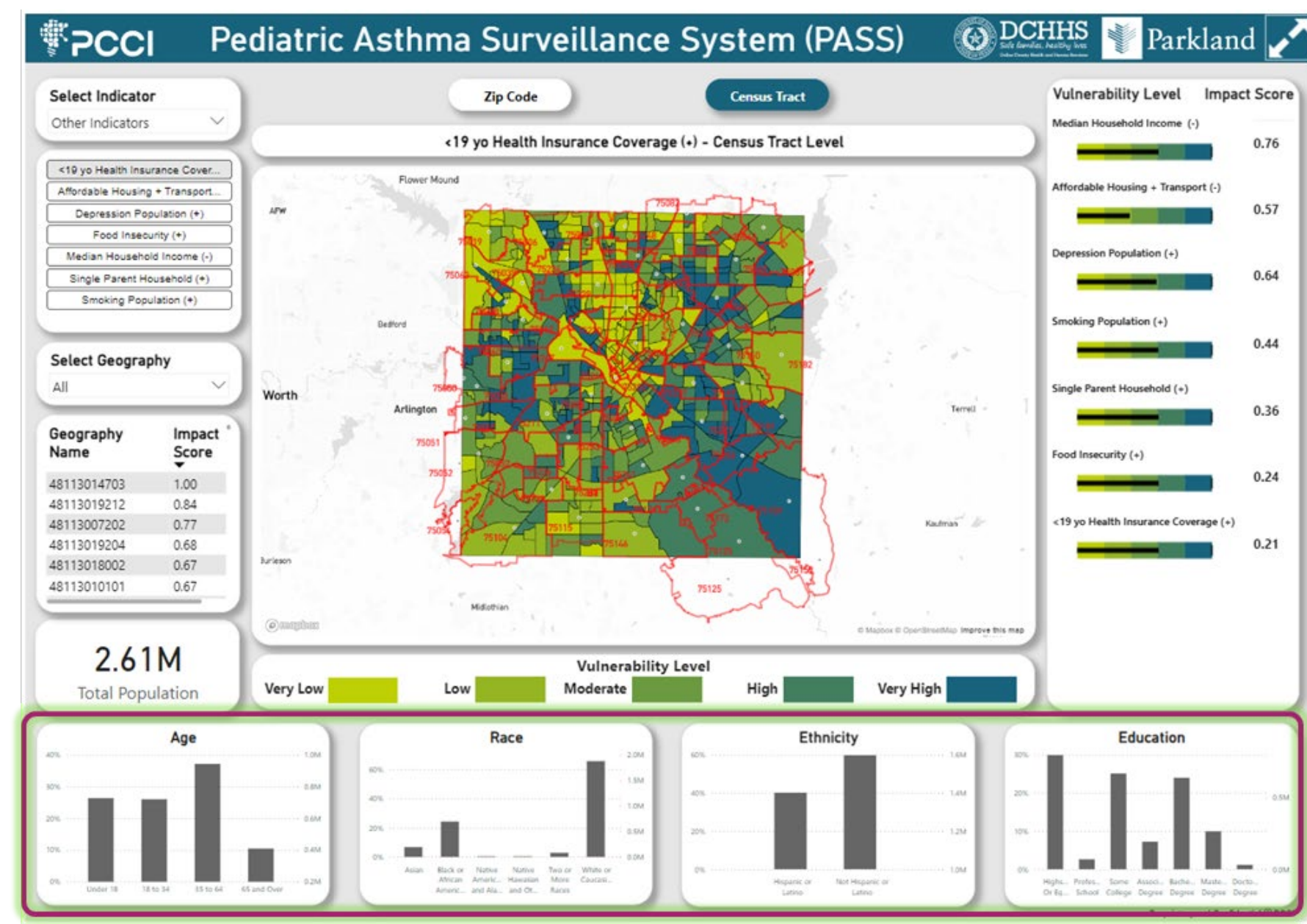
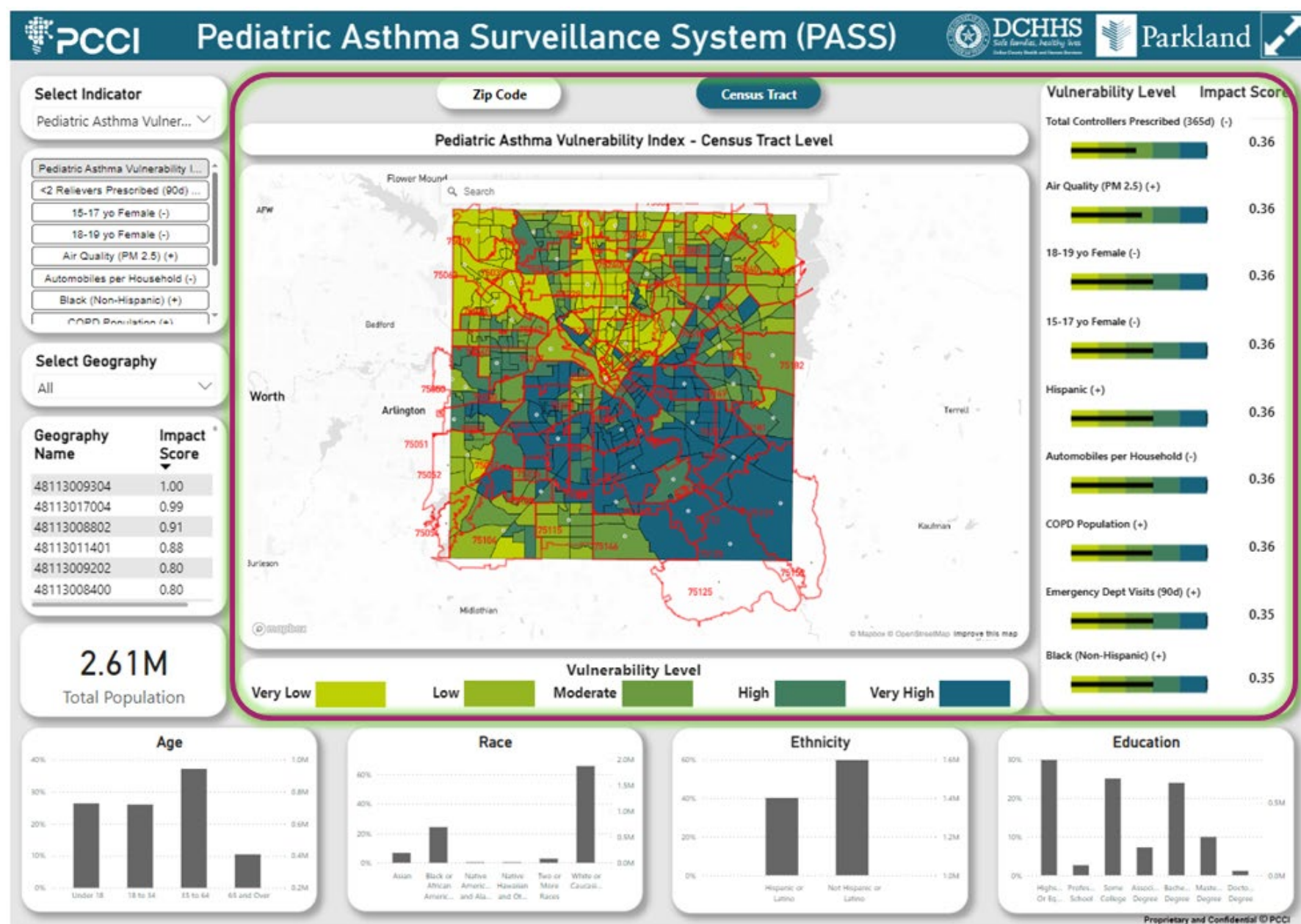


# PASS – Dashboard & Maps



Provides Risk Scores & Drivers

Key Socio-Demographic Insights



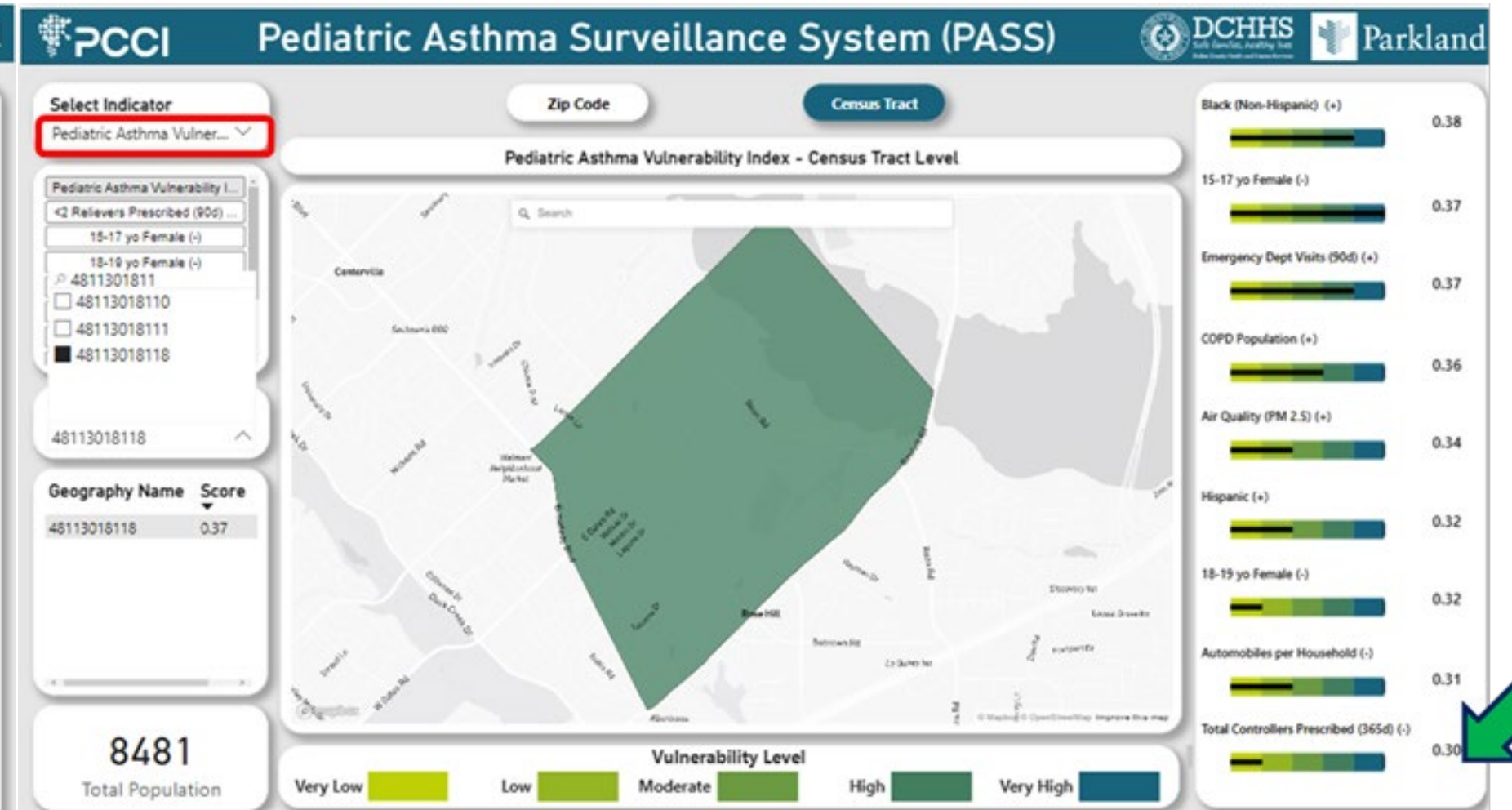
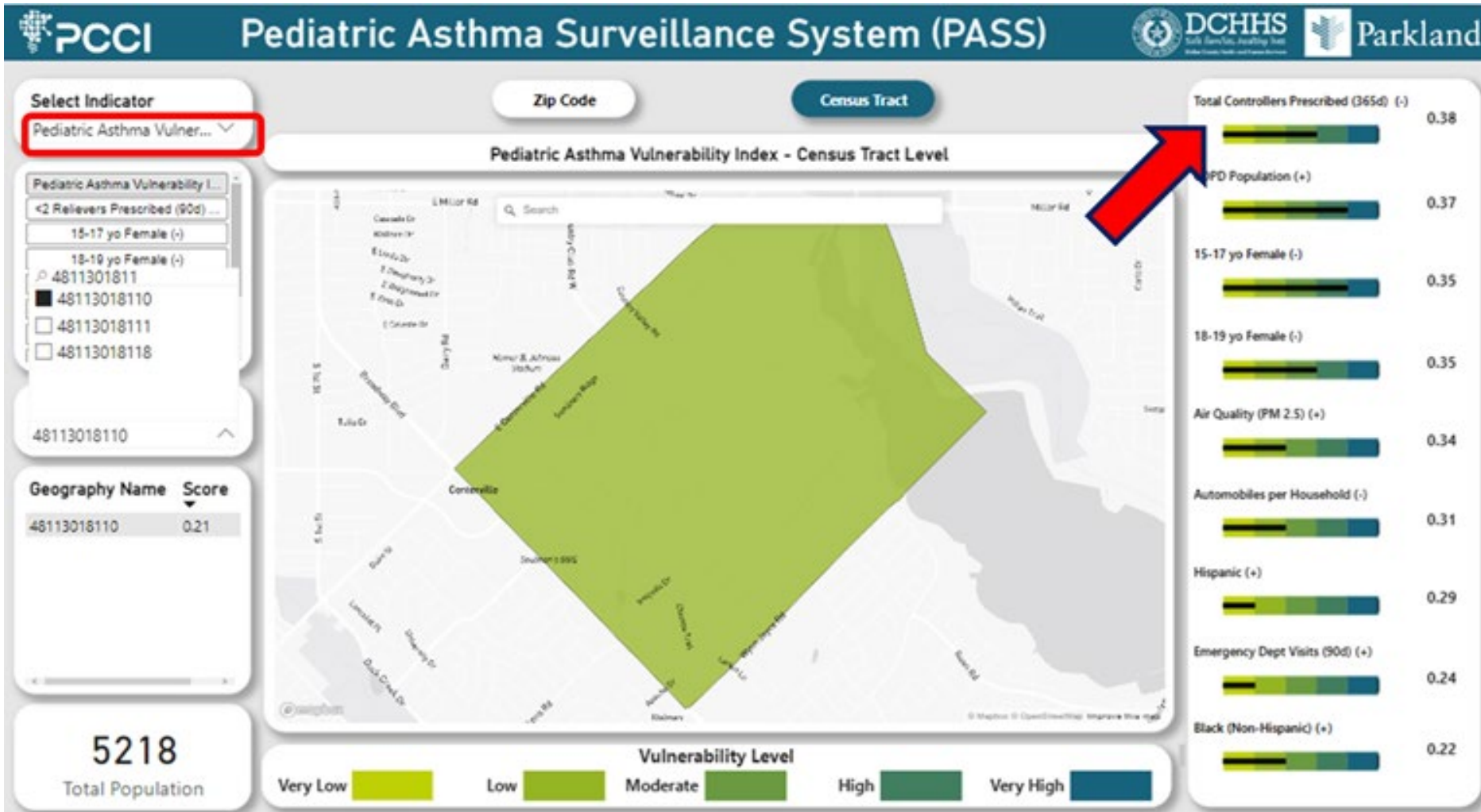


# PASS – Preliminary Insights



Contiguous Census Tracts...

..Have Different Vulnerabilities



- **Low Risk**
- Non-Hispanic White
- **Low** ED Utilization

- **High Risk**
- Black Male
- **High** ED Utilization





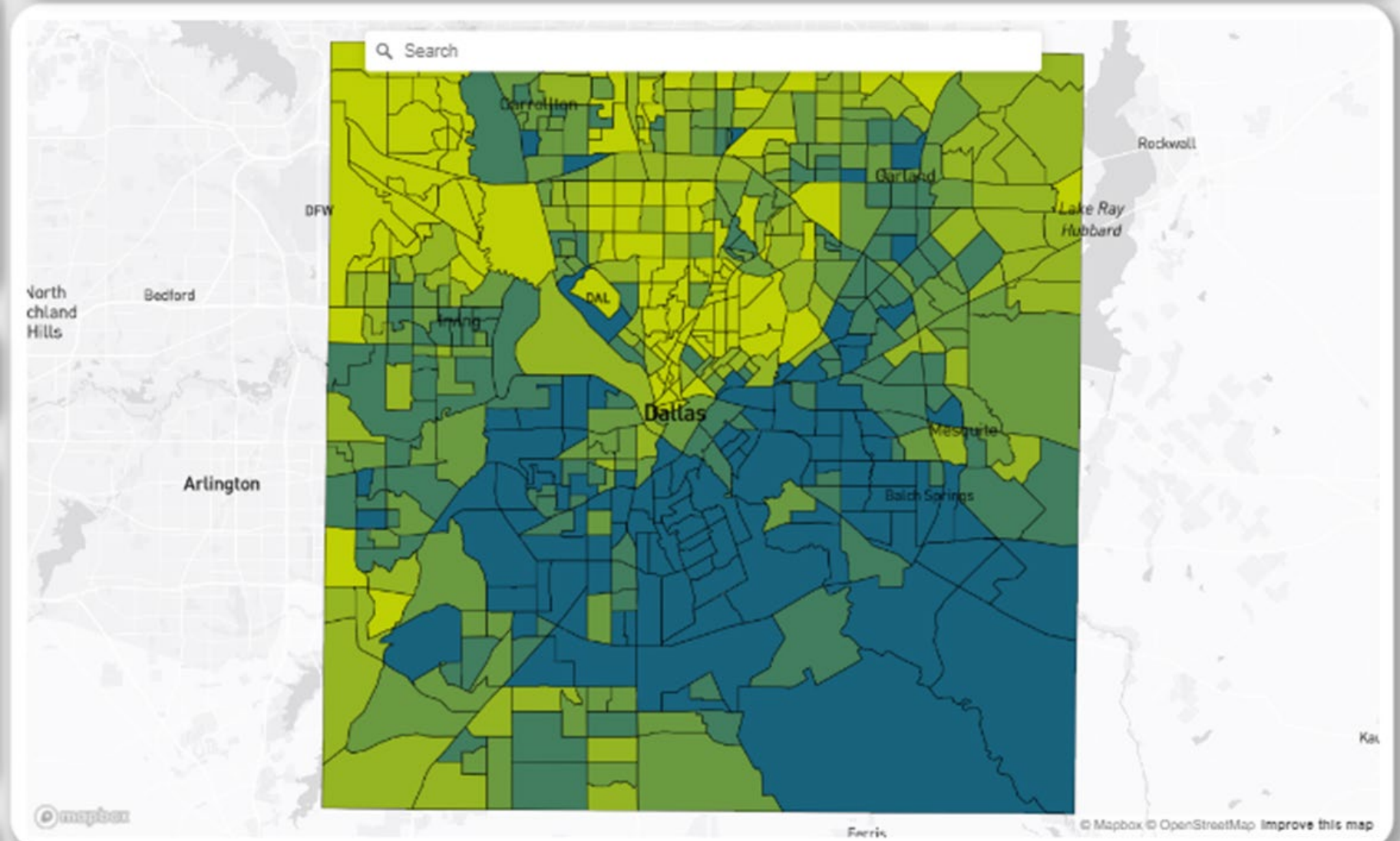
# PASS – Preliminary Insights



Children Vulnerable to Asthma...

...Use The Emergency Room

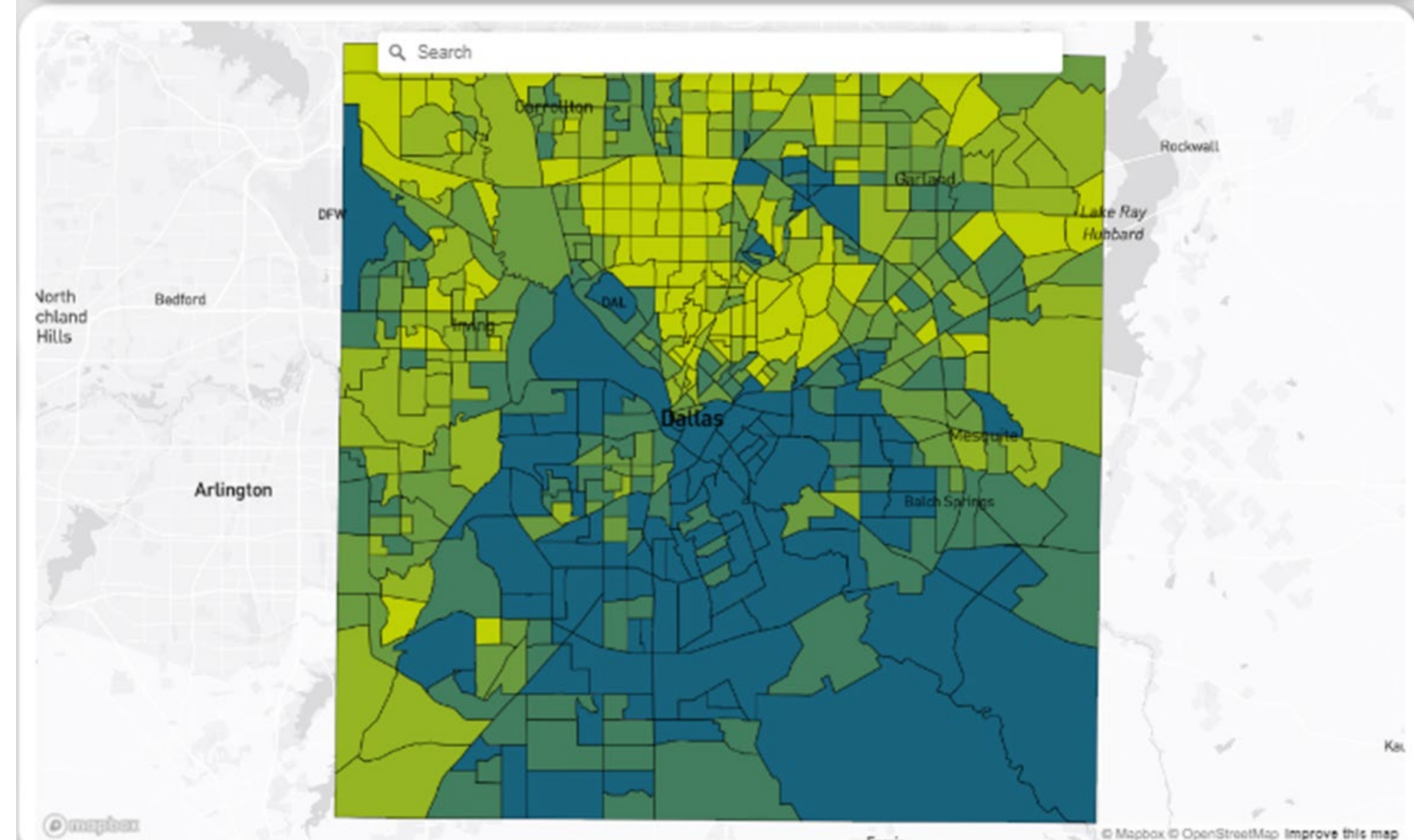
Pediatric Asthma Vulnerability Index - Census Tract Level



Vulnerability Level



Emergency Dept Visits (90d) (+) - Census Tract Level



Vulnerability Level





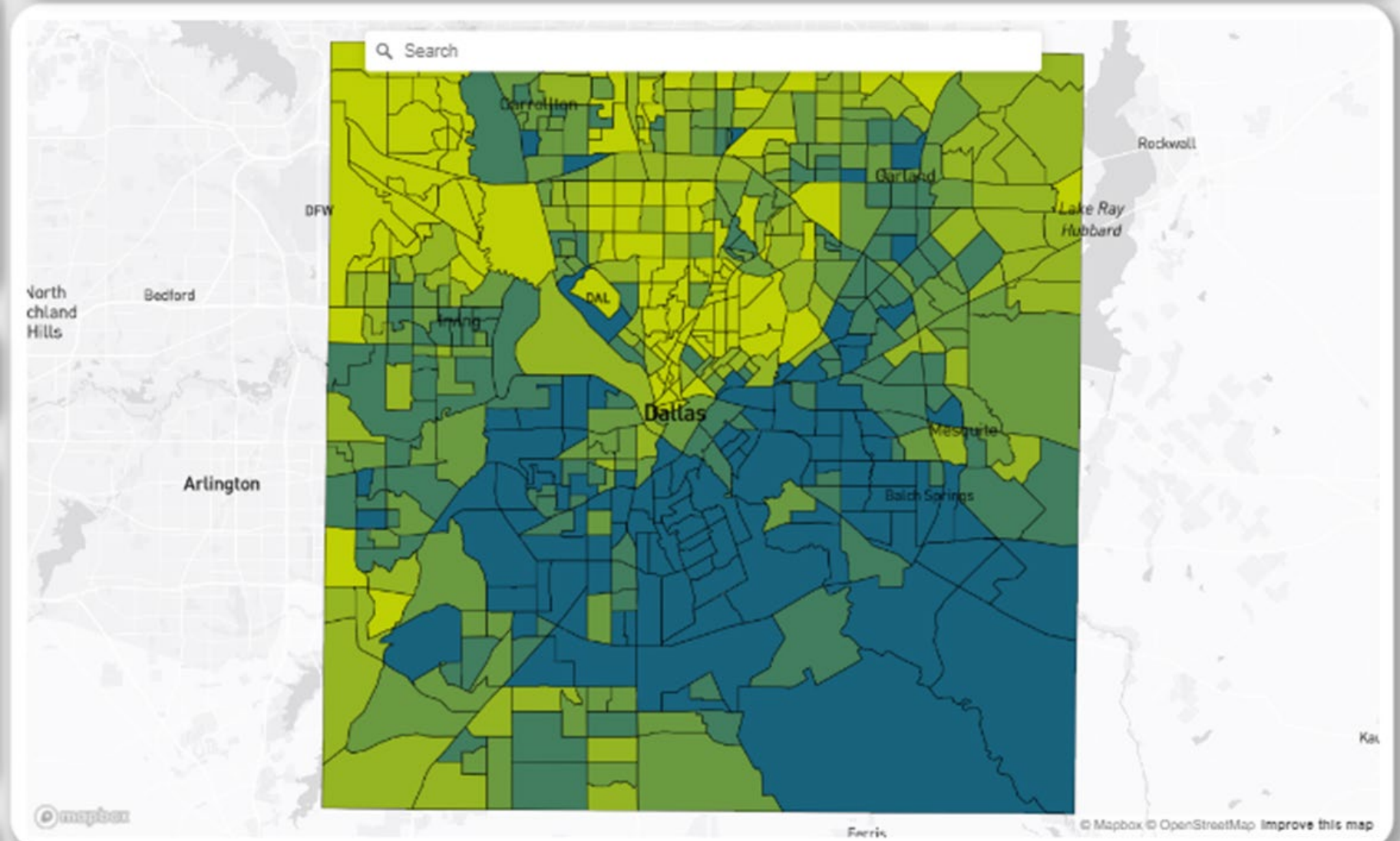
# PASS – Preliminary Insights



Children Vulnerable to Asthma...

..Are Exposed To Adult Smoking

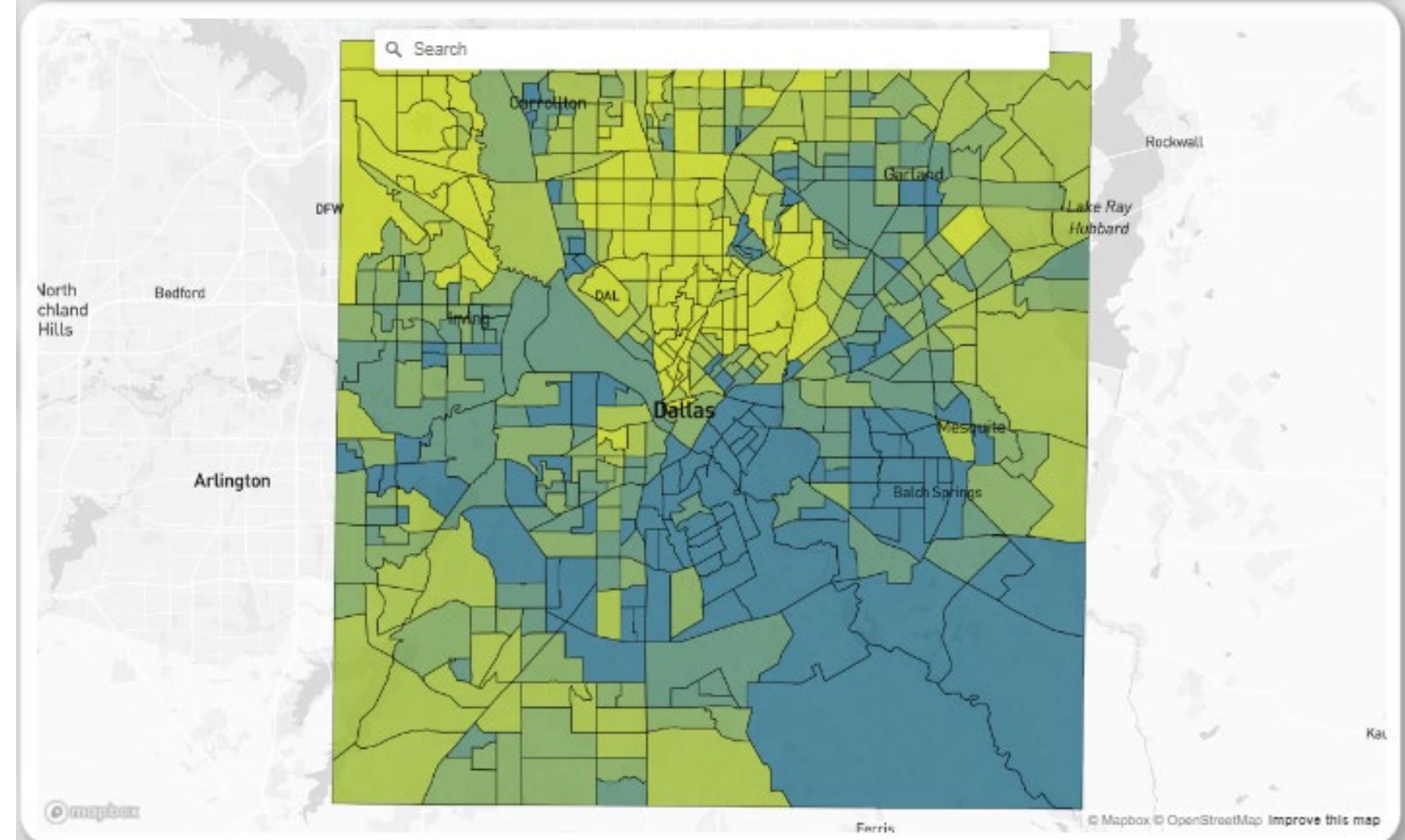
Pediatric Asthma Vulnerability Index - Census Tract Level



Vulnerability Level



Smoking Population (+) - Census Tract Level



Vulnerability Level





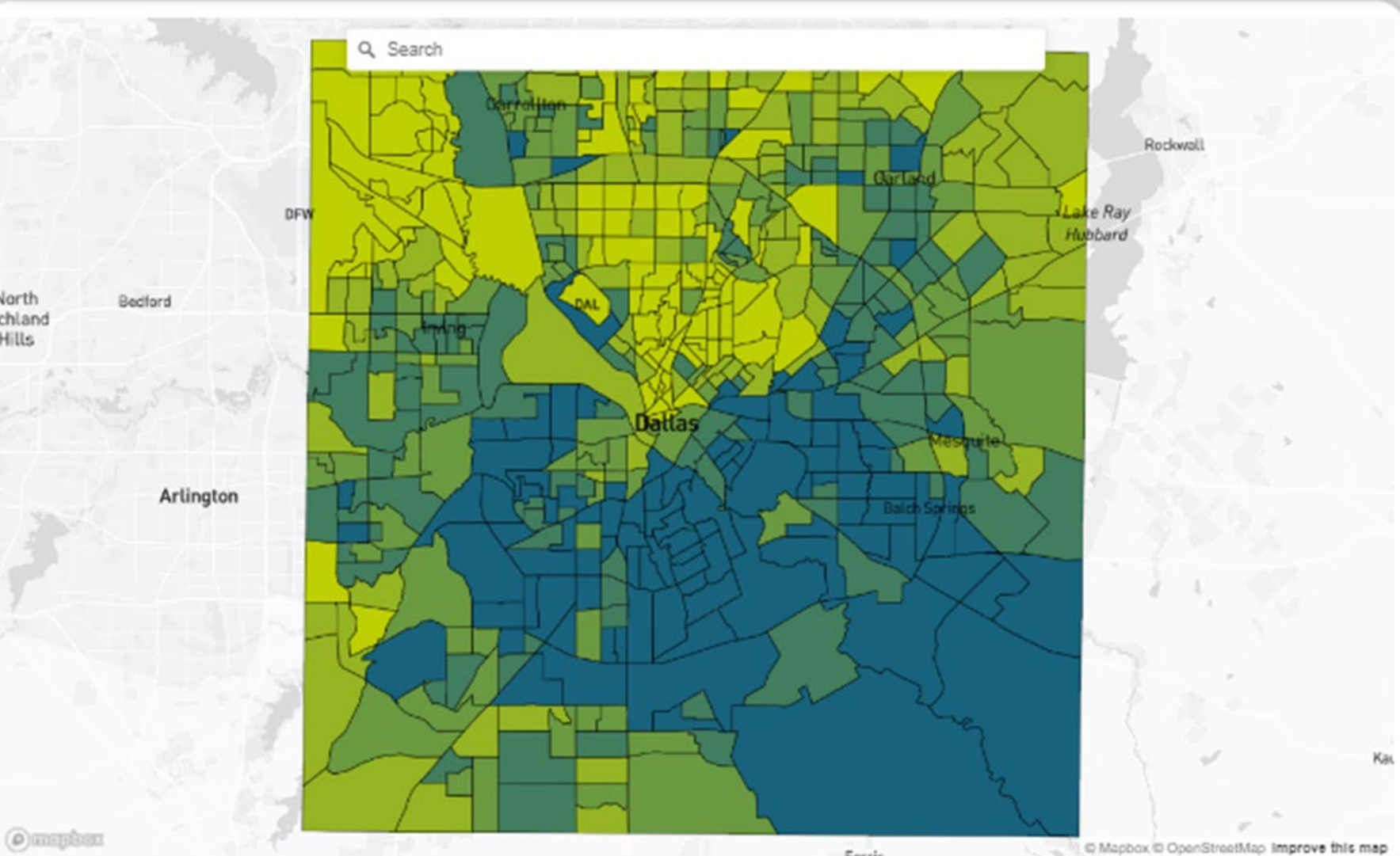
# PASS – Preliminary Insights



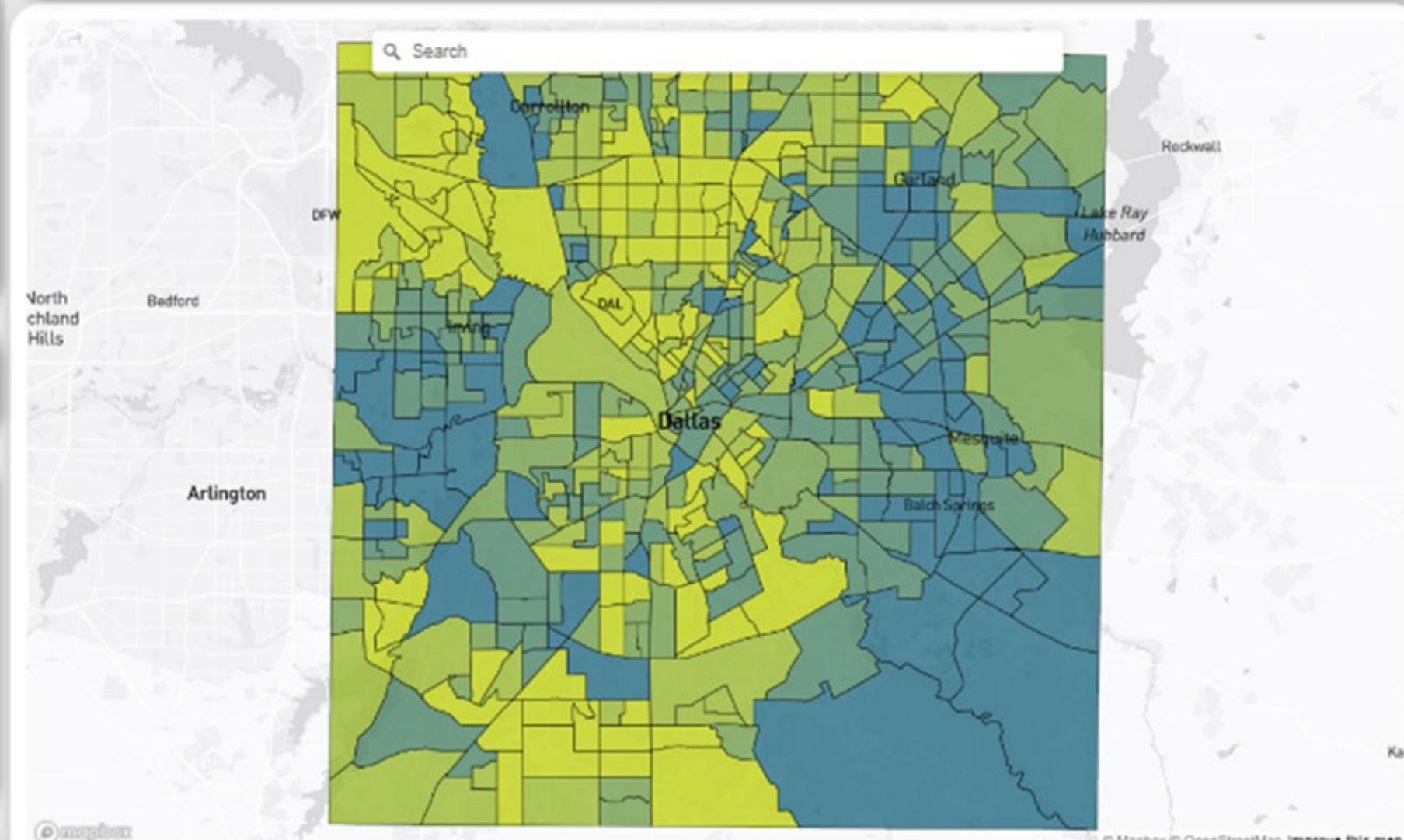
Children Vulnerable to Asthma...

..Have High Prev. Adult Depression

Pediatric Asthma Vulnerability Index - Census Tract Level



Depression Population (+) - Census Tract Level





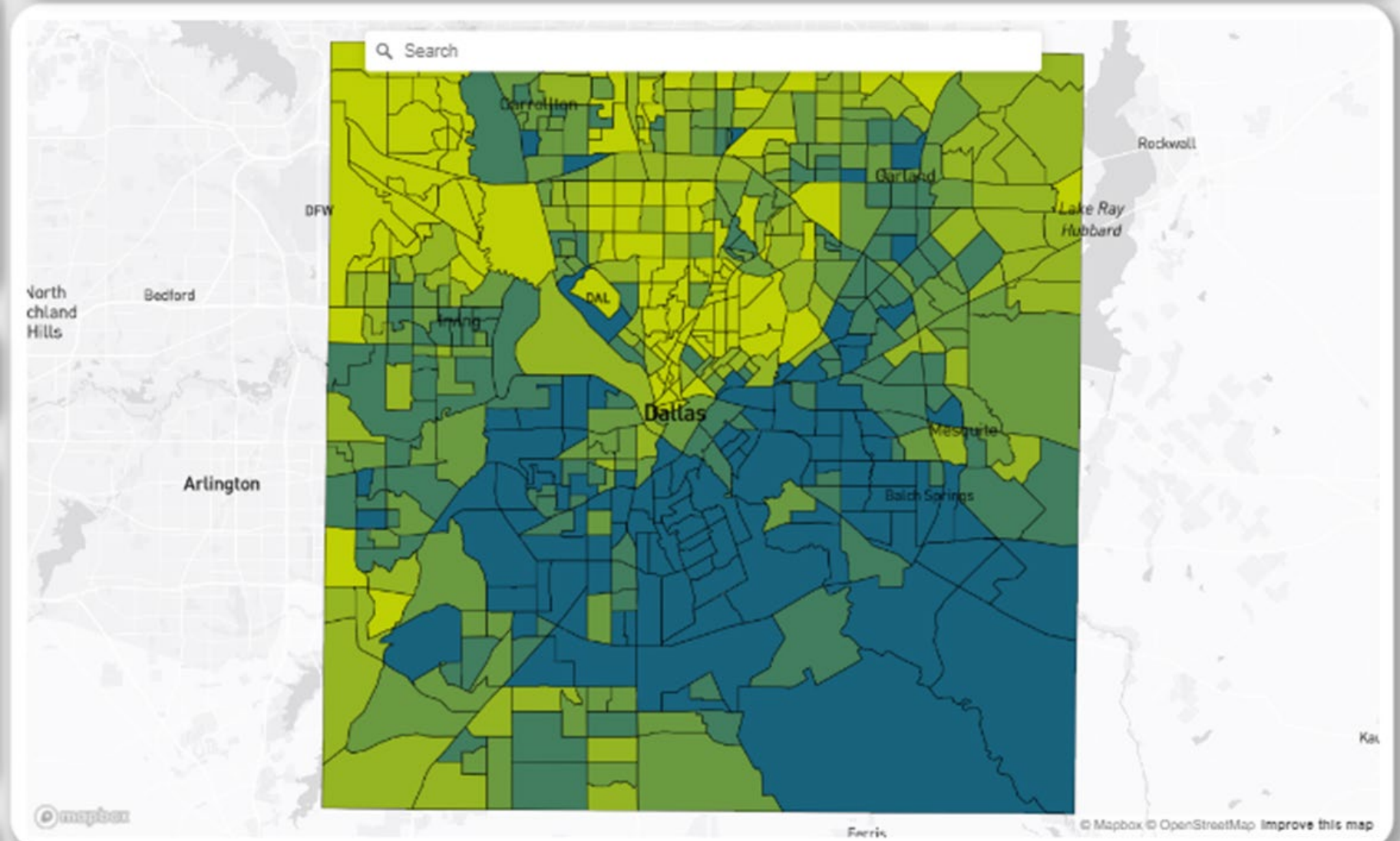
# PASS – Preliminary Insights



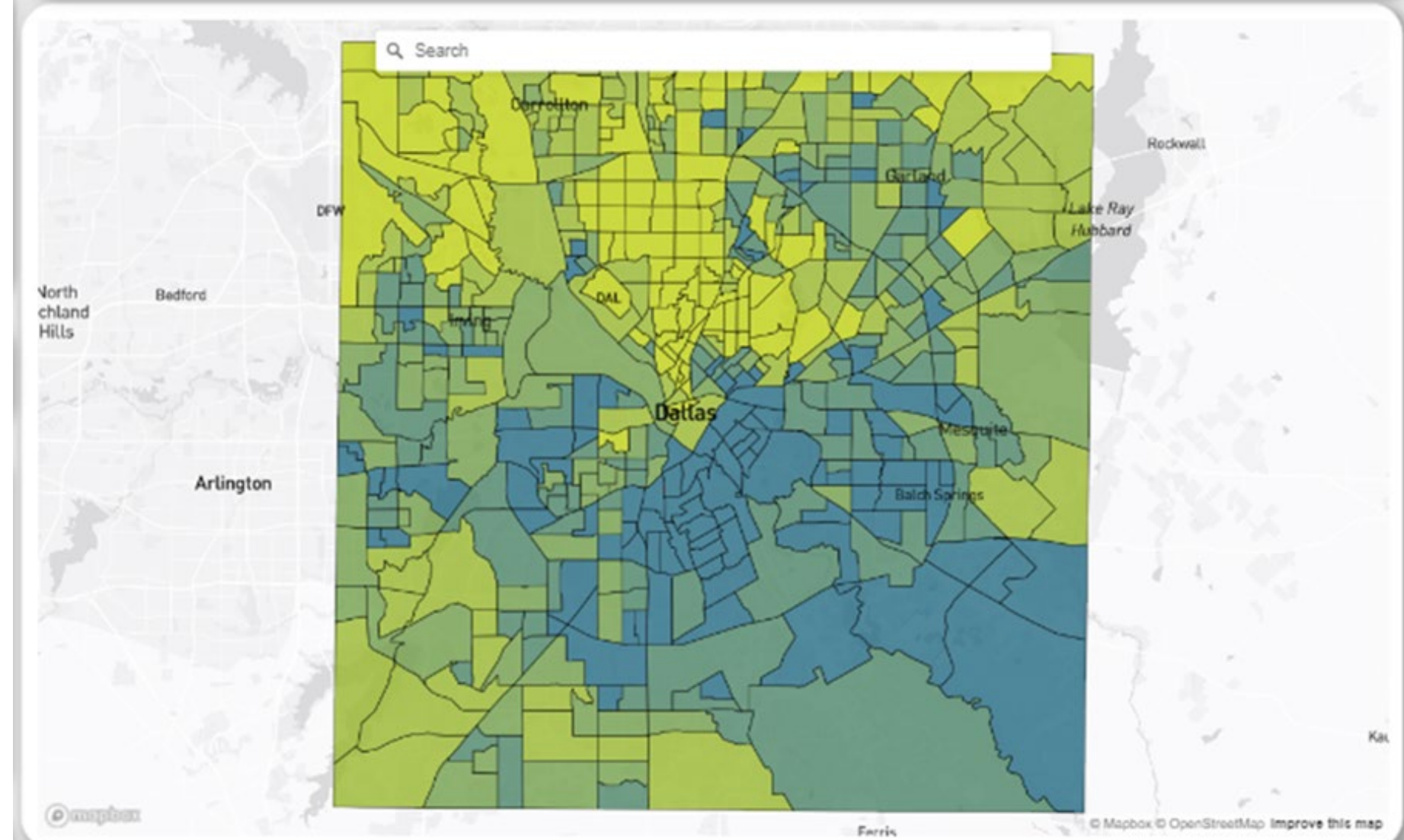
Children Vulnerable to Asthma...

..Have High Prev. Food Insecurity

Pediatric Asthma Vulnerability Index - Census Tract Level



Food Insecurity (+) - Census Tract Level





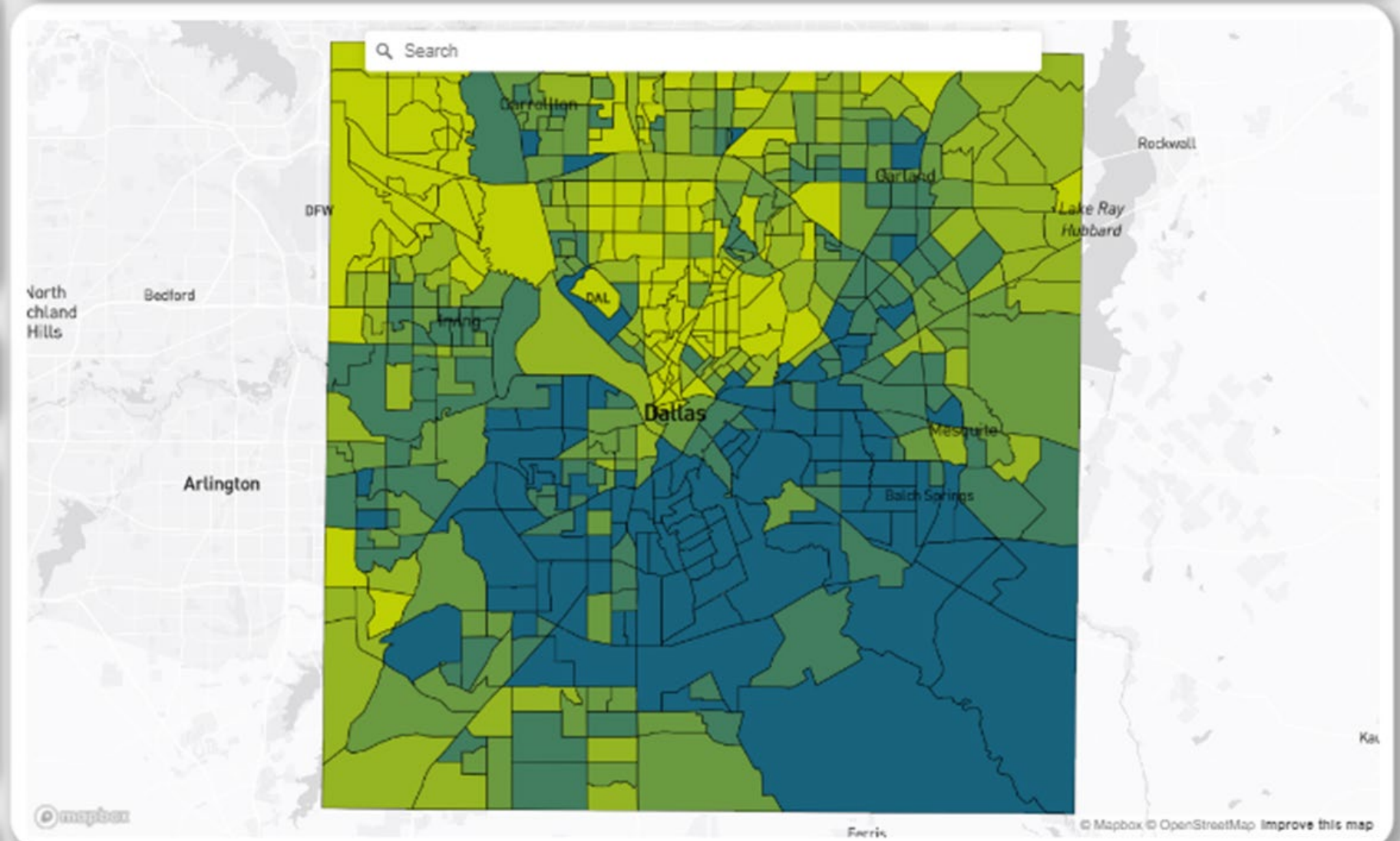
# PASS – Preliminary Insights



Children Vulnerable to Asthma...

..Have Housing & Transp. Needs

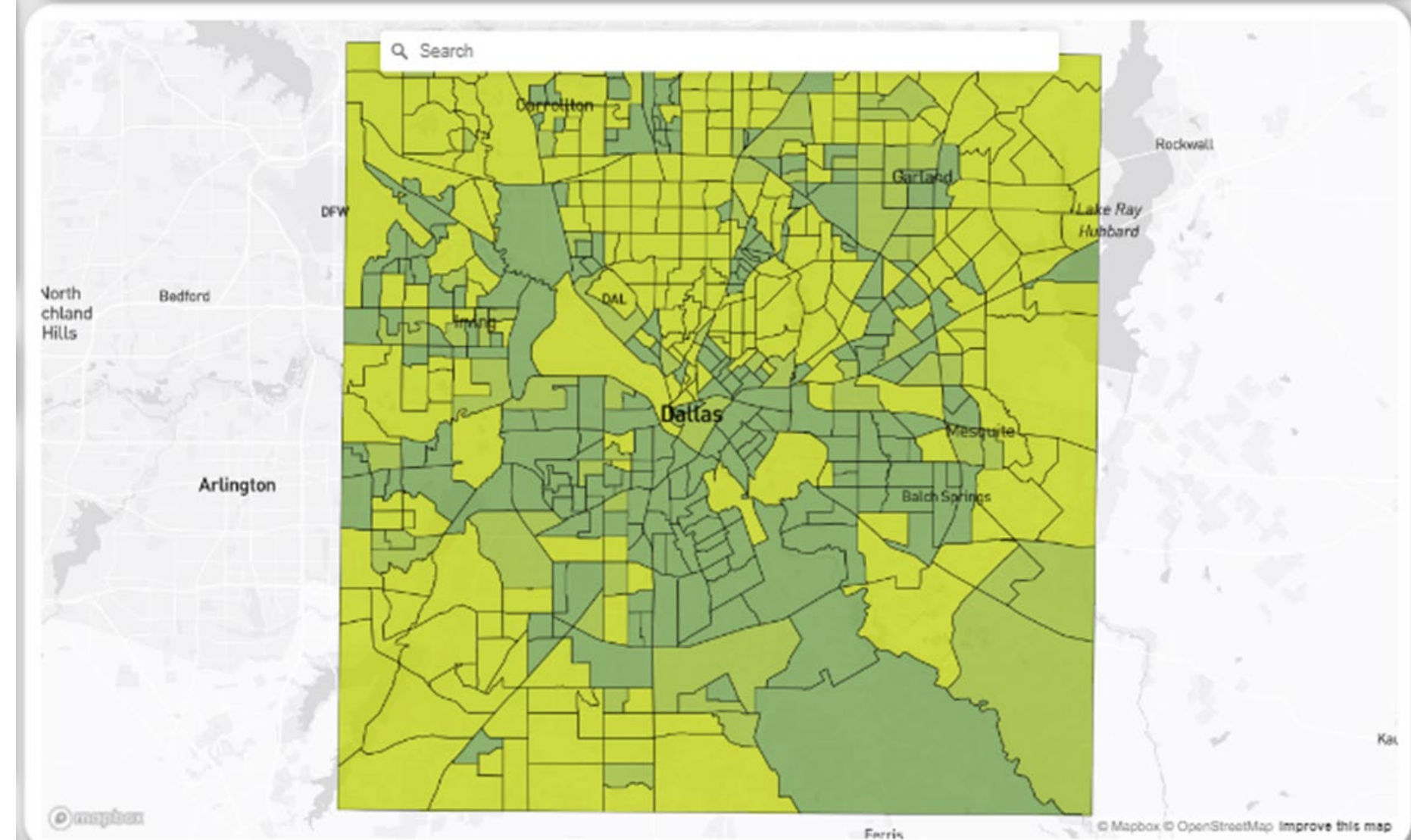
Pediatric Asthma Vulnerability Index - Census Tract Level



Vulnerability Level



Affordable Housing + Transport (-) - Census Tract Level



Vulnerability Level





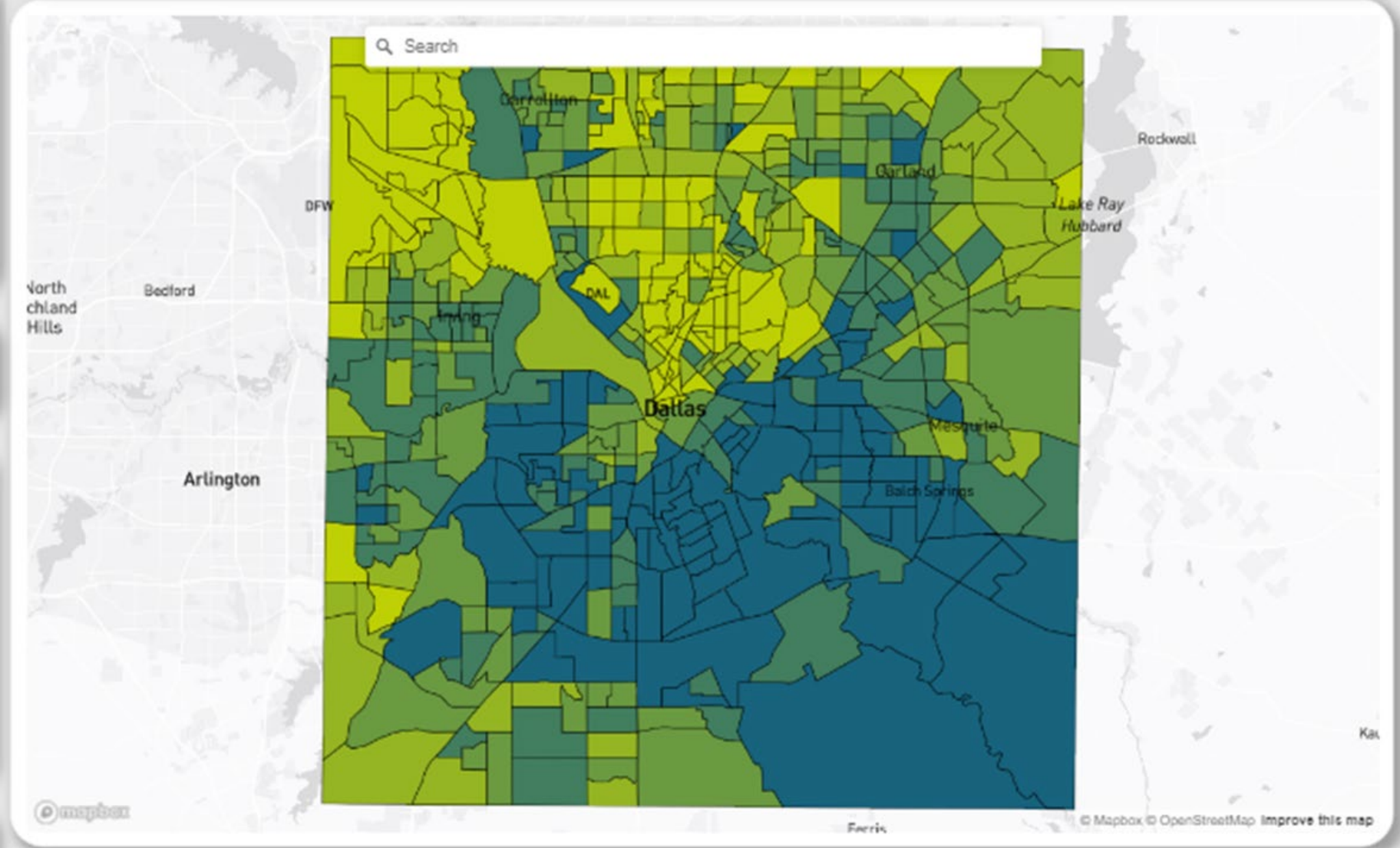
# PASS – Preliminary Insights



Children Vulnerable to Asthma...

..Use Controller Meds Ineffectively  
(Incorrect use? ED as PCP? Trigger Exposure?)

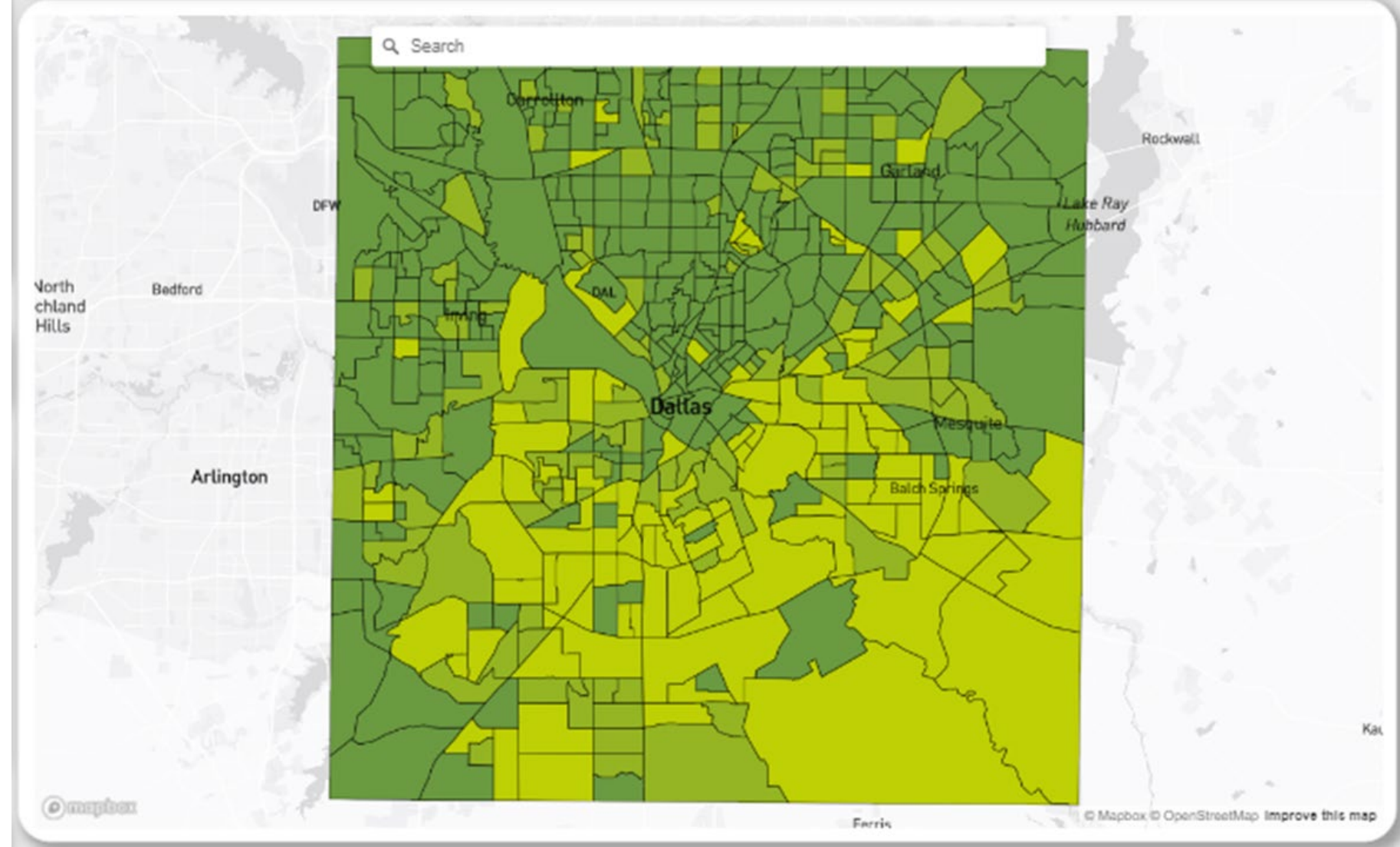
Pediatric Asthma Vulnerability Index - Census Tract Level



Vulnerability Level



Total Controllers Prescribed (365d) (-) - Census Tract Level



Vulnerability Level





# PASS – By The Numbers



## Community Engagement & Utilization Within One Year of Launch

- **Fifteen (15)** Organizations engaged
  - **Six (6)** training sessions
  - **Fifty (50)** people trained
- Website visit logs in 12 months:
  - **3463 views** (1/1/2023 - 1/15/2024)
- Social Media:
  - **6064** Impressions on LinkedIn
  - **5936** Impressions on X "formerly Twitter"
- Further Monitoring:
  - Community Interventions using PASS
  - Community Feedback

## PASS Use Cases – By Community Stakeholders

- Public Health Interventions
- Environmental Advocacy
- Residency Training
- School-Based Interventions
- Smoking Cessation Program
- Corporate Social Responsibility
- Engagement with ISDs
- Targeted Community Engagement/Educ.
- Targeted sites for asthma screening



# PASS – Next Steps



## Continued Improvement & Replicate to Other Diseases

- Diabetes
- Hypertension
- Maternal Health
- Mental and Behavioral Health



# Questions



Thank you!

Contact:

[Yolande.pengetnze@pccinnovation.org](mailto:Yolande.pengetnze@pccinnovation.org)

[Teresita.oaks@phhs.org](mailto:Teresita.oaks@phhs.org)

[Woldu.Ameneshoa@dallascounty.org](mailto:Woldu.Ameneshoa@dallascounty.org)



# Tarrant County Community Health Needs Assessment

Savannah Panagopoulos  
MPH, CHES, CPST

Community Health Analyst,  
Cook Children's Center for  
Community Health







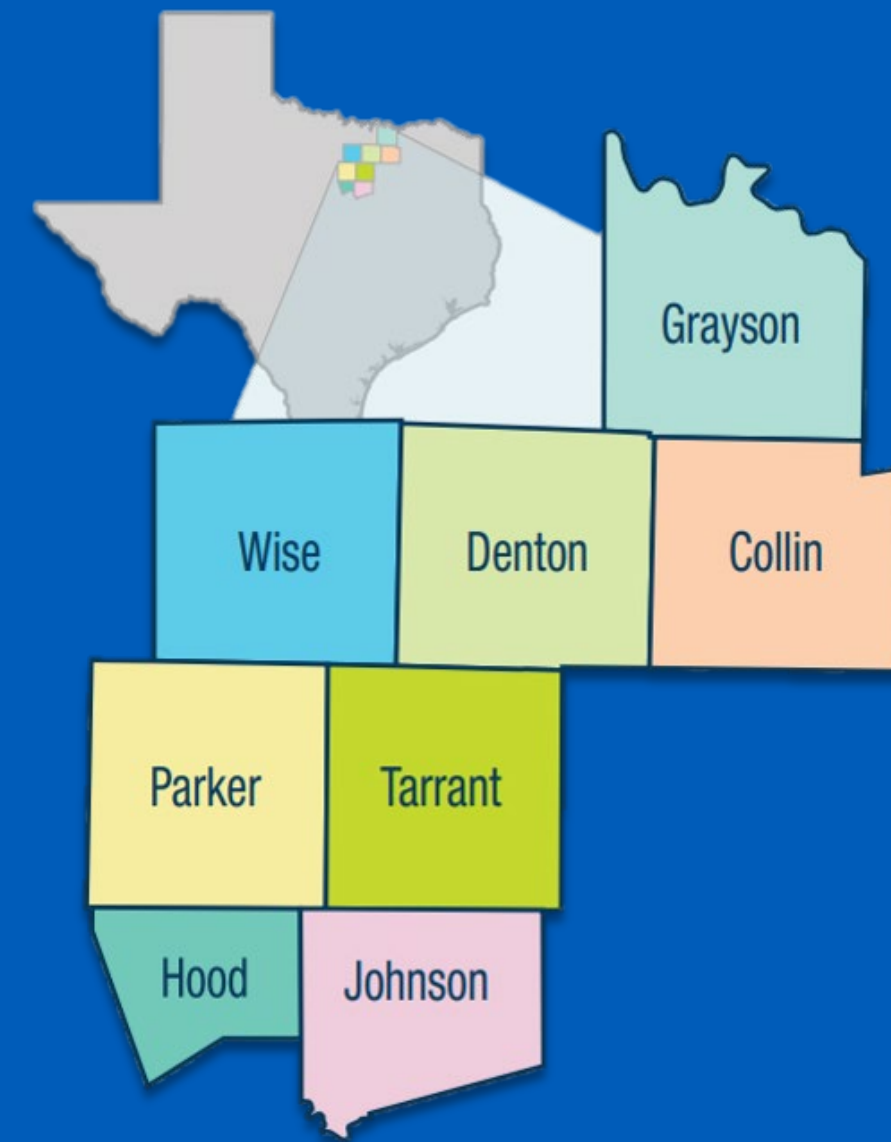
# Connecting the dots: Leveraging needs assessment data to understand child Asthma needs

**Savannah Panagopoulos, MPH, CHES, CPST**

Community Health Analyst, Child Health Evaluation,  
Center for Community Health

# Agenda

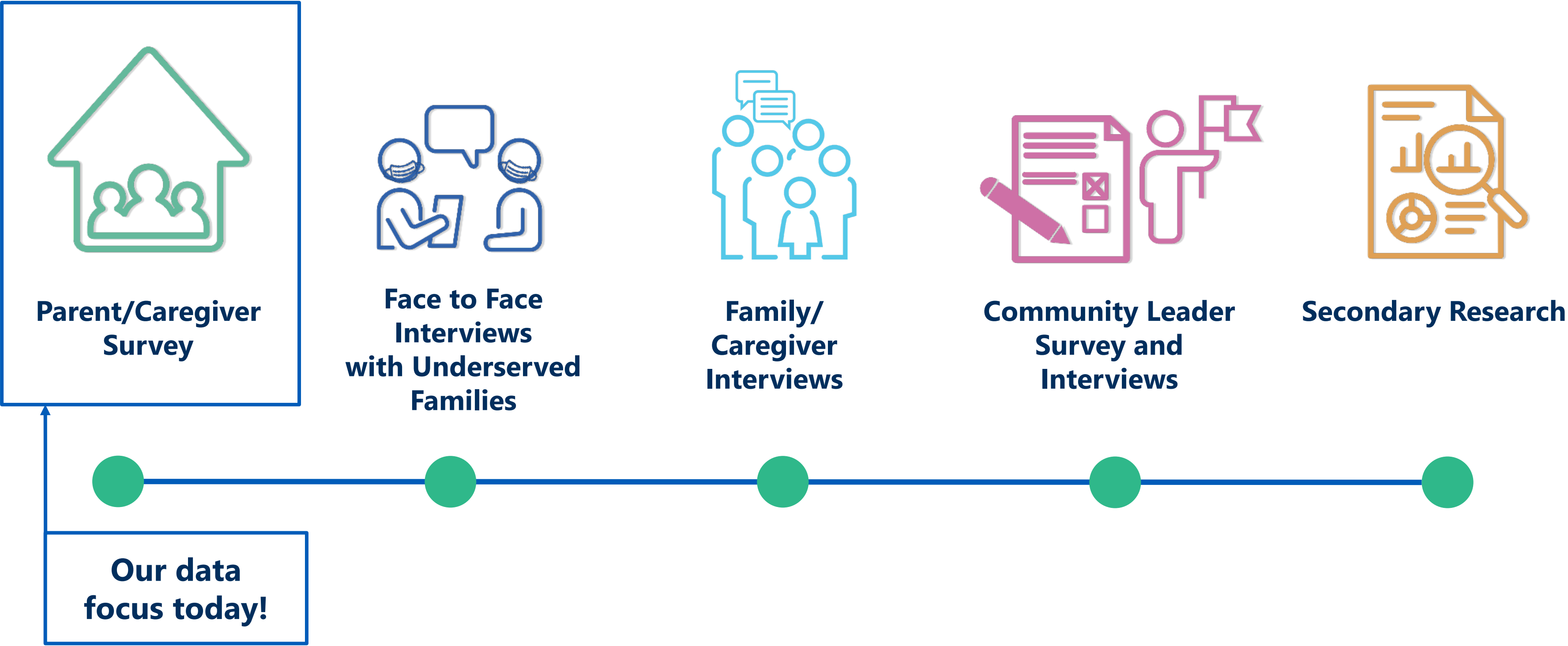
1. Provide a brief overview of the Cook Children's Community Health Needs Assessment (CHNA).
2. Identify key results related to children's asthma needs in our eight-county service region.
3. Share the Cook Children's Community Health Needs Assessment public data dashboard.



**1.2 million** children  
and counting!



# 2024 Cook Children's Needs Assessment Methodology



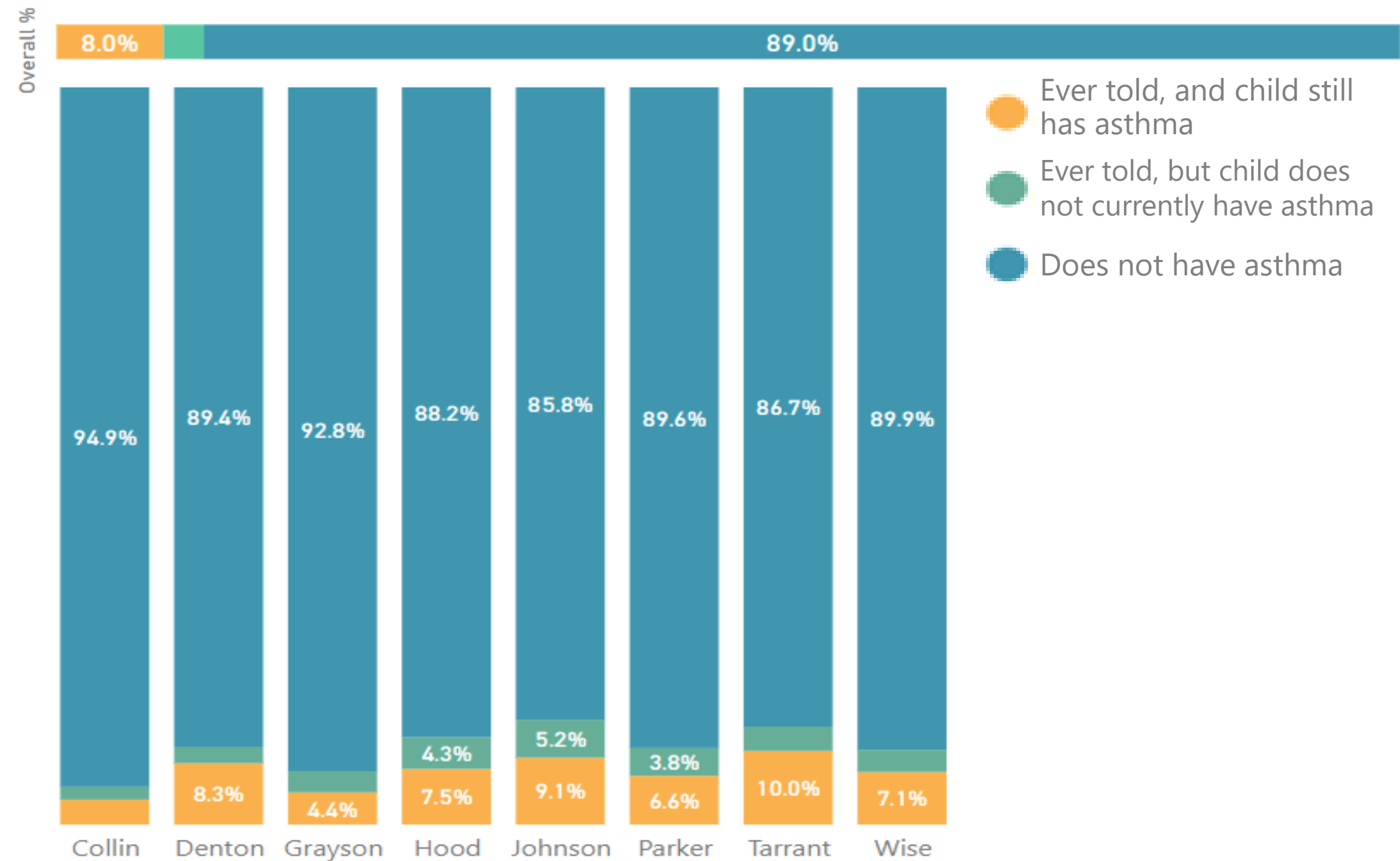


# Children's Asthma Data



# 2024 CHNA: Key Results for Asthma

**Asthma** 2024 CHNA Survey of Caregivers with Children ages 0-17



# 2024 CHNA: Key Results for Parenting Support

**Asthma** 2024 CHNA Survey of Caregivers with Children ages 0-17



**42% of children**

with asthma had an episode of asthma or asthma attack within the past 12 months.

Estimated number of children: 58,294



**14% of children**

with asthma have been in an emergency room in the past year because of asthma symptoms.

Estimated number of children: 19,950



**87% of children**

with asthma received all the asthma medication that was prescribed for him/her.

Estimated number of children: 118,969



**37% of children**

with asthma **do not** have an individualized asthma action plan.

Estimated number of children: 50,708



# CHNA Parent Survey Data Dashboard

Email: CHNAFeedback@cookchildrens.org Web: www.centerforchildrenshealth.org Community Health Needs Assessment (CHNA): Parent Survey

**CookChildren's** Key Indicators Healthcare Health Insurance Child's Health Oral Health Emotional/Mental Health Lifestyle/Wellness Safety Family/Caregiver

Time Frame Selected: 2023

Questions concerning your child's asthma

Select Survey Time Frame: 2021 2022 2023

ASTHMA: Children with current asthma

This Child's Health

Results by County

by percentage of children

Overall %

94.9% 89.4% 92.8% 88.2% 85.8% 89.6% 86.7% 89.9%

8.0% 8.3% 4.4% 7.5% 9.1% 6.6% 10.0% 7.1%

Collin Denton Grayson Hood Johnson Parker Tarrant Wise

Additional This Child's Health Questions

- HEALTH STATUS: This child's health
- SPECIALIZED HEALTH NEEDS: Does this child have any specialized healthcare needs for a child his or her age?
- VACCINES: Are your child's vaccines up-to-date for a child of his/her age?
- WEIGHT: Are you concerned about this child's weight?

DURING THE PAST 12 MONTHS, about how many days of school did this child miss due to...?

- Asthma symptoms [6-17 years Old]
- Injury [6-17 years Old]
- Medical appointments
- Physical illness [6-17 years Old]

Questions concerning your child's asthma

- ASTHMA: Children with current asthma
- ER VISIT DUE TO ASTHMA: Has this child been in an emergency room in the past year because of asthma symptoms
- MEDICATION FOR ASTHMA: Did this child receive all the medication that was prescribed to him/her for asthma

Results by:

- Child's Age Group
- Child's Family Total Annual Household Income
- Child's Race/Ethnicity
- County
- Special Population [Unweighted Results]

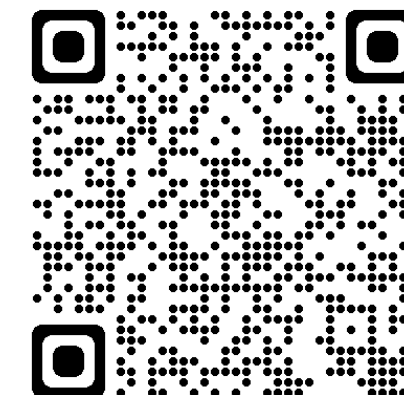
Click to view the Community Health Needs Assessment (CHNA): Parent Survey

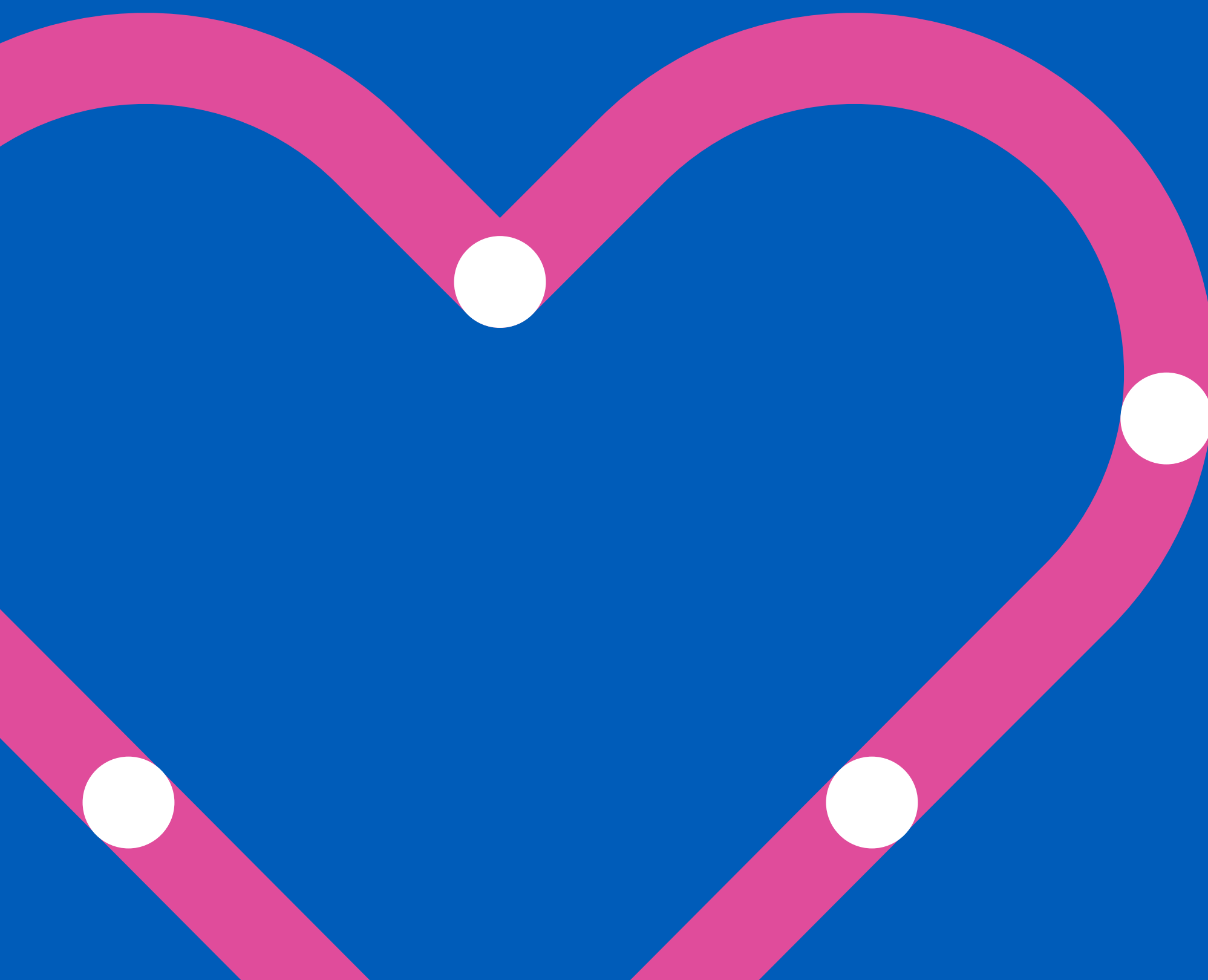
Health Topic Pages

Filter by data collection year

Survey Questions

Data filter





**Thank you!**

[Savannah.Panagopoulos@cookchildrens.org](mailto:Savannah.Panagopoulos@cookchildrens.org)





# DATA PANEL DISCUSSION

# QUESTION 2: TOPICS OF DISCUSSION

What 3 topics would you most want to discuss with other participants in break-out groups today?  
Of these 3, which is most important to you?



Examples:

- Indoor air quality – and triggers in the home
- Outdoor air quality and triggers
- Lack of access to medical services
- Inability to afford medication
- Cultural Barriers
- Language Barriers





**BOX LUNCH PICK UP**  
**PLEASE VISIT RESOURCES TABLE!**



# COMMUNITY VOICES AND PERSPECTIVES



Shamarra Norris  
Positive Breathing  
Outcomes - Asthma  
Chasers



Pam Rogers  
RRT-NPS, MBA  
Parent and Program  
Perspectives



Marquetta Jones  
MPH, CHW  
Healthy Homes



Courtney Barnard  
EdD, LMSW-AP  
Healthy Homes





# 15 MINUTE STRETCH AND INITIATIVES BREAK



# BREAK-OUT SESSION





GROUP 1

Cultural  
Barriers

GROUP 2

Lack of  
Healthcare  
Access

GROUP 3

Language  
Barriers

GROUP 4

Education

# QUESTIONS

## Long Term :

- What are the most important priorities to address with this topic?
- What may be the best starting point to address this topic of asthma?
- What solutions might be first considered?

## Short Term:

- What are the goals for 2025?





# BREAK - OUT SESSION DEBRIEF

# FINAL REMARKS

Kelly Wilmore  
MPH, CHES

Public Health Specialist  
Dallas County Health  
and Human Services





PLEASE TAKE OUR  
POST SUMMIT SURVEY!





THANK YOU