**Background**

Lung injury, in some cases severe, associated with “vaping” have been reported in multiple states during the last 2-3 weeks. A definitive causal relationship has not been determined, but the association with “vaping” is strong. Tennessee Poison Center has had 23 calls about exposures with e-cig, but none have been associated with lung injury.

**Reported Cases**

Reported symptoms and findings in cases of suspected “vaping” associated lung injury include:

* Fever, nausea, vomiting
* Shortness of breath, cough, and chest pain
* Bilateral perihilar infiltrates and ground glass opacities, often with peripheral sparing
* Progression of symptoms over several days with similarities to a viral illness
* Patients endorse “vaping”, often THC products, in the days to weeks preceding symptom onset

**Evaluation**

1. Be aware of the potential for significant lung injury in patients presenting with pulmonary symptoms or otherwise appearing to have a “viral syndrome”
2. If a patient has a history of “vaping”, perform a careful pulmonary examination and provide patient education regarding the potential for severe lung injury
3. Provide education to any patient who endorses “vaping” regarding the immediate risk of lung injury in addition to long term health concerns

**Case Identification**

In patients with lung injury without an apparent alternative cause, obtain a detailed history of:

1. “Vaping” activity
   1. Device used
   2. Product used; including substance
   3. Whether the product was purchased from a store vs. from the street or otherwise potentially tampered with
   4. Where, geographically, was it purchased and used (e.g. city, county, zip code)
   5. Chronicity and pattern of “vaping”
   6. Timing of use relative to symptom onset
2. Symptom onset and progression
3. Baseline lung or other systemic disease
4. Any other drug or environmental exposure
5. Recent travel

**Diagnostics**

1. Vital sign assessment
2. Pulmonary examination findings
3. Imaging: plain film and/or CT without contrast according to clinical indication and availability
4. If possible and appropriate, the following data may be helpful in diagnosis and treatment:
   1. Urine drug screen
   2. Complete blood count, comprehensive metabolic panel, venous or arterial blood gas
   3. Sputum culture
   4. Viral and fungal pathogen testing
   5. Bronchoalveolar lavage findings and specimen evaluation

**Treatment**

At this time, no additional systemic toxicity has been identified. The goals of therapy are supportive to maintain adequate oxygenation and ventilation through means determined by the patient’s clinical condition and response to therapy. Significant hypoxemia and precipitous deterioration in respiratory illness have been reported. Some reported cases have required mechanical ventilation and VV-ECMO.

**Surveillance**

The identification of cases will be critical in order to fully assess the impact as well as investigate the cause and prevent further harm. If you suspect a case of lung injury related to “vaping”, please call Tennessee Poison Center at **1(800)222-1222**. The poison center can provide assistance in the evaluation and potentially management of patients. Additionally, cases reported to poison centers will be catalogued in the National Poison Data System which will greatly strengthen the public health response to this potential threat.

Call **1(800)222-1222** 24/7/365 with questions regarding this or any other poison, drug, or chemical exposure