

## E-cigarette Use Amongst Adolescents in Staten Island Dina Arslani, Kristi Simonetti, Jessica Verga

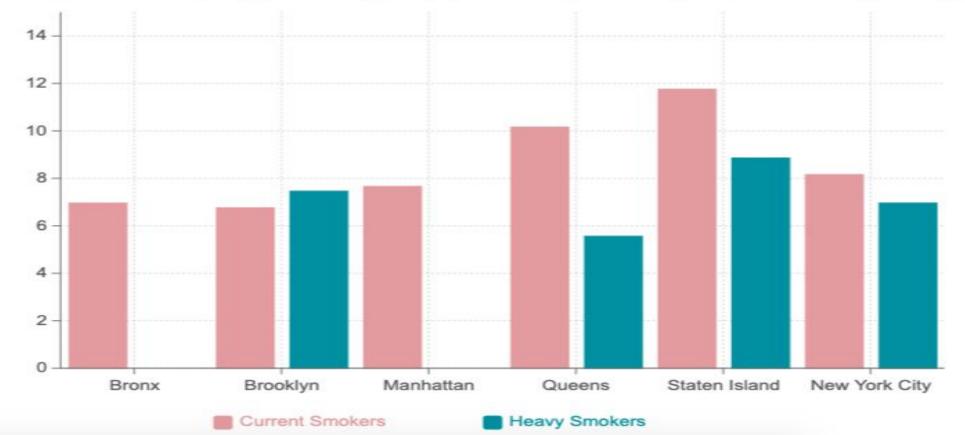
# Wagner College, Evelyn L. Spiro School of Nursing

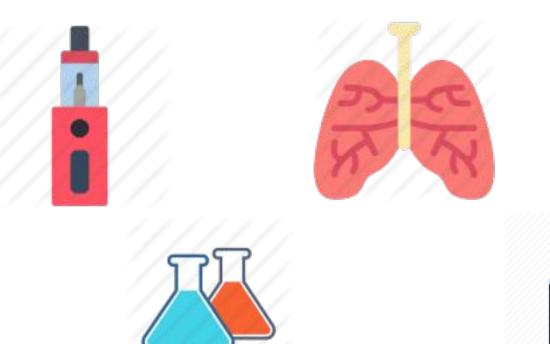


### Introduction

- How is vaping affecting the health of the adolescent population in the Staten Island community?
- "Staten Island has the highest rate of electronic cigarette (e-cigarette) use among high school students in New York City, according to recent data, and U.S. Sen. Charles Schumer is urging the Food and Drug Administration (FDA) to regulate the inhalable product" (2019).
- "The number of middle (ages 11-13) and high school students (ages 14-18) using e-cigarettes rose from 2.1 million in 2017 to 3.6 million in 2018—a difference of about 1.5 million youth"

#### SMOKING AMONGST New York HIGH SCHOOL STUDENTS











31.2%

product

### Problem in the Community

- The electronic cigarette (e- cigarettes/vaping products) has gained widespread popularity nationwide and has an increasingly negative effect on public health. These devices have acquired recognition based on the belief that it is a safe and viable potential smoking cessation aid (5).
- This growing epidemic has attributed to health issues including, but not limited to, respiratory, cardiovascular, and immune system diseases. Ongoing studies continue to gather data investigating the effects of vaping on the vital organs.
- "People using vape products have reported a variety of symptoms, developing over a period of days to weeks, including: pulmonary symptoms (cough, shortness of breath, chest pain), gastrointestinal symptoms (nausea, vomiting, diarrhea), fatigue, fever, headache, and weight loss" (3).
- One of the substances reported to have the most harmful effect on public health is vitamin E acetate. This substance is found in almost all cannabis- containing vaping products, and "is now the key focus of the Department of Health's investigation of potential causes of vaping associated pulmonary illnesses" (3).
- The use of e-cigarette is increasing not only in the U.S. but worldwide. The European Region has the highest rated tobacco use in the world, "with an estimated 209 million people smoking" (90% of lung cancers can be avoided by eliminating tobacco use, new WHO report reveals, 2019). The United Kingdom along with France and Belgium have the highest levels of e-cigarette use (8).
- As of February 18, 2020, a total of 2,807 hospitalized EVALI cases or deaths have been reported to CDC from all 50 states, the District of Columbia, and two U.S. territories (Puerto Rico and U.S. Virgin Islands). Sixty-eight deaths have been confirmed in 29 states and the District of Columbia. (7).
- In a 2017 survey of 15 to 17- year- old adolescents in New York State currently using electronic vapor products, which 19% of the adolescents said that flavors were the reason that they first tried an e-cigarette and 27% said flavors were the reason for maintaining use (6).

HIGH SCHOOL STUDENTS

TOBACCO PRODUCT USE AMONG

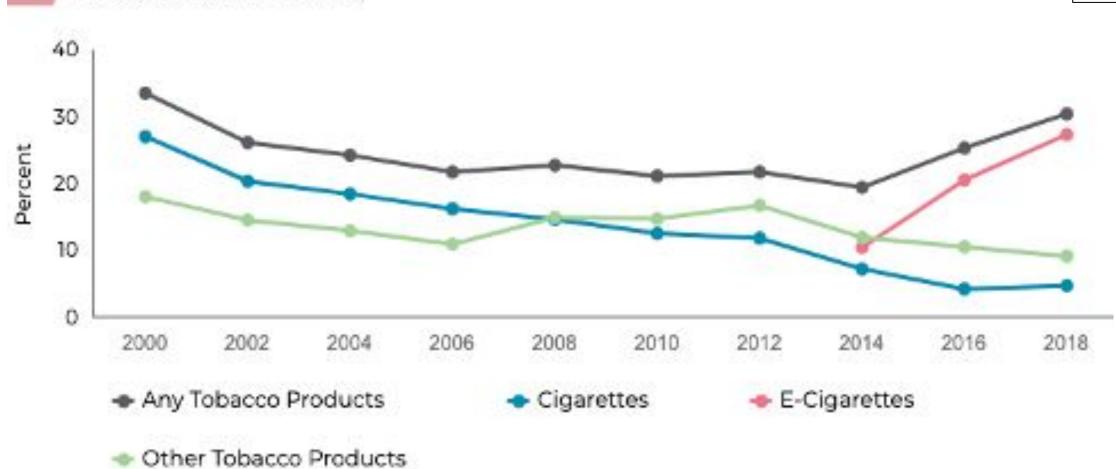
tobacco

#### The persuasive marketing tools these companies use in promoting appealing flavors are directed towards the adolescent and young adults contributing to the outbreak of vaping in this age bracket.

- The use of e-cigarettes, specifically in youth, can lead to nicotine dependence, which is a major concern in the development of the adolescent brain.
- Using nicotine in adolescence can harm the parts of the brain that control attention, learning, mood, and impulse control.
- Adolescents who use e-cigarette are more likely to engage in risky behavior. The correlation between adolescent e-cigarette use and other substances such as alcohol, marijuana, amphetamines increase with the use of e-cigarettes (11).
- Of the 5 boroughs, Staten Island is known as vaping central. Vaping has dominated the adolescent population island-wide due to its convenience, accessibility, and its appealing nature. Staten Island has the highest rate of electronic cigarette (e-cigarette) use among high school students in New York City, about 1 in 5 high school students are using e-cigarettes
- With the continuing rise of e-cigarettes, Staten Island faces an increase in use among adolescents, especially while in school.
- In September of 2019, Governor Andrew Cuomo has implemented "emergency executive action to ban the sale of flavored electronic cigarettes in New York State" (6). A contributing factor for the easy access of e-cigarettes is the fact store owners allow adolescents (under twenty-one years) to purchase the e-cigarette. The governor has also stated any retailer selling vaping products to minors will now face criminal nenalties along with civil nenalties

### **VAPING Abnormal Breath** Popcorn Lung Very Hard to Quit Induced Lung Injury **Respiratory System**

#### Trends in Any Tobacco Product Use among High School Students in NYS



### Proposed Solution 1

- A proposed solution for the cessation of e-cigarettes is to educate and change the false narratives that e-cigarettes are a safe and healthier alternative to smoking.
- The goal is to spread awareness through television, radios, posters, and social media. By increasing the awareness of the harmful effects of e-cigarettes, we can challenge the advertisements seen on social media.
- This proposed solution is based on the theorist, Everette Rogers, and his work called, Diffusion of Innovations Theory. The diffusions of theory will be used as a guide to help us promote, spread and increase our social media page.

Learning objective goals are:

- 1. To decrease the use of e-cigarettes amongst the adolescent
- **2.** To recognize the adverse effects of e-cigarette use.
- **3.** To use social media as an advantage to increase public health.
- This method can be effective by influencing adolescents and young adults to steer away from using e-cigarettes which may increase public health in the future.

#### **HEALTHY**

#### NOT



### Conclusion

- The new course of e-cigarettes swept in and changed the dynamic of what we thought would have been the end of an era of tobacco smokers.
- Instead, we see a rise in nicotine addiction amongst the adolescent population due to the increasing demand for e-cigarettes.
- To reduce this up rise in popularity, a proposed solution is to create a social media platform to provide evidence and risk factors about e-cigarettes.
- This method can be effective by influencing adolescents and young adults to steer away from using e-cigarettes which may increase public health in the future.
- This solution will help the new generation of Americans who are at risk of nicotine addiction.

#### References

- 1. Baker, T. (2016). Retrieved from https://rumcsi.org/Uploads/Public/Documents/FinalCSP.pdf Level V 2. Bascome, E. Staten Island high school students using e-cigs at high rate, data shows. 2017, November 22). Retrieved from https://www.silive.com/news/2017/11/schumer\_calls\_on\_fda\_for\_e-cig.html. Level V
  Department of Health.New York State Department of Health Announces Update on Investigation into Vaping-Associated Pulmonary Illnesses Retrieved November 7, 2019, from
- DiNapoli, T.P., Bleiwas, K.B. An Economic Snapshot of Staten Island. (2018, September). Retrieved from Rpt7-2019.pdf Level IV
- Eltorai, A. E. M., Choi, A. R., & Eltorai, A. S. Impact of Electronic Cigarettes on Various Organ Systems. Respiratory Care, 64(3), 328–336. (2019).
- https://doi.org/10.4187/respcare.06300 Level II
  Governor Cuomo Announces Emergency Executive Action to Ban the Sale of Flavored E-Cigarettes. (2019, September 18). Retrieved from
- https://www.governor.ny.gov/news/governor-cuomo-announces-emergency-executive-action-ban-sale-flavored-e-cigarettes. Level IV Outbreak of Lung Injury Associated with the Use of E-Cigarette, or Vaping, Products. (2019, November 8). Retrieved from Shapiro, H. No Fire, No Smoke: The Global State of Tobacco Harm Reduction 2018. 2018). Retrieved from <a href="https://gsthr.org/downloads/GSTHR Report/GSTHR.pdf">https://gsthr.org/downloads/GSTHR Report/GSTHR.pdf</a> Level IV
   Staten Island Population 2019. (n.d.). Retrieved from <a href="https://gsthr.org/downloads/GSTHR Report/GSTHR.pdf">https://gsthr.org/downloads/GSTHR Report/GSTHR.pdf</a> Level IV
- U.S. Census Bureau QuickFacts: Richmond County (Staten Island Borough), New York. (n.d.). Retrieved from https://www.census.gov/quickfacts/fact/table/richmondcountystatenislandboroughnewyork/PST045218 Walley, S. C., Wilson, K. M., Winickoff, J. P., & Groner, J. A Public Health Crisis: Electronic Cigarettes, Vape, and JUUL. Pediatrics, 143(6), 1–11. (2019).
- 12. Youth and Tobacco Use. (2019, February 28). Retrieved from https://www.cdc.gov/tobacco/data\_statistics/fact\_sheets/youth\_data/tobacco\_use/index.htm. Level IV



Analysiand community is composed of predominantly whites, being 75.2% of the total population (10).

- The top two demographics being of Italian and Irish descent (9).
- Italian Americans represent one of the largest influxes in ethnicity throughout history.
- The rate of employment has risen by 13% since 2017 in Staten Island in the following work areas: construction, social assistance, leisure and hospitality, and health care (4).
- About 70% of the population living on the island are homeowners, the highest rate in comparison to all five boroughs (4).
- The major health issues that are currently plaguing the Staten Island community are obesity, poor air quality, smoking, unmet mental health needs, and drug overdose deaths (1). Smoking comes in third place.
- Deaths from heart disease and chronic lower respiratory disease represent the highest in Staten Island when compared to the other four boroughs (1).