NEW YORK STATE SENATOR

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Struggling to Breathe:

Manhattan's Asthma Epidemic

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Introduction

According to a report by the New York State Department of Health, "[o]ne in every 10 adults and one in every 10 children in New York State currently have asthma. This chronic disease remains an *epidemic* in New York with significant public health and financial consequences." [1] (emphasis added). New York City faces some of the highest rates of asthma, particularly in Northern Manhattan. Senator Alcántara proposed a bill, S.5559, that unanimously passed the NY Senate, directing the New York State Department of Health (DOH) to conduct a study on the high incidence of asthma in Manhattan. In addition, the bill directs DOH to prepare a remedial plan regarding this serious issue. The Senator is dedicated to protecting public health and determining why New Yorkers face some of the highest rates of asthma.

New York's Asthma Prevalence Compared to the Nation

New York State has higher rates asthma than the national average across most age groups. The following chart depicts asthma prevalence in children throughout the United States compared to New York. New York's children consistently see a higher rate of asthma compared to the United States as a whole.

Asthma Prevalence in the United States and New York State by Age Group, Children (0-17 Yrs) [2]

	Age Group	Sample Size	Prevalence(%)	95% CI**	Estimated Number of People Affected
US* Lifetime	0-4	14,216	7.3	6.6-8.2	820,210
	5-9	14,906	14.5	13.4-15.7	1,966,256
	10-14	17,554	17.9	16.8-19.0	2,107,884
	15-17	12,873	17.9	16.5-19.4	1,523,405
NYS Lifetime	0-4	206	7.8	4.8-12.6	74,262
	5-9	222	19.5	13.8-26.6	217,164
	10-14	256	18.7	13.9-24.6	173,540
	15-17	176	13.4	8.8-19.9	82,666
US* Current	0-4	14,179	5.3	4.7-6.0	587,913
	5-9	14,857	10.4	9.5-11.5	1,415,665
	10-14	17,489	11.4	10.5-12.4	1,341,722
	15-17	12,818	10.2	9.1-11.3	860,081
NYS Current	0-4	205	6.8	4.0-11.5	64,771
	5-9	222	14.2	9.5-20.7	158,588

[1] Public Health Information Group Center for Community Health New York State Department of Health https://www.health.ny.gov/statistics/ny_asthma/pdf/2013_asthma_surveillance_summary_report.pdf

[2] New York State Department of Health https://www.health.ny.gov/statistics/ny_asthma/asthmaprevchild13.htm * U.S. Total includes the 50 states plus the District of Columbia and excludes the two territories.

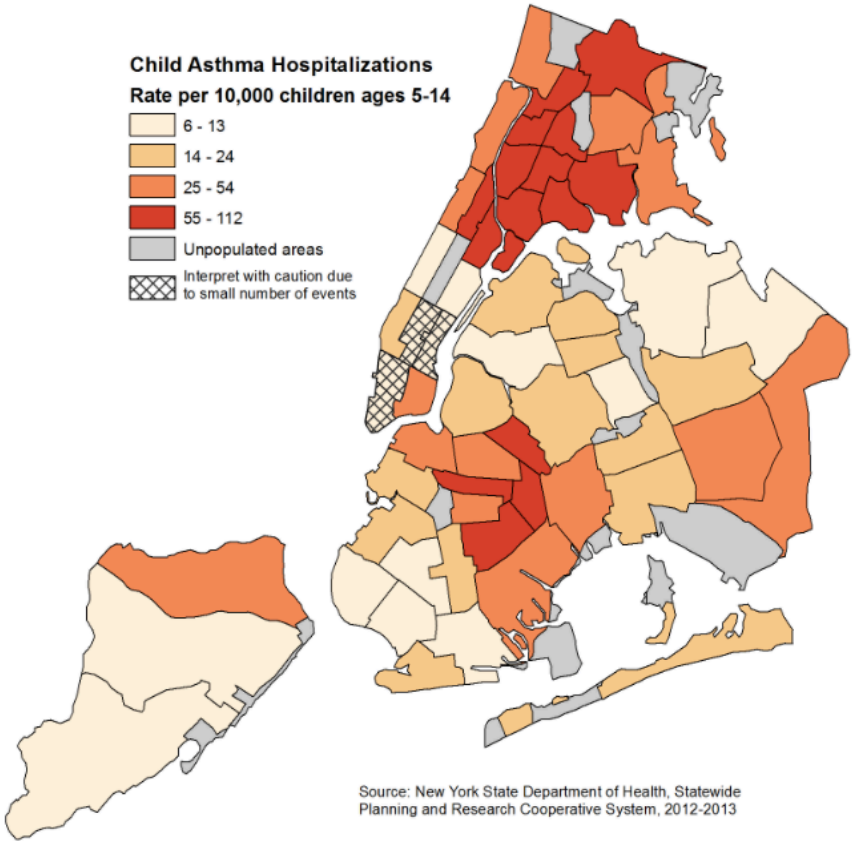
** CI denotes confidence interval.

*** "Other" race includes multi-races; "Other NH" race/ethnicity includes multi-races Non-Hispanic

	10-14	255	10.7	7.2-15.7	99,465
	15-17	175	4.5	2.3-8.7	27,660

Asthma Prevalence in NYC Children

Asthma prevalence in children is an issue of epidemic proportion. Notably, Manhattan sees some the highest rates of asthma in children. In Central Harlem/Morningside Heights and East Harlem, asthma related hospitalizations of children ages 5-14 rank in the top ten of neighborhoods in New York City.[3] In addition, Manhattan ranks second in all five boroughs regarding the most asthma related hospitalizations.[4] Senator Alcántara is passionate about protecting the health of New York's children and realizes that asthma hospitalizations are a tremendous issue in Manhattan. The following map depicts the hospitalization rates of children ages 5-14 in New York City.[5]



[3] NYC Environment and Health Data Portal *available at* http://a816-dohbesp.nyc.gov/IndicatorPublic/VisualizationData.aspx?id=85,4466a0,11,Summarize
[4] *Id.*
[5] New York City Community Health Profiles Atlas *available at* http://www1.nyc.gov/assets/doh/downloads/pdf/data/2015_CHP_Atlas.pdf

Hospitalizations are not the only metric in which Manhattan performs badly. When it comes to emergency department visit by children 5 to 14 years old, a couple of neighborhoods in Northern Manhattan have by far the highest incidence rates according to the NYC Department of Health and Mental Hygiene (DOHMH)[6].

Asthma Emergency Department Visits (Children 5 to 14 Yrs Old)

Geography	Number	Rate, per 10,000 residents
2014		
Citywide		
New York City	24,704	260.2
Borough		
Bronx	9,584	482.6
Manhattan	3,666	303.8
Brooklyn	7,101	222.1
Queens	3,668	145.9
Staten Island	685	116
Neighborhood (UHF 42)		
Manhattan: Central Harlem - Morningside Heights	1,093	631.8
Manhattan: East Harlem	812	631
Bronx: Hunts Point - Mott Haven	1,316	592.6
Bronx: High Bridge - Morrisania	1,902	580.7
Bronx: Crotona -Tremont	1,732	523.1
Bronx: Fordham - Bronx Pk	1,922	520.8

According to a Columbia University article, children living in low-income areas are three times as likely to suffer from lung related diseases, such as asthma. In addition, the article notes "high truck and traffic volume, industrial facilities and older heating systems can all contribute to increased levels of air pollution in impoverished neighborhoods."[7] Environmental issues concerning poor air quality directly correlate with the high rates of asthma in New York City's children. Children in Manhattan face these grave air quality issues on a daily basis and their health is at severe risk.

According to the Department of Health, several areas in Manhattan have the highest hospitalization rates. It is important to note that this data merely reflects those instances where asthma attacks were severe enough to put a child in the hospital. The amount of children suffering from asthma on a daily basis is much higher. Senator Alcántara recognizes the severity

[6] NYC Environment and Health Data Portal, *available at:* http://a816-dohbesp.nyc.gov/IndicatorPublic/VisualizationData.aspx?id=2046,4466a0,11,Summarize

[7] Jeremy Hinsdale, *By the Numbers: Air Quality and Pollution in New York City* June 2016 *available at* http://blogs.ei.columbia.edu/2016/06/06/air-quality-pollution-new-york-city/

of this issue in Manhattan and that is why the Senate passed a Manhattan specific study. The Department of Health must invoke a sense of urgency to determine why Manhattan children are suffering at disparate rates.

Additionally, the NYC Department of Health and Mental Hygiene deduced from a 2012 report that, "[i]n 2009, the rate of child asthma-related emergency department visits in the poorest neighborhoods was three times the rate in the wealthiest." The report also found that one in five Hispanic and one in six black children have been diagnosed with asthma. 13 percent of New York City's children under the age of 12 have asthma.[8] Finally, another NYC dataset shows that in the 31st district there were 19,835 emergency department visits in one year.[9] Senator Alcántara is directing the Department of Health to take a harder look at this issue and its disparate impact on low-income and minority New Yorkers.

Air Quality and its Impact on Asthma Rates

Indoor and outdoor air quality directly affects a child's likelihood to have asthma attacks. Asthma is a condition that occurs due to family history and the environment.[10] There is no definitive answer as to why one person develops asthma over another, however, there is an abundant amount of scientific information regarding the impacts of air quality and asthma attacks.[11] Notably, there is no cure for asthma, thus, once you have asthma, you have it for life.[12] According to the Environmental Protection Agency (EPA), there are various factors indoors and outdoors that can trigger asthma attacks.[13] Common indoor and outdoor triggers include outdoor air pollution from vehicles and industrial sites, chemical irritants, nitrogen dioxide, second-hand smoke, and dust mites.

According to EPA, "outdoor air pollution is caused by small particles and ground level ozone that comes from car exhaust, smoke, road dust and factory emissions….Particle pollution can be high any time of year and *are higher near busy roads* and where people burn wood."[14] (emphasis added) The Senator realizes that although asthma is an incurable, we can have cleaner air and more information available to parents to prevent traumatic asthma attacks from plaguing our children's lives. By proposing a Manhattan specific study that requires the Department of Health to publish a remedial plan, the Senator is directing the state's experts to proffer the solution to this issue. Once Manhattan has the information we need, the Senator can take next steps to help our children lead healthier lives.

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[8] *Id.*
[9] *See* Citizens Committee for Children http://data.cccnewyork.org/data/map/6/asthma-emergency-room-visits#6/a/4/9/8/a; *see also* http://data.cccnewyork.org/data/map/7/asthma-hospitalizations#7/a/4/11/8/a
[10] Environmental Protection Agency, Asthma *available at* https://www.epa.gov/asthma/what-asthma
[11] *Id.*
[12] *Id.*
[13] *Id.*
[14] Environmental Protection Agency, Asthma Triggers *available at* https://www.epa.gov/asthma/asthma-triggers-gain-control

Conclusion

Due to the tremendous scientific data showing that Manhattan has some of the worst asthma hospitalization rates in the city, state, and country, Senator Alcántara is dedicated to remedying the issue. Alcántara advocated passionately for S.5559 and it unanimously passed the NYS Senate. Now we are advocating for it in the Assembly to ensure it passes this session. The same-as bill, A.7214 sponsored by Assemblywoman Rebecca Seawright, was referred to Assembly Ways and Means committee[15] and will hopefully get to the floor soon. This legislation is the first step towards cleaning Manhattan's air and ensuring the health of our children.

[15] A 7214 Seawright