

INTRODUCTION

Health disparities in Chicago are prevalent in examining respiratory health disease amongst children.

Underlying Factors:

- ◆ Barriers to access
- ◆ Knowledge
- ◆ Living conditions
- ◆ Genetic predisposition

A secondary analysis of pooled data from previous studies examining access to healthcare, physician distribution within areas of the city, and asthma prevalence and severity were examined to formulate a plan for intervention.

OBJECTIVES

- ◆ Highlighting the communities where asthma prevalence and severity is highest.
- ◆ Determining existing housing policy and where improvements can be made.
- ◆ Secondary analysis of demographics and socioeconomic status in correlation to asthma prevalence.

METHODS

The City of Chicago is divided into 77 community areas that are comprised of multiple neighborhoods. These community areas are simplified into 4 “sides,” named North, South, West, and Central.

Chicago’s rental housing composition was determined by analyzing Section 8 eligible housing from publically available Chicago Housing Authority (CHA) rental property statistics.

The American Medical Association’s (AMA) “Doctor Finder” tool was used to map AMA and non-AMA internal medicine and family medicine doctors in Chicago by zip code to determine distribution within the city.

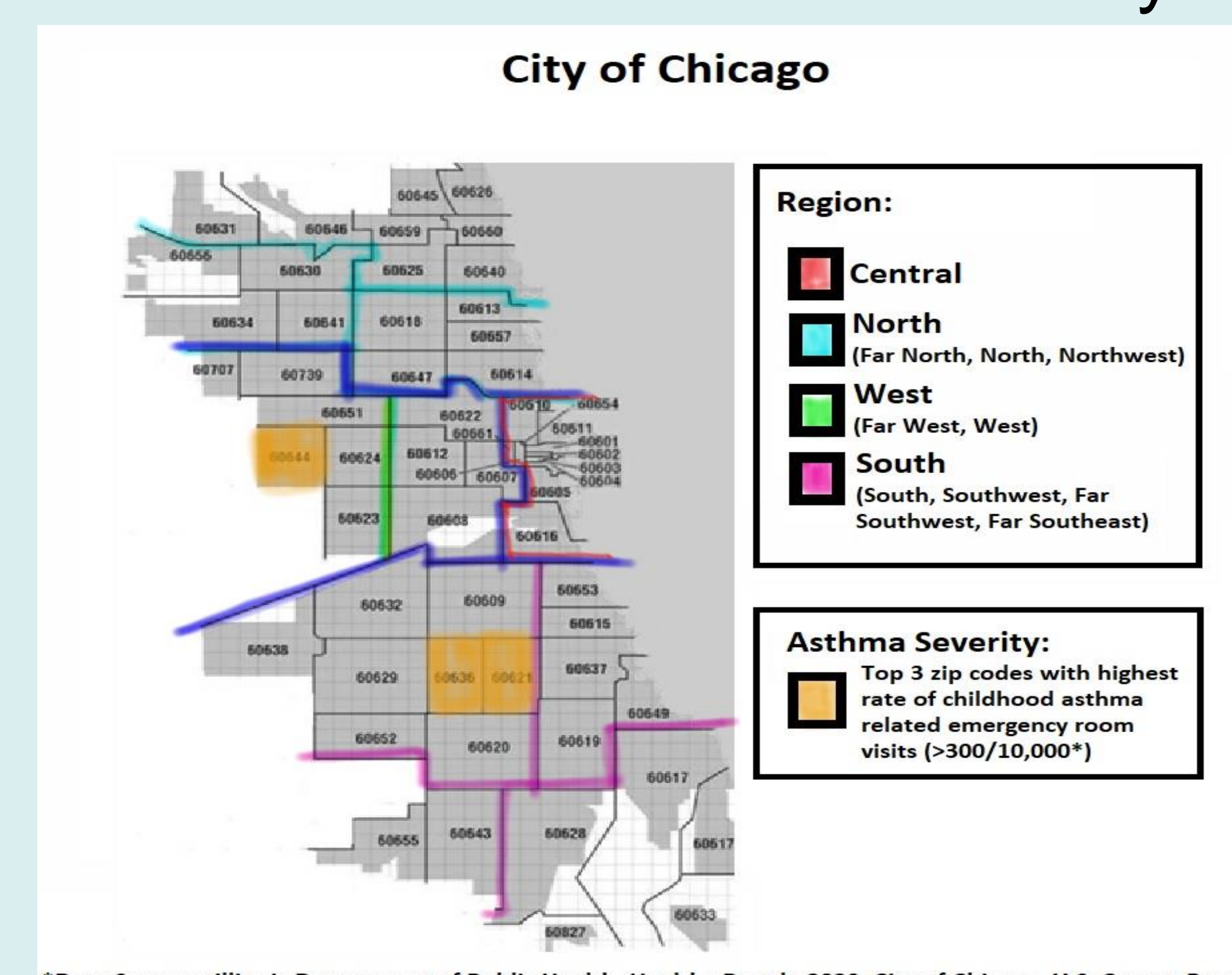
Asthma severity was determined by Emergency Department visits per year, according to data from Healthy People 2020.

Race distribution was determined using population data statistics from the U.S. Census Bureau.

Geomapping of rental housing, physician distribution, asthma severity, and race were correlated to determine factors that contribute to asthma prevalence, as reported by the Centers for Disease Control and Prevention.

RESULTS

Data distribution reveals that the most emergency room visits occur in zip codes 60644, 60636, and 60621, which are located in the south and west sides of the city.



*Data Sources: Illinois Department of Public Health, Healthy People 2020, City of Chicago, U.S. Census Bureau

Within these 4 areas, the following were compared:

- ◆ Asthma related emergency room visits
- ◆ Distribution of primary care physicians by region as compared to total PCPs in Chicago.
- ◆ Ethnic majority

Region	Emergency Department Visits Per Year (% asthma related/ total ED visits in region)	Primary Care Physician Distribution (% PCP/ total PCP in Chicago)	Ethnic Majority
North	0.4% - 0.99%	30.4%	Non-Hispanic White
West	0.99%- 14%	9.69%	Hispanic/Black/African American
Central	0.4%-0.99%	37.96%	Asian/ Non Hispanic White
South	>14%	30%	Black/African American

The south and west sides of the city have more rental property, an increased amount of asthma related emergency room visits, decreased amount of primary care physicians per square footage, and a population comprised of primarily African American and Hispanic individuals as compared to the north and central sides of the city.

CONCLUSION

These results solidify the correlation between the increased prevalence of pediatric asthma in Chicago’s predominantly African American and Hispanic neighborhoods, with contribution from an increased prevalence of asthma triggers in rental housing as well as a lack of physical access to physicians.

Future intervention should be aimed at neighborhoods in the 60644, 60636, and 60621 zip codes, including:

- ◆ Home environmental trigger mitigation
- ◆ Policy to improve housing conditions
- ◆ Care coordination to improve access to care

ACKNOWLEDGEMENTS

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