How can smoking and vaping affect patients with COVID-19?

Smoking & Vaping during COVID-19

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NBNA No Tobacco Day 2020
Introduction of speakers

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Service Unit Manager-Chronic Conditions Management
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Chair, NBNA Substance Use Disorders Committee
MSN & PM Coordinator, Stockton University

Moderator: Selena A Gilles, DNP, ANP-BC, CNEcl, CCRN
Clinical Assistant Professor, New York University
Kimberly Scott, RN, MSN, MBA

➢ Registered Nurse, San Francisco Bay Area.
➢ MSN in nursing & business administration
➢ Graduate of the National Speaker’s Academy of Northern California
➢ Professional Speaker on:
  ○ nursing and health care professions
  ○ motivation
  ○ health & wellness
  ○ diversity & inclusion
  ○ nursing leadership.
➢ Nursing advocate, motivator, and connector, coach.
➢ Community = Common Unity.
➢ Past President of the Bay Area Black Nurses Association, Inc.
➢ Board member, NBNA Board of Directors.
➢ Conference Chair, Florence Stroud Black History Month Nursing Conference
➢ Proud mother of Sydney Beals
Kamila Barnes, DNP, RN, FNP-C
Second Vice President & Social Media Chair
Greater NYC - Black Nurses Association, Inc.

Dr. Barnes has been a RN for 13 years and is a Founder/Owner of Barnes Health Affiliates, LLC at www.bhapro.com She completed her Doctorate (DNP) and Masters (MS) degrees at the University of Rochester, School of Nursing. She also graduated from Binghamton University with a Bachelors of Science in Nursing and minor in Spanish. She is currently an Assistant Professor of Nursing at Long Island University - Brooklyn and a clinician at Northwell Health.
Betty J. Braxter, PhD, RN, CNM, CTTS

- Associate Dean of Undergraduate Program and Associate Professor, University of Pittsburgh, School of Nursing
- Certified Nurse Midwife, American College of Nurse Midwifery
- BSN: Louisiana State University Medical School
- CNM: University of Mississippi Medical School
- MS: Texas Woman’s University, Dallas
- PhD: University of Pittsburgh
- Research focus tobacco use among childbearing age women includes electronic cigarettes
- Certified Tobacco Training Specialists, Duquesne University
- Member of Pittsburgh Black Nurses in Action (PBNA) Pittsburgh’s National Black Nurses Association Chapter
- Member of the National Black Nurses Association Substance Use Disorder Committee
- Member and past Co-Chair of the National Black Nurses Association Women’s Health Committee
Larider Ruffin, DNP, APN, ANP-BC, A-GNP, CRNP, CTTS

- Chair, National Black Nurses Association Substance Use Disorders Committee
- Past President, Northern NJ Black Nurses Association
- Graduate Nursing Coordinator, Stockton University, Galloway, NJ
- Assistant Professor of Nursing, Stockton University, Galloway
- President, Reverence Discount Pharmacy, Pleasantville NJ
- Chairman & CEO, RUFFIN ASSOCIATES HEALTHY HOUSECALLS LLC
- DNP: Wilmington University, New Castle, DE
- MSN: University of Medicine & Dentistry of NJ, Now Rutgers University
- BSN: Rutgers University, Newark, NJ
- Certified Tobacco Treatment Specialist in community settings in Southern NJ
- Adult & Gerontology Primary Care Nurse Practitioner
Presentation Outline

- Smoking & COVID-19 Demographic Data
  - Smoking Data
  - COVID-19 Data

- Racial Disparities With COVID-19
  - Disproportionate burden on African-Americans

- Discuss Electronic Cigarette Use & COVID-19
  - Vaping & Health Concerns
  - Warnings from Health Experts

- The effects of Smoking on COVID-19
  - Smoking & the Respiratory System
  - Expert advice regarding smoking and COVID-19
Question 1

Select all that apply

- I am a nurse
- I am not a nurse, but I am a healthcare professional
- I am not a nurse, I am not a healthcare professional
- I am a member of NBNA
- There is a clear link between smoking/vaping and COVID-19
Smoking & COVID-19 Demographic Data
Ms. Scott
WORLD NO TOBACCO DAY

● World No Tobacco Day (WNTD)

● Created by the World Health Organization (WHO)

● Informs the public regarding the dangers of the tobacco epidemic, and what the people around the world can do to claim their right to healthy living, and to protect future generations

● NBNA adopted WNTD as NBNA no Tobacco day in 2017
The secret’s out.

If your product killed 8 million people each year, you’d also target a new generation.

World No Tobacco Day

31 May 2020
One person dies every 4.5 seconds from a tobacco-related disease (13 people per minute)

Around 80% of the world's 1.1 billion smokers are between 25-64, live in low- and middle-income countries, have disabilities, low level of education, underinsured, LBGTQ, Native Indians/Alaskan Natives.

Tobacco kills more than 8 million people each year. More than 7 million of those deaths are the result of direct tobacco use.

Between 1990 and 2009 cigarette consumption decreased by 26% in Western Europe, but increased by 57% in Africa and Middle East
SMOKING DATA

- **World No Tobacco Day** is held every year on May 31. This year’s campaign is based on banning tobacco advertising, promotion and sponsorship.

- The annual death toll from tobacco could rise to more than **8m** by 2030 unless action is taken.

- There are **1bn** smokers worldwide.

- **80%** live in low and middle-income countries.

- Tobacco kills almost **6m** people every year - more than **5m** from smoking and more than **600,000** from second-hand smoke.

- There are **more than 1,000 chemicals** in tobacco smoke. At least **250** are harmful and more than **50** are known to cause cancer.

- The number of people protected from second-hand smoke increased from **354m** in 2008 to **739m** in 2010.

- **4 in 10 children** have at least one smoking parent.

**Sources:** World Health Organization, Action on Smoking and Health, University of Cambridge, HMRC, Tobacco Manufacturers’ Association, Office for National Statistics.
SMOKING DATA

- Second-hand smoke causes more than 1.2 million premature deaths per year, 65K children die each year from illnesses attributable to second-hand smoke.
- 60% of people intent or have a desire to quit
- Smokeless Tobacco is highly addictive and causes oral cancer.
- Tobacco use contributes to poverty by diverting household spending from basic needs such as food and shelter to tobacco. This spending behavior is difficult to curb because tobacco is so addictive.
- Current smokers highest in US states-LA, KY, and WV (22.9-26%)
- Smokeless tobacco contains nicotine, which is highly addictive.
Corona Viruses are a group of viruses that have been known to affect animals, however some in humans MERS, SARS.

Novel Corona Virus, first seen in Wuhan China December 31, 2019. Named SARS Cov-2 is the virus that causes COVID-19 named by the international task force.

Currently there are over >6 M confirmed Covid-19 cases world wide

>369K total deaths in 188 countries
COVID-19 Data

- US-1.6 M total confirmed cases
- US is 4% of the world’s population, however 30% of total deaths- highest in NY
- Virus spread person to person by respiratory droplets from infected person’s sneeze or cough
- Incubation period 2-14 days
- Virus can also spread when touching contaminated surfaces
- 22% of cases of pediatric patients made up of infants, children, and adolescents <18 years of age, called multisystem inflammatory disorder.
COVID-19 Data

- It’s a new virus, so learning something everyday
- There isn’t a vaccine yet, however scientist are predicting one 12-18 months
Racial Health Disparities of COVID-19

Dr. Barnes
Racial Disparities with COVID-19

What are Health Disparities?

“Health disparities are differences in health among groups of people. These differences can include: how frequently a disease affects a group; how many people get sick; or how often the disease causes death.”

Who are affected?

- Racial and Ethnic Populations
- Rural Residents
- Women, Children and Senior Citizens
- People with Disabilities
- Lower Socioeconomic Classes (low income/poor)
- People of Various Religious Groups
- Lesbian, Gay, Bisexual and Transgender Individuals; and
- Individuals and Families Experiencing Mental Illness

(Office of Minority Health, 2018)
Racial/Ethnic Health Disparities

- Individual Behavior
- Allocation of government funds
- Socio-Economic status
- Educational Disadvantages
- Healthcare access and quality
- Biology
- Racism and discrimination
- Environment
COVID-19 Disparities

Study of 1,500 patients in 14 states
90% of people in the hospital with COVID-19 had at least one underlying health condition
50% had high blood pressure
48% were obese
35% had chronic lung disease
28% had diabetes and cardiovascular disease

Mortality rate of Blacks is 3.57 times the mortality rate of Whites
New York City COVID-19 Data

Case, Hospitalization and Death Rates

Rate per 100,000 people (age-adjusted)

<table>
<thead>
<tr>
<th>View by:</th>
<th>Age</th>
<th>Sex</th>
<th>Race/ethnicity</th>
<th>Poverty</th>
<th>Borough</th>
</tr>
</thead>
</table>

Rate per 100,000 people (age-adjusted)

Cases | Hospitalizations | Deaths

Got the data • Created with Datawrapper

Data on people identified as other categories, including Native American/Alaska Native or multiracial, are not provided here. The Hispanic/Latino category includes people of any race. Race and ethnicity information is most complete for people who are hospitalized or have died. There are much less demographic data currently available for non-hospitalized cases.
Michigan COVID-19 Data

Michigan COVID-19 cases by race

- Overall percentage
- Percentage of deceased

- Caucasian 51%
- Black or African American 40%
- Asian/Pacific Islander 1%
- American Indian or Alaska Native < 1%
- Other 2%
- Multiple Races 2%
- Unknown 4%

Michigan Census: Blacks or African Americans account for 14.1% of state population.
COVID-19 Disparities

What are the causes of COVID mortality occurring at a disproportionate rate amongst Blacks and Hispanics?

- Lack of health care services and treatment follow up
- Denial of health care services
- Lack of social distancing
- Essential service jobs that are not remote
- Living conditions - crowded, multi-family homes, urban settings
- Multiple co-morbidities
“Social distancing is a privilege”

“What’s the matter?
It’s the same distance!”
COVID-19 Call for Action

- Collect data about disparities
- Collect data about sequelae from COVID
- Contact tracers programming
- Add testing sites to communities of color that do not require transportation
- Add on sites to deliver COVID related health care
- Provide temporary housing to enable social distancing during recovery
- Full insurance coverage of COVID related treatments and follow up; make funding available for the uninsured
Question 2

- I currently smoke
- I currently vape
- I have a close family member / friend who smoke or vape
- I used to smoke / vape, but I quit!
Electronic Cigarette Use and Coronavirus Disease 2019 (COVID-19)

Dr. Braxter
Electronic Nicotine Delivery Systems (ENDS)

The purpose

- The Purpose of this presentation is to provide an overview on the possible link between use of electronic cigarettes referred to as vaping and complications associated with the coronavirus disease 2019 (COVID-19).

- Electronic cigarettes are known as personal vaporizers, vape pens, e-cigs, e-hookahs, and vaping devices.

- Operate by heating a liquid that produces aerosols inhaled into the lungs.

- Popular among adolescents and youth given varied flavorings were available (e.g., candy, peppermint, bubble gum).
Vaping and Health Concerns

- Airway centered pneumonitis
- Alveolar damage
- Chronic bronchitis
- COPD
- Nicotine is very addictive
- Bronchiolitis Obliterans
- E-cigarette or Vaping Product Use Associated with Lung Injury EVALI
Coronavirus Disease 2019

- Betacoronavirus with its origin linked to bats
- Similar to MERS-COV and SARS-COV
- Respiratory droplets released during coughing and sneezing landing on the mouth and nares
- Virus is easily spread when an infected individual is in close contact with others (i.e., less than 6 ft.)
Vaping and COVID-19

- Vaping can cause EVALI (e-cigarette or vaping associated lung injury)
  - Acute inflammation
  - Damaged air sacs reducing oxygenation
  - Potential sites for development of pneumonia.

- Lung changes may lead to COPD that worsens with COVID-19.

- Vaping and smoking may make individuals more susceptible to being infected and hospitalized.
Warnings from Health Experts

- HEALTH EXPERTS WARN SMOKERS AND VAPERS AT GREATER RISK
- The coronavirus attacks the lungs, and behaviors that harm the lungs put individuals at greater risk. The harmful impact of smoking on the lungs is well documented, and there is growing evidence that vaping (use of e-cigarettes) can harm lung health as well:

- There is conclusive evidence that smoking increases susceptibility for respiratory infections, weakens the immune system and is a major cause of underlying health conditions that increase risk for COVID-19, including chronic obstructive pulmonary disease (COPD), other lung diseases, heart disease and diabetes.

- There is also growing evidence that vaping can also harm lung health. Dr. Nora Volkow, director of the National Institute on Drug Abuse, has stated that “emerging evidence suggests that exposure to aerosols from e-cigarettes harms the cells of the lung and diminishes the ability to respond to infection.”

- For these reasons, there is mounting concern among leading public health organizations and medical experts that people who smoke or vape are at greater risk for serious complications from COVID-19. Adding to these concerns is the fact that youth e-cigarette use has skyrocketed to record highs in the U.S. More than 5.3 million U.S. kids – including over 1 in 4 high school students – now use e-cigarettes.
The Effects of Smoking on COVID-19

Dr. Ruffin

“COVID-19 is a lung infection that aggressively attacks the lungs and even leaves lung cells and tissue dead. While it’s important to prevent getting COVID-19 in the first place, it’s also essential that we do all we can to keep our lungs healthy to avoid the worst effects of the disease.”

Dr. Albert Rizzo
CMO, American Lung Association
Smokers contract more respiratory ailments, including colds (commonly rhinoviruses, but also coronaviruses) than non-smokers.
- Smokers show double the influenza rate and increased rates of bacterial pneumonia and TB.
- The damage caused to the lungs by smoking makes patients more susceptible to pulmonary infections, both bacterial and viral.
- Smokers are 34% more likely than non-smokers to contract the flu.
- Evidence showed that smoking was consistently associated with a higher risk of hospital admissions after influenza infection.
- Smoking is the primary etiological factor behind chronic obstructive pulmonary disease (COPD) in the developed world, but environmental pollution and degrading air quality are also responsible in developing countries.
- Smoking is now the fourth leading cause of death in the world…
  - Brake et al., 2020
- Active smoking is significantly associated with the risk of severe COVID-19.
- Evidence suggests that smokers are more vulnerable to lung infection, and COVID-19 is no exception.
  - Fei R. Guo, 2020
SAY NO TO TOBACCO IN THE TIME OF COVID-19... AND ALWAYS!

Smoking makes you more vulnerable to COVID-19.

- Increased risk of serious illness due to unhealthy lungs
- Higher chance of transmission from hand to mouth

So, stop smoking and give your lungs a chance!

PRELIMINARY EVIDENCE FOR COVID-19 REVEALS TOBACCO USERS AND MEN EXPERIENCE A MORE SEVERE PROGRESSION OF THE DISEASE (INCLUDING DEATH).

- Nearly 27% of the population in the WHO European Region use tobacco.
- More than 35% of men in the Region are tobacco users.

#COVID19
March 2020
SMOKING VAPING & COVID-19

During the COVID-19 pandemic, it is vital that people are aware of the serious potential risks associated with smoking or vaping and COVID-19. We must act now to spread the word.

Smoking or vaping may put people into a higher-risk category.
Smoking or vaping may increase the chances that a person will be infected by COVID-19 and need hospitalization and advanced life support to survive.

Smoking or vaping could make COVID-19 infections worse.
If a person who smokes catches COVID-19, they are more likely to develop a severe case of the virus than those with no smoking history. Flavored tobacco products could make lung infections like COVID-19 worse.

Smoking and vaping damage lungs and weaken the body’s immune system.
Smoking and vaping damage the lungs, allowing viruses to more easily attach to lung cells and enter the lungs.

Smoking and vaping may increase the spread of COVID-19.
The virus is easily spread from hand-to-mouth contact, common when using smoking and vaping products. Social sharing of smoking and vaping products can also facilitate the spread of the virus.

Special Collection
Coronavirus (COVID-19): effective options for quitting smoking during the pandemic
20 MIN
Blood pressure and pulse return to normal.

24 HRS
Risk of heart attack starts to drop.

14 DAYS
Circulation increases. Airways in lungs relax.

1-9 MTHS
Less coughing. Lungs start to work better.

1 YR
Added risk of smoking-related heart disease or stroke is cut in half.

5 YRS
Risk of stroke is same as someone who never smoked.

10 YRS
Risk of dying from lung cancer is much lower.

QUIT FOR COVID
Select all that apply

- This presentation helps me understand smoking, vaping & COVID-19
- As a result of this presentation, I will encourage family and friends to quit smoking & Vaping
- I enjoy the presentation
- I would like to see similar webinars more frequently from NBNA committees
References


References

Michigan coronavirus data: Tracking case count, cases by county, deaths, cases by age, tests

Office of Minority Health and Health Disparities Prevention (OMH-HDP)
https://www.health.ny.gov/community/minority/


The biological embedding of social differences in ageing trajectories https://jech.bmj.com/content/70/2/111

Yale Medicine. EVALI- E-cigarette or Vaping Product use Associated Lung Injury
https://www.yalemedicine.org/conditions/evali/