

Severe Pulmonary Disease Associated with E-Cigarette Use

Recently, reports of severe pulmonary disease associated with use of electronic cigarette products (e-cigarettes) have been reported in the United States. As of September 19, 2019, 530 cases have been reported from 38 states and one U.S. territory, with seven deaths confirmed. A suspect case was reported in London, Ontario on September 18, 2019. There have been no reported cases to date in BC.

Based on information to date, the disease is likely caused by an unknown chemical exposure, but no single product, substance or additive has been identified in all cases. Cases have reported use of cannabis vaping products as well as nicotine and non-nicotine e-cigarettes. Of concern, many of the cases have been amongst adolescents and young adults, who are the primary users of e-cigarettes. Case and cluster reports have described severe illness, almost all requiring hospitalization and many requiring mechanical ventilation. In addition to respiratory symptoms (shortness of breath, cough, chest pain), most have had gastrointestinal and constitutional symptoms.

On September 19, 2019, BC's Provincial Health Officer made cases of severe pulmonary disease associated with vaping or dabbing* with no evidence of alternative plausible diagnosis reportable conditions in BC. Cases are most likely to present to hospitals, but community physicians should also be aware of the case definition for reporting purposes.

Please report patients with severe respiratory illness who:

- 1. Report vaping or dabbing using e-cigarette devices, related products or other means of inhaling a variety of products in the 90 days before symptom onset, AND**
- 2. Who have pulmonary infiltrates on X-ray imaging, AND**
- 3. Whose illness is not attributed to other causes.**

Cases occurring since June 1, 2019 are to be reported promptly to the Medical Health Officer. During working hours, call 604-675-3900 and after-hours contact the Medical Health Officer on-call at 604-527-4893.

E-cigarette products, with or without nicotine, are legally available for sale in BC to adults age 19 years and older. However the full range of their harms is not known. Youth, pregnant women, and adults who do not currently smoke should never use e-cigarettes. For adult smokers attempting to quit, patients in BC are eligible for up to 12 weeks per year of one of the following evidence-based first-line treatments:

1. Nicotine Replacement Therapy – gum, lozenges, patch, inhaler or spray. Available from a pharmacist without prescription.
2. Prescription medications – one of the following:
 - a. Varenicline (Champix™) – blocks the effects of nicotine
 - b. Bupropion (Zyban™) – makes smoking less pleasurable

Evidence of the effectiveness of e-cigarettes for adults attempting to quit smoking is limited. However, e-cigarettes are likely less harmful than tobacco, so adults using e-cigarettes containing nicotine to quit smoking should not return to smoking cigarettes. They should be advised not to modify their devices or use them in conjunction with illicitly manufactured vaping products such as those containing THC or CBD oils.

Further information on smoking cessation is available from CAMH (Centre for Addiction and Mental Health):
<https://www.nicotinedependenceclinic.com/en/canadaptt/Pages/CAN-ADAPTT-Guidelines.aspx>

* "dabbing" is heating concentrates of cannabis on a hot surface then inhaling through a "dab" rig

**You can reach a Medical Health Officer in Vancouver at 604.675.3900 Toll free at 1.855.675.3900
For public health emergencies after hours contact the Medical Health Officer on call at 604.527.4893**

**Vancouver Medical Health Officers
Dr. Patricia Daly (Chief Medical Health Officer)
Dr. John Harding, Dr. Althea Hayden, Dr. Réka Gustafson**

To receive Physicians' Updates by email please contact us at: vchregistrationcdc@vch.ca