

Severe Lung Injury Associated with Vaping Algorithm

Hawaii Department of Health



PATIENT SYMPTOMS

- Cough, dyspnea, pleuritic chest pain
- Nausea, vomiting, diarrhea
- Headache, fatigue, weight loss

PHYSICAL EXAM FINDINGS

- Hypoxemia, fever, tachypnea

EXPOSURE HISTORY

- E-cigarette ("vaping") or "dabbing" (inhaling concentrated liquid) in past 3 months
- DOH patient vaping history questionnaire may be helpful in eliciting history https://health.hawaii.gov/docd/files/2019/11/HDOH_vaping_patient_history_survey_v03.pdf
- Advise patient to retain all vaping products and devices for possible collection and testing

1 PERFORM IMAGING

- Chest X-ray: Diffuse bilateral patchy infiltrates
- Chest CT: Nonspecific bilateral ground glass opacities
- If patient has any of the abnormal radiographic findings listed, then proceed to #2

2 REPORT TO HDOH

- For patients with exposure history, relevant symptoms/signs, and abnormal radiographic findings, call HDOH (numbers listed below) to report and complete Provider Preliminary Vaping Case Report Form <https://health.hawaii.gov/docd/files/2019/09/Preliminary-VAPING-case-report-form-v1.3.pdf>
- If clinical specimens collected, retain earliest blood and urine as well as any bronchoscopy/biopsy specimens
- If history, physical and/or radiographic findings not suggestive, consider alternative diagnoses
- If atypical presentation, repeat imaging as indicated and provide close follow-up

3 RULE OUT INFECTIOUS DISEASE

- Influenza test (PCR if available)
- Respiratory virus panel (as clinically indicated)
- *Streptococcus pneumoniae* urine antigen
- Legionella urine antigen
- Mycoplasma PCR (as clinically indicated)
- Blood culture (if febrile)
- HIV testing
- CBC with differential and platelets
- CRP/ESR
- Comprehensive Metabolic Panel (CMP)
- Urinalysis
- If bronchoscopy/biopsy performed
 - Bacterial and fungal stains/cultures
 - Acid-fast bacilli smear and mycobacterial cultures
 - Pneumocystis PCR or pneumocystis specific stain (as clinically indicated)
 - Lipid Oil Red stain
 - Other tests as clinically indicated

4 OTHER TESTING

- Urine drug testing, especially for THC
- Consider rheumatologic, cardiac, neoplastic, as clinically indicated

5 CONSIDER CORTICOSTEROIDS IF APPEARS TO BE VAPING LUNG INJURY

- Advise consulting pulmonologist, infectious disease physicians, and other clinically relevant physicians

Adapted with permission from Minnesota Department of Health

Reporting Phone Numbers

Oahu (Disease Reporting Line).....	(808) 586-4586	After hours on Oahu.....	(808) 600-3625
Maui District Health Office	(808) 984-8213	After hours on neighbor islands	(800) 360-2575 (toll free)
Kauai District Health Office	(808) 241-3563		
Big Island District Health Office (Hilo)	(808) 933-0912	Big Island District Health Office (Kona).....	(808) 322-4877