# Severe vaping-related illness and injury

**CANADIAN PAEDIATRIC SURVEILLANCE PROGRAM**
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**REPORTING INFORMATION**
(To be completed by the CPSP)

| | |
|---|---|
| Report number: | |
| Month of reporting: | |
| Province: | |
| Today's date: | |

**Please complete the following sections for the case identified above. If the information requested below is not readily available, please leave it blank. Strict confidentiality of information will be assured.**

**CASE DEFINITION FOR SEVERE VAPING-RELATED ILLNESS AND INJURY**

Report any patient less than 18 years of age (up to 18th birthday) requiring emergency department care, hospitalization, or admission to an intensive care unit (ICU) due to an illness or injury associated with any of the following:

1. Inhalation of aerosol from a vaping device (e.g., acute pulmonary injury, serious gastrointestinal symptoms, central nervous system activation/depression, acute nicotine toxicity or withdrawal)
2. Malfunction of a vaping device (e.g., burn, trauma to the eye, hand, and/or face)
3. Ingestion of a vaping substance (e.g., e-liquid with or without nicotine and/or flavours, tetrahydrocannabinol [THC] oil, hash oil)

Exposure to vaping devices/products/substances may be either **intentional** or **unintentional** and includes both primary (i.e., direct use/inhalation) and/or secondary exposures (i.e., exposure to another person's vaping aerosol or injury caused by another person using a vaping device).

Vaping devices include any type of electronic cigarette or similar device that aerosolizes a solid or liquid substance (vaping substance) which may contain some or all of the following: nicotine, cannabis, flavouring agents, and other chemicals.

## SECTION 1 – PATIENT DEMOGRAPHIC INFORMATION

1.1 Month/year of birth: ____ /_____
MM YYYY

1.2 Sex assigned at birth: ❍ Male ❍ Female ❍ Intersex

1.3 Gender: ❍ Male ❍ Female ❍ Transgender ❍ Non-binary ❍ Unknown ❍ Other, specify: _____

1.4 Patient- or family-reported population groups (select all that apply):

| | | | |
|---|---|---|---|
| ❑ Arab | ❑ Black | ❑ Chinese | ❑ Filipino |
| ❑ Japanese | ❑ Korean | ❑ Latin American | ❑ White |
| ❑ First Nations | ❑ Inuit | ❑ Métis | ❑ Unknown/Did not ask |
| ❑ Southeast Asian (e.g., Vietnamese, Cambodian, Laotian) | ❑ South Asian (e.g., East Indian, Pakistani, Sri Lankan) | ❑ West Asian (e.g., Iranian, Afghan) | ❑ Other, specify: _____ |

1.5 First 3 digits of patient's postal code: ___ ___ ___

## SECTION 2 – CLINICAL PRESENTATION

2.1 Date of presentation: ____ /____ /_____
DD MM YYYY

2.2 How was the vaping-related illness/injury acquired? (select **only one**)

❍ **Inhalation of aerosol from a vaping device**

*If yes*: **a)** Which type(s) of illness/injury did the patient experience? (select all that apply):

| | | |
|---|---|---|
| ❑ Respiratory distress | ❑ Lung injury | ❑ Mouth/throat irritation |
| ❑ Nausea/vomiting | ❑ Abdominal pain | ❑ Agitation |
| ❑ Paranoia/hallucinations | ❑ Coma | ❑ Headache |
| ❑ Dizziness | ❑ Palpitations/tachycardia | |
| ❑ Nicotine withdrawal | ❑ Central nervous system depression | |

❑ Constitutional symptoms (e.g., fever, weight loss
❑ Other, specify: _____

**b)** Did the injury reach criteria for **probable** or **confirmed** vaping-associated lung illness (VALI)*: ❍ Confirmed ❍ Probable ❍ Unsure ❍ N/A
** For specific diagnostic criteria, refer to: **https://www.canada.ca/en/public-health/services/diseases/vaping-pulmonary-illness/health-professionals/national-case-definition.html***

**c)** Was the injury due to: ❍ Direct exposure (i.e., inhalation)
❍ Second-hand exposure (i.e., another person using a vaping device)
❍ Unknown

❍ **Malfunction of a vaping device**

*If yes*: **a)** Which type(s) of illness/injury did the patient experience? (select all that apply)

❑ Respiratory distress ❑ Lung injury
❑ Eye injury/burn/vision loss ❑ Head or neck injury/burn
❑ Mouth injury/burn ❑ Injury/burn to hand
❑ Injury/burn to lower limbs ❑ Injury/burn to upper limbs/chest
❑ Other, specify: _____

**b)** What was the cause of the injury?
❍ Battery malfunction ❍ Electrical fire ❍ Smoke inhalation ❍ Explosion
❍ Unknown ❍ Other, specify: _____

❍ **Ingestion of a vaping substance**

*If yes:* **a)** Was the ingestion: ❍ Intentional ❍ Unintentional ❍ Unknown

**b)** Which type(s) of illness/injury did the patient experience? (select all that apply)

❑ Respiratory distress ❑ Mouth/throat irritation and/or burn
❑ Nausea/vomiting ❑ Abdominal pain ❑ Agitation
❑ Paranoia/hallucinations ❑ Coma ❑ Headache
❑ Dizziness ❑ Palpitations/tachycardia
❑ Central nervous system depression
❑ Other, specify: _____

**c)** How did the patient come in contact with the vaping substance?
❍ Spill ❍ Refill bottle ❍ Prefilled cartridge/pod product
❍ Directly from the device ❍ Unknown
❍ Other, specify: _____

2.3 Was the injury officially reported? ❍ Yes ❍ No ❍ Unknown

*If yes*, where was it reported? (select all that apply) ❑ Public health authorities ❑ Health Canada ❑ Poison control
❑ Other, specify: _____

## SECTION 3 – VAPING PRODUCT INFORMATION

3.1 Did the vaping substances contain flavouring? ❍ Yes ❍ No ❍ Unknown ❍ N/A

*If yes:* Which flavours did the vaping substances contain?
❍ Mint ❍ Menthol ❍ Fruit ❍ Dessert/candy ❍ Tobacco ❍ Alcohol ❍ Cannabis ❍ Other, specify: _____

3.2 Did vaping substances contain nicotine? ❍ Yes ❍ No ❍ Unknown ❍ N/A

3.3 Did vaping substances contain cannabis or cannabinoids (e.g., tetrahydrocannabinol [THC], cannabidiol [CBD], hash oil)? ❍ Yes ❍ No ❍ Unknown ❍ N/A

3.4 Was the vaping device: ❍ A closed system (with pre-filled pods/cartridge) ❍ An open system (with a refillable reservoir)
❍ A disposable device (i.e., one-time use) ❍ A non-combusted ("heat-not-burn") device
❍ Other, specify: _____ ❍ Unknown

3.5 Was the device modified or used in a way that differed from its recommended use? ❍ Yes ❍ No ❍ Unknown

3.6 How were the vaping product(s)/substance(s) acquired?
❍ Purchased from a legal retail location (e.g., vape shop, authorized retailer for cannabis)
❍ Purchased from a legal/illegal online source
❍ Purchased from an illegal source other than online (i.e., illicit market)
❍ Borrowed/given from a friend or family member
❍ Found at home
❍ Other, specify:_____
❍ Unknown

## SECTION 4 – TREATMENT AND OUTCOMES

4.1 Patient treatment location (select all that apply): ❑ Emergency department ❑ Inpatient hospital ward ❑ ICU
❑ Other, specify: _____

*If the patient was hospitalized*: How many days was the patient hospitalized?
____ day(s) ❍ Unknown ❍ Still admitted

*If the patient was admitted to the ICU:* How many days did the patient remain in the ICU?
____ day(s) ❍ Unknown ❍ Still admitted

4.2 Did the patient require (select all that apply):
❑ Intravenous fluids ❑ Steroids ❑ Antibiotics ❑ Surgery ❑ Oxygen
❑ Non-invasive ventilatory support (i.e., BiPAP) ❑ Intubation ❑ Tracheostomy
❑ Extracorporeal membrane oxygenation (ECMO)
❑ Other, specify: _____

4.3 Patient outcome: ❍ Full recovery ❍ Ongoing health issue(s), specify: _____
❍ Death ❍ Unknown

## SECTION 5 – CO-EXPOSURES, RISK FACTORS, AND COMORBIDITIES

5.1 Has the patient ever been tested for COVID-19: ❍ Yes ❍ No ❍ Unknown

*If yes*: Did the patient ever test positive for:
❑ COVID-19 polymerase chain reaction (PCR) ❑ COVID-19 antibody ❑ Unknown

*If patient tested positive:* Date of test:_____

5.2 Does the patient have a history of/been diagnosed with a chronic medical condition?
❍ Yes ❍ No ❍ Unknown

*If yes,* specify (select all that apply): ❑ Asthma ❑ Cystic fibrosis ❑ Congenital heart disease ❑ Epilepsy
❑ Inflammatory bowel disease ❑ Diabetes ❑ Unknown ❑ Other, specify:_____

5.3 Had the patient used a vaping device prior to the use/exposure that led to this injury/illness?
❍ No ❍ Once or twice ❍ Three times or more ❍ Unknown ❍ N/A

*If yes,* what was the frequency of vaping device use in the month preceding the injury/illness?
❍ No use ❍ Once or twice ❍ Weekly ❍ Daily ❍ Unknown

5.4 Has the patient ever used (select all that apply):

❑ Cigarettes ❑ Other tobacco products (e.g., cigars, hookah, chewing tobacco) ❑ Cannabis ❑ Alcohol
❑ Opioids ❑ Benzodiazepines ❑ Cocaine ❑ Ecstasy/molly/MDMA ❑ Psychostimulants (non-prescribed)
❑ Other, specify (if known): _____ ❑ Unknown ❑ None ❑ N/A

5.5 The day of the illness/injury, *in addition* to the vaping product identified in Section 3, had the patient used (select all that apply):

❑ Cigarettes ❑ Other tobacco products (e.g., cigar, hookah, chewing tobacco) ❑ Cannabis ❑ Alcohol
❑ Opioids ❑ Benzodiazepines ❑ Cocaine ❑ Ecstasy/molly/MDMA ❑ Psychostimulants (non-prescribed)
❑ Other, specify (if known): _____ ❑ Unknown ❑ None ❑ N/A

5.6 Does the patient have a history of/been diagnosed with a mental health or behavioural condition?
❍ Yes ❍ No ❍ Unknown

*If yes,* specify (select all that apply):

❑ Depression ❑ Suicidal ideation ❑ Suicide attempts ❑ Self-harm ❑ Eating disorder
❑ Anxiety ❑ Drug overdose ❑ Behavioural problems ❑ Attention-deficit/hyperactivity disorder
❑ Unknown ❑ Other mental health/behavioural condition, specify: _____

5.7 Is there a history of parental/familial/peer use of vaping, tobacco, and/or cannabis products?
❍ Yes ❍ No ❍ Unknown

*If yes,* specify (select all that apply):

❑ Mother ❑ Father ❑ Sibling ❑ Grandparent ❑ Other relative ❑ Peer/friend(s) ❑ Unknown

❍ **I agree to be contacted by the CPSP for further information on this questionnaire.**

❍ **I do not wish to be contacted by the CPSP for further information on this questionnaire.**

## SECTION 6 – LONG-TERM IMPACT

A separate study may be conducted to better understand the long-term impact of severe vaping-related illness and injury. This process would be separate from the CPSP.

6.1 Do you agree to be contacted by the study team in the future with follow-up questions about this case? By answering 'Yes' you are giving permission for the CPSP to release your contact information (including email) to the study team, led by Dr. Nicholas Chadi. ❍ Yes ❍ No

## SECTION 7 – REPORTING PHYSICIAN

7.1 Which of the following best describes your practice?
❍ General paediatrician ❍ Paediatric subspecialist, specify: _____
❍ Other, specify: _____

7.2 First 3 digits of the postal code of your practice: ___ ___ ___

7.3 Practice setting (select all that apply):
a) ❑ Urban ❑ Suburban ❑ Rural/remote
b) ❑ Academic ❑ Non-academic
c) ❑ Emergency department ❑ ICU ❑ Inpatient hospital ward ❑ Other, specify: _____

First name_____Surname_____
Address_____
City_____Province/territory_____ Postal code_____
Telephone number_____Fax number_____
E-mail_____Date completed_____

**Thank you for completing this form.**

(VRI 2021/01)