



# The Harmful Effects of Vaping Among Adolescents in Staten Island Community District I

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## Introduction

- Staten Island District 1:Grymes Hill, Mariners Harbor, Port Richmond, Stapleton, St George, West Brighton, and Westerleigh is among one of the communities with the highest rate of e-cigarette use among high school students in New York City.
- The highly addictive nature of e-cigarette use has become a community healthcare issue. While not containing tobacco, E-cigarettes contain a flavored nicotine which can be addictive and detrimental to adolescent brain development.
- E-cigarettes are also advertised using the same themes and tactics that have been shown to increase youth initiation of other tobacco products, including cigarettes. In 2021, about 7 in 10 middle school and high school students, which is more than 17.7 million youth, said they had seen e-cigarette advertising. (9)
- The increased inflammation of lung tissue by COVID-19 infection and the inflammation induced by vaping may worsen the likelihood of systemic inflammation, with an associated increase in symptoms like fever, myalgias, fatigue and headache. (8)

## Community Assessment and Analysis

- District 1:population of 181,484
- Within this population; Staten Island residents identify as 38% White, 22% Black, 9% Asian, 30% Latino, and 2% of residents listed as other. (7).
- 7% of this population is unemployed
- 21% live in poverty
- Top causes of premature death: Cancer (55%), Heart Disease (45%), Drug-related (14%), HIV (10%), and Diabetes Mellitus (9%). (7).
- 51% of St. George and Stapleton residents are rent burdened. Meaning that families are contributing more than 30% of their income just for housing needs. This financial burden can result in difficulty affording other necessities in one's life like food, clothing, transportation and health care. (7)

## Problem in the Community

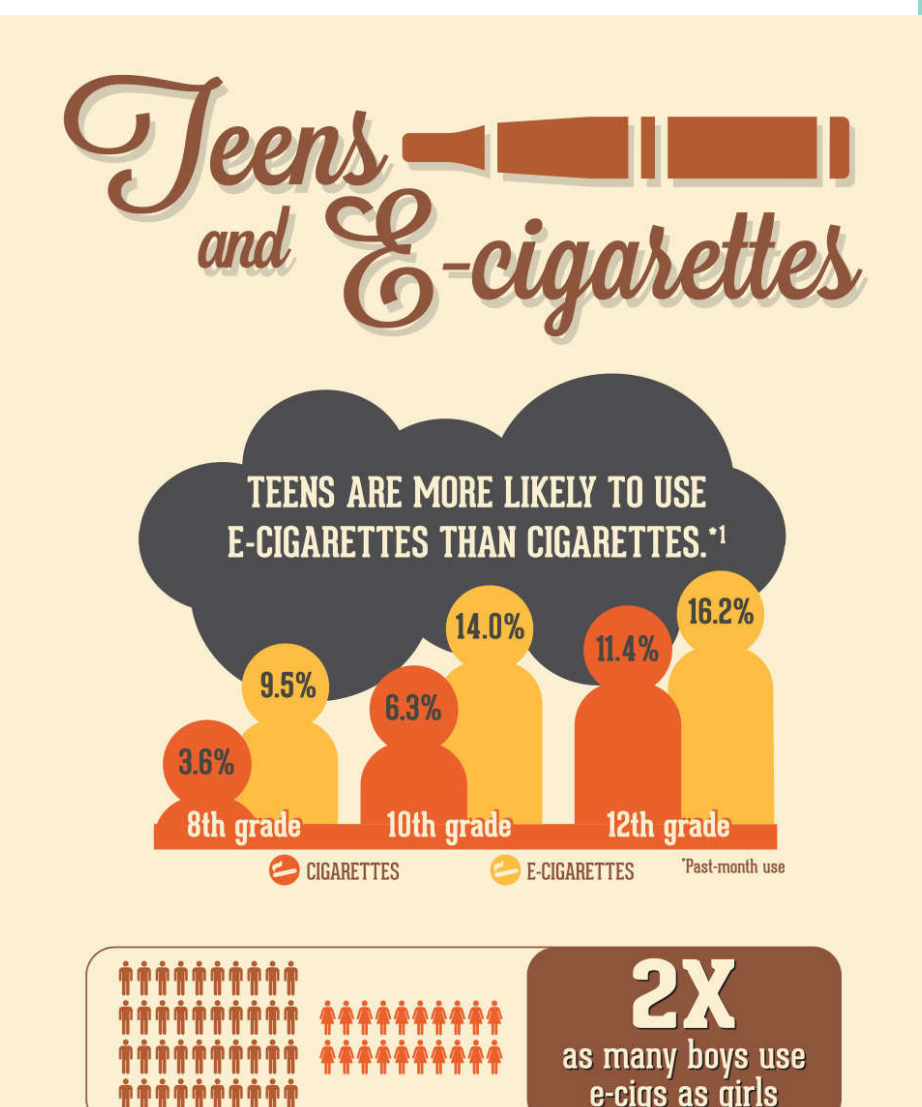
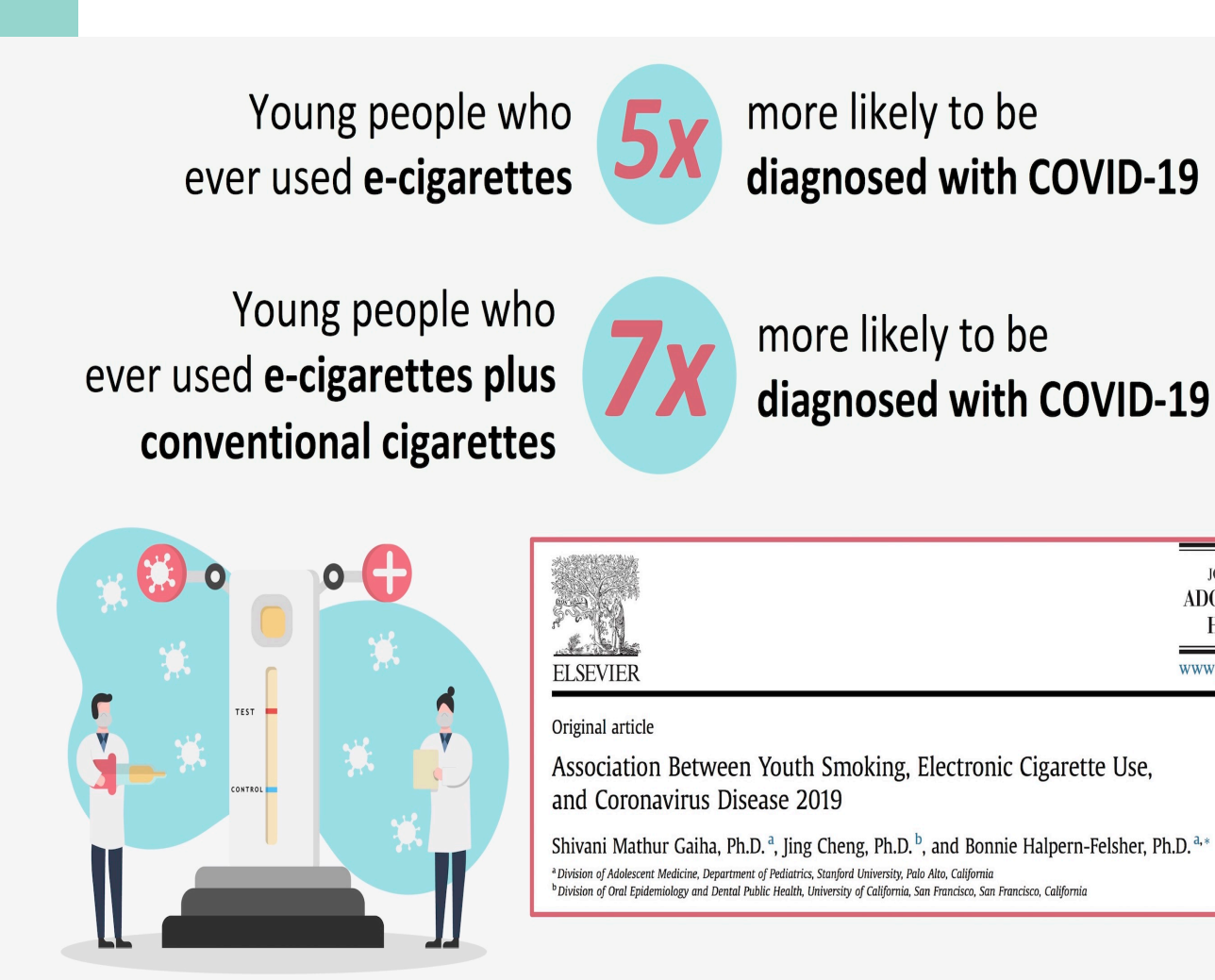
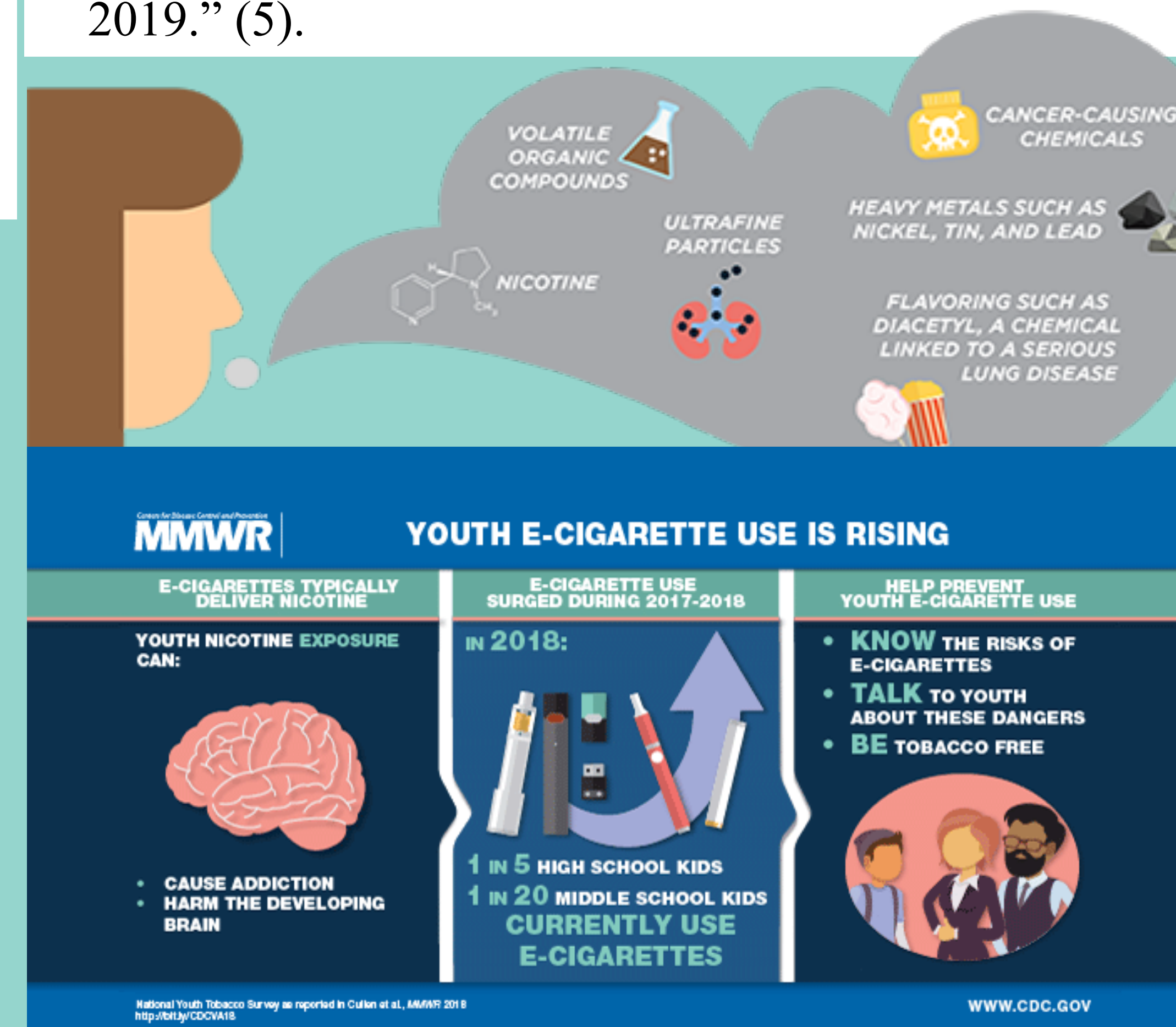
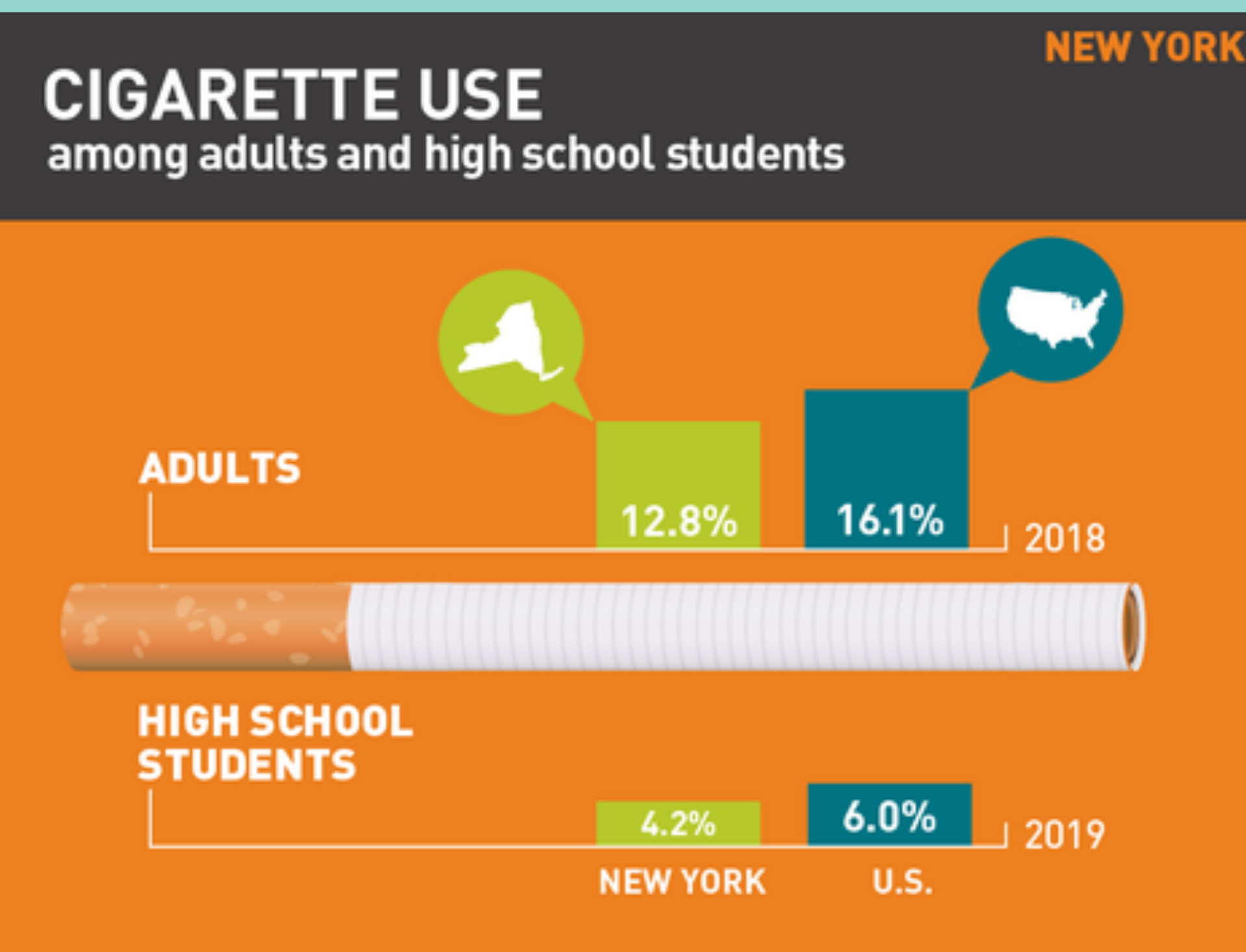
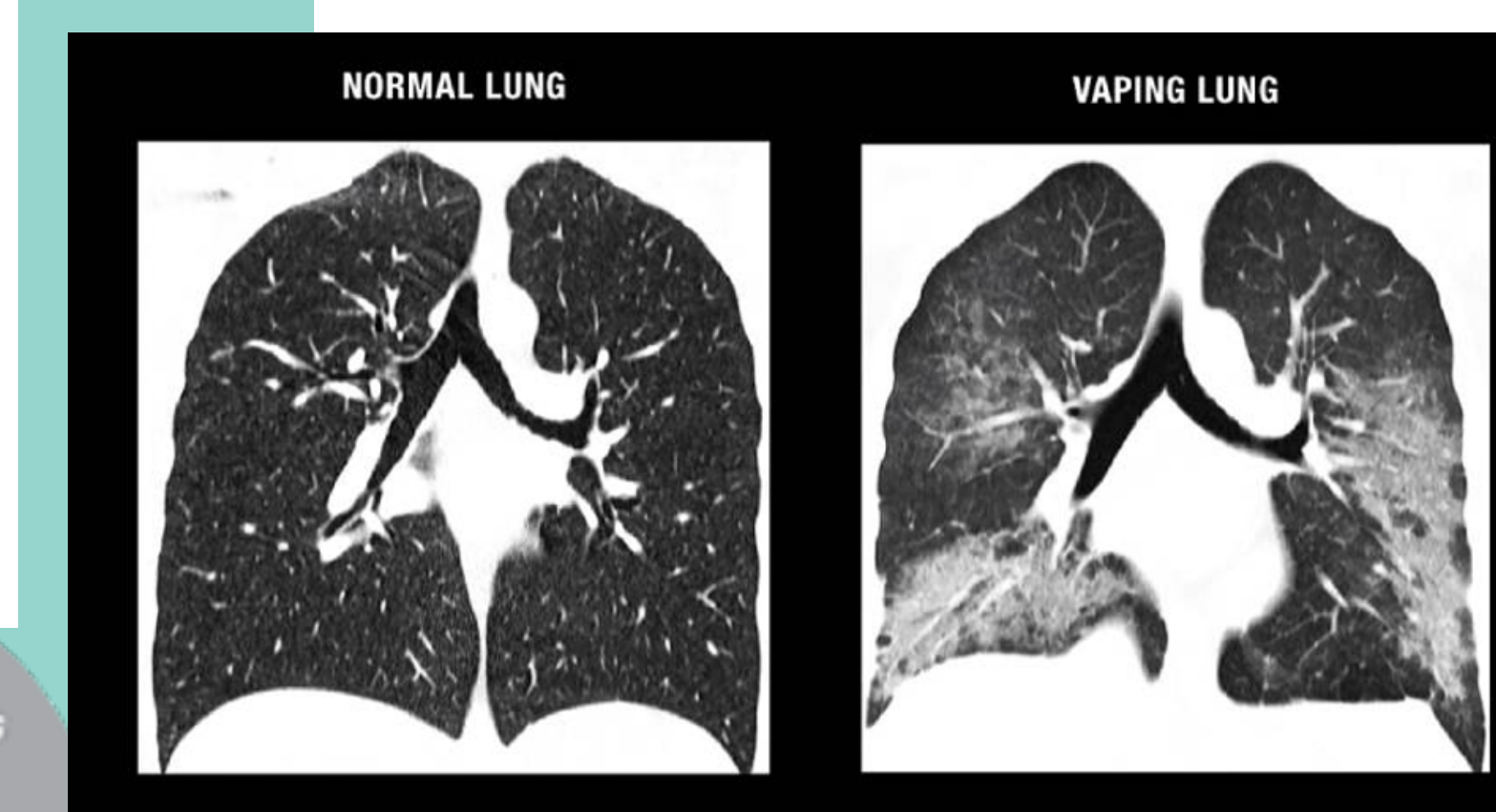
- Electronic cigarettes/vaping products have gained popularity nationally and globally.
- Vaping had been marketed as an alternative to cigarette smoking, and would have minimal damaging effects to the human body
- E-cigarettes deliver nicotine and other liquid mixtures such as propylene glycol, glycerin, and other chemicals that have flavors added making it more attractive to users. (1).
- Aerosol from heated e-liquids can also contain harmful chemicals like formaldehyde (cancer-causing chemical), benzene (cancer-causing chemical), diacetyl from flavoring (linked to lung disease), and heavy metals (such as nickel, tin, and lead). (2).
- Rise in e-cigarette use/vaping has led to a substantial increase of health issues, such as respiratory, cardiovascular, and immune disease.
- "...using e-cigarettes or other vaping devices. Symptoms included: cough, trouble breathing, or chest pain; nausea, vomiting, or diarrhea; fatigue, fever or weight loss." (3).
- Nicotine is the main chemical component of e-cigarettes and is highly addictive; this can be extremely detrimental to the developing adolescent brain. (4).
- E. cigarettes are the most used tobacco product among U.S. middle and high school students. (1).
- In a 2019 quantitative study, "...many participants mentioned that one of the reasons why people vape in their age group was because they felt cool using it among their peers." (1).
- 17.3% of adolescents were reported to use e-cigarettes, as opposed to 2.5% of adults using. (2).
- Staten Island has the highest rate of e-cigarette use among public high school students compared to the other boroughs in NY. On Staten Island, 19 percent of youth had used e-cigarettes in the last 30 days. Overall, 15.9 percent of youth in New York City had used e-cigarettes in the last 30 days: Bronx – 13.7%, Queens – 15%, Brooklyn – 16.2%, Manhattan – 17.4%. (6).
- Addiction in poorer demographics on Staten Island, such as St. George and Stapleton, may presumably lead to unnecessary spending on vaping products.
- In Italy the prevalence of current e-cigarette use increased from 8.4% in 2014 to 17.5% in 2018, in Georgia – from 5.7% in 2014 to 13.2% in 2017, while in Latvia it was 9.1% in 2011 and 18% in 2019." (5).

## Proposed Solution

- Educate different adolescent groups on the harmful effects of vaping.
- Inform teens on the different chemicals inside of vapes, and how detrimental they are to the growing body and brain.
- Created a free cessation program named **O2 for You(th)** which is aimed at helping adolescents who want to stop vaping and gain healthier habits.
- The goal is to help inform adolescents about the negative effects of vaping and how to combat addiction and/or peer pressure.

### Learning Objectives:

- In the beginning of the program, students will share their initial motive for starting e-cigarettes/vape products.
- Students participating in the program will identify three harmful effects of vaping by the end of the program.
- At the end of the program, students will be able to name smoking cessation resources in the community.



### Resources

1. Park E;Kwon M;Gaughan MR;Livingston JA;Chang YP; Listening to adolescents: Their perceptions and information sources about e-cigarettes [Internet]. Journal of pediatric nursing. U.S. National Library of Medicine; [cited 2022Mar28]. (Level 4)
2. The Health Department sounds the alarm on e-cigarette use ... [Internet]. [cited 2022Mar29]. (Level 7)
3. Health risks of e-cigarettes [Internet]. American Cancer Society. [cited 2022Mar28]. (Level 7)
4. Electronic cigarette use in youths: A position statement ... [Internet]. [cited 2022Mar29]. (Level 7)
5. New who report reveals that while smoking continues to decline among European adolescents, the use of electronic cigarettes by young people is on the rise [Internet]. World Health Organization. World Health Organization; 2020 [cited 2022Mar28]. (Level 7)
6. Schumer: Staten Island has highest rate of teen e-cig use in NYC, with use of E-cigs being fueled by 'juul' & other new e-cigs; new type is odorless, looks like a school supply & kids can charge it in classroom, then puff away; senator demands FDA do its job & regulate devices laced with 'mystery chemicals' now that 1 in 5 NY kids are hooked: U.S. senator Chuck Schumer of New York [Internet]. Press Release | Press Releases | Newsroom | U.S. Senator Chuck Schumer of New York. 2017 [cited 2022Mar28]. (Level 7)
7. Community health profile [Internet]. Scribd. Scribd; [cited 2022Apr15]. (Level 7)
8. MayoClinic. E-cigarette users who test positive for covid-19 are more likely to experience COVID-19 symptoms [Internet]. EurekAlert! [cited 2022Apr15]. (Level 7)
9. Quick facts on the risks of e-cigarettes for kids, teens, and young adults [Internet]. Centers for Disease Control and Prevention. Centers for Disease [Internet] Control and Prevention; 2022 [cited 2022Apr15]. (Level 7)