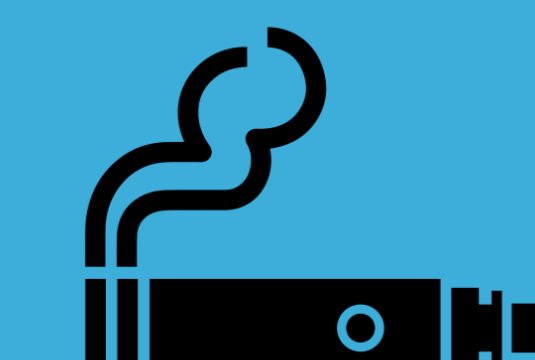


# Nicotine Vaping For Tobacco Smokers With Severe Mental Illness: Tobacco Harm Reduction or More Addiction?



Amin Rajwani BSc Pharm., MSW, Dactin Tran BSc Pharm., Chelsea Ford-Sahibzada BHSc, Dr. Margaret Oakander BSc(Hons) MD FRCP(C)

## Tobacco Harms in Patients with Severe Mental Illness (SMI)

- Patients with SMI have poor health and reduced life expectancy by 15 to 20 years compared to the general population
  - Smoking tobacco is a major cause of this health gap



## Prevalence of Tobacco Use in Patients with SMI

- Patients with SMI have high tobacco smoking rates
  - In Australia, it is estimated that 70% of patients with schizophrenia and 61% of patients with bipolar disorder are tobacco smokers
- There continues to be a high prevalence of smoking in patients with SMI despite a significant decline in the general population
- Patients with SMI are as motivated as others to quit tobacco use. Over half of the patients with SMI want to quit smoking tobacco and have made repeated attempts to do so
- Health care practitioners often underestimate the percentage of patients with SMI that want to quit smoking tobacco

(Sharma et al, 2017)



## Barriers to Tobacco Smoking Cessation in SMI

- Heavier smoking and more severe nicotine dependence
- Reinforcement of smoking behavior
  - increased social interaction
  - reduced social isolation
- Use of nicotine to self medicate
  - Stimulant effects improves attention and working memory
  - Decreases sedation
  - Attenuate lack of motivation and blunt affect
- Patients require multiple attempts to reduce and quit tobacco but Provincial Health Plans provide limited coverage of nicotine replacement therapy and tobacco cessation medications

## E-cigarette or Vaping Product use-Associated Lung Injury (EVALI)

### CDC on cases of EVALI outbreak

- Majority of EVALI cases due to Tetrahydrocannabinol (THC)-containing e-cigarette or vaping products obtained from the street and informal sources
- Vitamin E acetate strongly linked to EVALI outbreak
  - Found in patient lung fluid samples
  - Not found in lung fluid of patients that do not have EVALI
- Cannot rule out possible contribution of other chemicals of concern

### Common symptoms in hospitalized patients

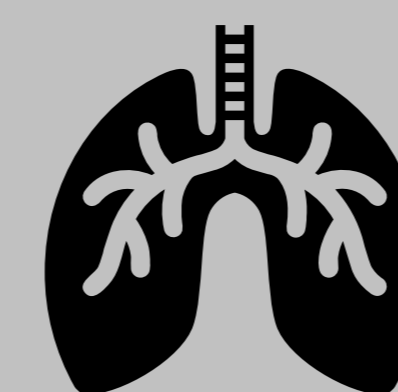
- Shortness of breath(85%), cough(85%), nausea(66%), tachycardia(63%), vomiting(61%), hypoxia(58 %), chest pain(52%), diarrhea(44%), tachypnea(43%), pleuritic chest pain(36%), abdominal pain(34%), fever (33%), hemoptysis (8%). Rarely GI symptoms without respiratory symptoms (Blount et al, 2019)

### CDC notes cases of EVALI are on the decline since Sept. 2019

- Increased awareness of vaping THC/Cannabis oils
- Removal of vitamin E acetate from some products
- Law enforcement targeting illicit products

### In the UK where cannabis possession is illegal

- One case identified that appears to meet the criteria for 'EVALI injury' since May 2016 (Public Health England, Feb 2021)



See Attached -Nicotine Vaping and Tobacco Harm Reduction Information for Patient Specific Counselling Points



Contact: Amin Rajwani; amin.rajwani@AHS.ca  
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## Public Health Relative Harm Positions

**Health Canada:** "Vaping products and e-cigarettes deliver nicotine in a less harmful way than smoking cigarettes. These products may reduce health risks for smokers who can't or don't want to quit using nicotine"

**US Center for Disease Control (CDC):** "E-cigarettes have the potential to benefit adult smokers who are not pregnant if used as a complete substitute for regular cigarettes and other smoked tobacco products."

**Public Health England:** "The extensive use of vaping products in quit attempts compared with licensed medication suggests vaping products may reach more people who smoke and so have more impact than NRT and varenicline."

## Recommendations

- Identify Tobacco Smokers with SMI that want to trial nicotine vaping to stop tobacco smoking
- Obtain a tobacco smoking and nicotine vaping history
- Ensure standard cessation techniques and therapies have been exhausted prior to attempting nicotine vaping
- Clarify any misperceptions of relative harms of tobacco smoking versus nicotine vaping
- Counsel on the risks of vaping THC/cannabis oils and to monitor for symptoms of EVALI
- Support patient to self titrate vaping frequency to replace tobacco
- Allow a period of transition (2 - 4 weeks) of dual use
- Support long term dual users to fully switch to vaping nicotine
- For patients that quit smoking tobacco, address effects of enzyme de-induction. Doses of some drugs eg. clozapine may need to be decreased. Vaping nicotine does not induce liver enzymes
- Follow up with the patient to provide support and monitor for adverse effects
- Support the patient to titrate down and to set a date to quit nicotine vaping

# References

- Blount BC, Karwowski MP, Shields PG, et al. Vitamin E Acetate in Bronchoalveolar-Lavage Fluid Associated with EVALI. *New England Journal of Medicine*. 2019;382:697-705.
- Centre for Disease Control and Prevention. *Outbreak of Lung Injury Associated with the Use of E-Cigarette, or Vaping, Products*. Retrieved from [https://www.cdc.gov/tobacco/basic\\_information/e-cigarettes/severe-lung-disease.html](https://www.cdc.gov/tobacco/basic_information/e-cigarettes/severe-lung-disease.html).
- Government of Canada, Public Health. Vaping-Associated Lung Illness. Retrieved from <https://www.canada.ca/en/public-health/services/diseases/vaping-pulmonary-illness.html>
- Sharma, R Sharma I, Gartner, CE, Castle DJ, et al. Should we encourage smokers with severe mental illness to switch to electronic cigarettes? *Australian & New Zealand Journal of Psychiatry*. 2017;1-2