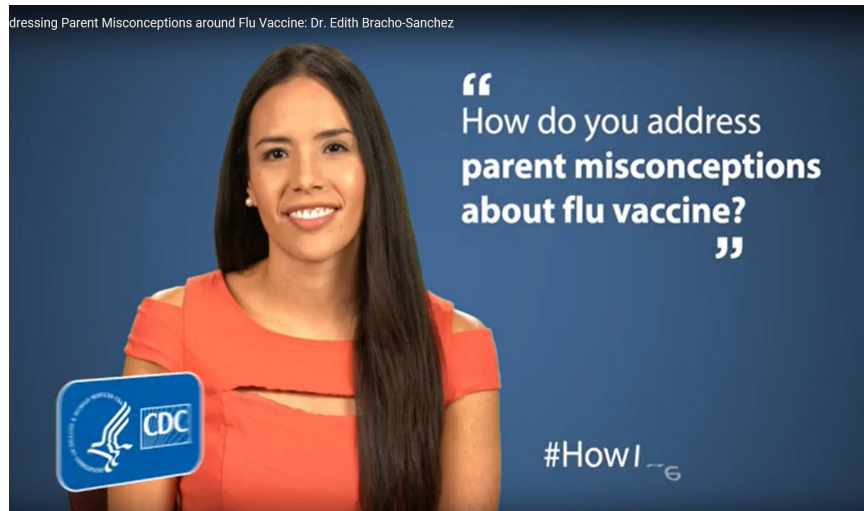


## Public Health LOOK OUT!

- November is National Lung Cancer Awareness Month. Lung cancer screening is recommended for those who have a history of chronic smoking and are between 55 and 80 years old. Testing is recommended for those who are current smokers or have quit within the past 15 years and are between 55 and 80 years old. It's also essential to get your home tested for Radon, which is the second leading cause of lung cancer. It's a naturally occurring gas that is found in dirt and rocks, which can get trapped in houses.
- It is also COPD Awareness Month; COPD is Chronic Obstructive Pulmonary Disease, which includes emphysema and chronic bronchitis. COPD makes breathing difficult for the 16 million Americans who have been diagnosed. Chronic lower respiratory disease, primarily COPD, was the third leading cause of death in the United States in 2014. There are complications when it comes to COPD, which include needing special equipment such as portable oxygen tanks, not being able to engage in social activities, and many more. Tobacco smoke is the leading cause of COPD along with other pollutants.
- November is also National Alzheimer's Disease Awareness Month, which highlights the most common form of dementia. There is virtually no cure for the disease that affects 5.4 million Americans, and continually increases over the years. One in 3 seniors dies with Alzheimer's or a related form of dementia. While some risk factors cannot be controlled staying active and making healthy choices can help. For more information and prevention tips please visit <https://www.cdc.gov/dotw/alzheimers/>.

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### E-Cigarette or Vaping Product Use Associated with Lung Injury: An Outbreak

By: Kyle Nowotny

The Florida Department of Health in Miami-Dade County (DOH-Miami-Dade) is taking part in a nationwide outbreak investigation of e-cigarette or vaping product use associated with lung injury (EVALI). This is a new outbreak amongst individuals who use electronic cigarettes, or similar devices, to vape various products. The most common products identified by the Centers for Disease Control and Prevention (CDC) are nicotine and tetrahydrocannabinol (THC), with THC being the most reported substances used. Many of these products are purchased off the streets, either from dealers, friends, or family. Several patients have reported that symptoms began hours to days after inhalation, with some reporting longer onset times.<sup>1</sup>

The most common symptoms fall into two categories: pulmonary and gastrointestinal symptoms. Pulmonary symptoms typically include cough, shortness of breath, or chest pain. Another common symptom is found upon computerized tomography (CT) scanning, which reveals ground-glass opacities, while chest x-rays show pulmonary infiltrates. Gastrointestinal symptoms may include nausea, vomiting, abdominal pain, or diarrhea.<sup>1</sup> Though less common, other symptoms have been reported, such as weight loss, fever, or fatigue. In addition, symptoms may vary between cases.<sup>2</sup>

The CDC has defined EVALI confirmed cases as patients who vaped in the last 90 days, who have identifiable pulmonary infiltrates or opacities and who have negative respiratory viral screenings, ranging from influenza to Legionella, with no other plausible cause for disease. Probable cases are defined as patients who vaped in the past 90 days and have pulmonary infiltrates or opacities, but also have pulmonary infections, though their clinical team does not believe the pulmonary infections explain their symptoms.

There is no singular brand, product, or flavor associated with this outbreak.<sup>2</sup> Devices are equally as varied, and include electronic nicotine delivery systems, vaporizers, vape pens, dab pens, and more.<sup>3</sup> In coordination with the Florida Department of Health, DOH-Miami-Dade is working to collect vaping samples from cases for testing to determine the exact chemical composition of products used. So far, no singular agent has been identified as the cause of this outbreak. Considering the wide range of products used, it is believed that the outbreak may be the result of several chemicals. It is therefore the recommendation of the CDC that no one should vape any products, especially, products that contain THC or are bought off the street.<sup>1</sup>

As of October 22, 2019, the CDC has reported 1,604 cases of EVALI in 49 states, the District of Columbia, and 1 territory. Additionally, there have been 34 deaths in 24 states.<sup>1</sup> In Florida, there are 78 cases with 1 death, as of October 29, 2019.<sup>3</sup>

Anyone experiencing symptoms should immediately visit the nearest emergency department for treatment. To report a possible case of EVALI, please call the DOH-Miami-Dade, Epidemiology, Disease Control, and Immunization Serves (EDC-IS) at 305-470-5660. More information can be found at <http://www.floridahealth.gov/newsroom/2019/09/092019-outbreak-of-lung-injury-associated-with-e-cigarette-use-vaping.pr.html> or at [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).

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# Lead Poisoning: The Invisible Toxicity

By: Judith Agbotse and Mohnisha Jit

## Background

Lead is a naturally occurring toxic metal found in the Earth's crust. Its widespread use has resulted in extensive environmental contamination, human exposure, and significant public health problems in many parts of the world. Important sources of environmental contamination include mining, smelting, manufacturing and recycling activities, and, in some countries, the continued use of leaded paint in homes, leaded gasoline, and leaded aviation fuel. However, lead is also used in many other products such as pigments, paints, solder, stained glass, lead crystal glassware, ammunition, ceramic glazes, jewelry, toys and in some cosmetics and traditional medicines.<sup>1</sup> It can be brought into the home from soil or lead debris on shoes, or it can be blown in from lead dust on windows. It is most commonly found in paint from homes built before 1978, and the paint becomes a hazard once it starts to deteriorate, chip, or peel. Lead poisoning occurs when lead is accumulated in the bloodstream and is diagnosed by conducting a blood test. When ingested or inhaled, lead can cause many health issues. Lead poisoning can cause learning, hearing, and behavioral problems, and can be harmful to one's organs.<sup>1</sup> In serious cases, lead poisoning can even result in death.

According to a study from the American Journal of Public Health, blood lead levels (BLLs) in the United States have decreased substantially over the past 40 years as a result of the removal of lead from gasoline, residential paint, and solder used for water pipes and food and beverage cans.<sup>4</sup> However, ingestion of lead-based paint, particularly prevalent in older housing, remains one of the most common sources of lead exposures among young children.<sup>1</sup>

The Florida Department of Health in Miami-Dade County's Lead Poisoning Prevention Program is a program funded by the Centers for Disease Control and Prevention (CDC) that aims to increase primary prevention activities by obtaining information through epidemiologic investigations to determine what potential source of exposure needs to be removed from a home. Also, the program aims to increase lead screening among children who are at high risk of lead poisoning by administering lead screenings at community events and local clinics, and to reduce the number of adults with elevated BLLs by encouraging them to get a lead test during a doctor's visit. A confirmed case of lead poisoning is defined as an individual of any age with a blood lead level greater than or equal to 5 µg/dL from a venous specimen, or blood lead level greater than or equal to 5 µg/dL from two capillary specimens taken within three months of one another.<sup>2</sup> In 2012, the CDC updated the national case definition for lead poisoning from a blood lead level (BLL) ≥10 µg/dL to ≥5 µg/dL based on the adverse health effects caused by BLLs <10 µg/dL in both children and adults.<sup>3</sup>

## Methods

Data from 2013 to 2018 for lead poisoning case investigations of Miami-Dade County residents were pulled from the Florida Department of Health's reportable disease surveillance system, Merlin. The data was analyzed using Microsoft Excel. The variables analyzed were age, gender, race/ethnicity, source of exposure, and the year in which the case was reported.

## Results

The number of cases reported in Miami-Dade County increased overall during the time period analyzed. There was a decrease from 2013, which had 112 cases, to 98 cases in 2015, then slightly increased between 2015 and 2016. There was a jump from 124 cases in 2016 to 515 cases in 2017 and then continued to increase to 654 cases in 2018 (Figure 1).

In Miami-Dade County, there was a total of 654 lead poisoning cases reported in 2018. Of those, 277 (42.4 %) were children under the age of 17 and 122 (24.8%) were adults. By gender, 136 cases were females (20.8%) and 518 were males (79.2%). In terms of race, most of the lead poisoning cases were Black at 121 (18.5%) cases, followed by White at 104 (15.9%) cases, other races at 77 (11.8%) cases, Asians/Pacific Islanders at 2 (0.3%) cases, and American Indians/Alaskan Natives with the lowest at 1 (0.2%) case (Figure 2). There were 349 (53.4%) cases that reported "unknown" for the category of race.

Of the 122 adult cases reported in 2018, 20 of the patients answered “Yes” to being exposed to lead at work (occupational exposure). Of the 20 occupational exposure cases, 2 cases were from an unknown source, 6 from lead-based paint at work, 5 cases from being exposed to firearms, 2 cases from leaded fishing equipment, 2 cases were exposed to waste management, and 3 from other. While most of the adult cases were from an exposure to lead-based paint and firearms at work, most of the 277 children cases were caused by exposure to two sources: toys and jewelry (74 cases) and tile floors or counter tops (75 cases). Of the remaining children cases, 55 cases were of children living in a home built before 1978, 39 cases were exposed to lead-based paint at home, 31 cases were exposed to soil, and 22 cases were a result of take-home exposure from a household member.

### Conclusion

Reporting both positive and negative blood lead levels is a vital step in reducing and preventing lead poisoning in Miami-Dade County, and findings indicate that the amount of cases increased due to the case definition change for lead poisoning. Children between the ages of 0–17 have been tested more than adults in the last 5 years. The number of children screened has increased from 126 cases in 2012 to 315 cases in 2018. In 2018, the most common source of exposure for the reported cases of lead poisoning in Miami-Dade for children were toys/jewelry and tile floors/countertops. Meanwhile, adults had the least amount of cases reported and the most common source of exposure for adults came from occupational or hobby related exposures such as working around or with lead-based paint or firearms. While tiles and toys are the most common source of lead poisoning in children, 22 of 229 cases were due to a household member that came into contact with lead as a result of an occupational exposure. This is why household members exposed to lead at work must shower and change clothes before entering their vehicle or coming home, wash their work and hobby clothes separately from the rest of their family's clothes; and must keep all work and hobby materials away from living areas.<sup>5</sup> Lead poisoning is a serious, but preventable public health problem that can result in long-lasting neurological damage to young children whose growing bodies are highly susceptible. In serious cases, lead poisoning can cause death. It is important for healthcare providers to provide screenings and follow-up appointments to children ages 0–6 years and also report all levels whether positive or negative.

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Figure 1. Number of Cases Reported by Year, Miami-Dade County, 2013-2018.

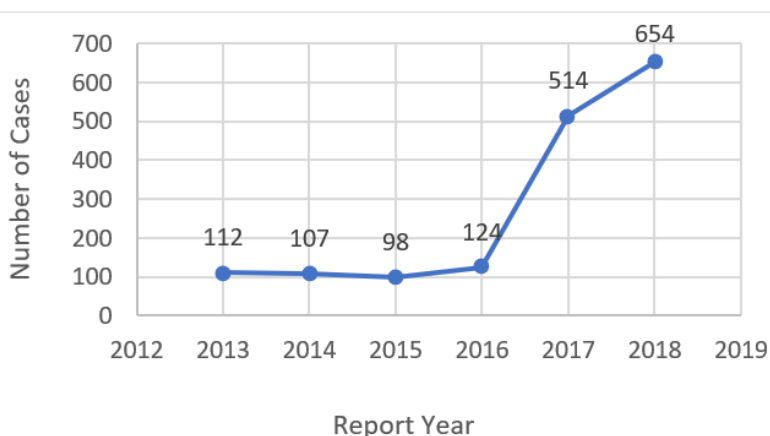
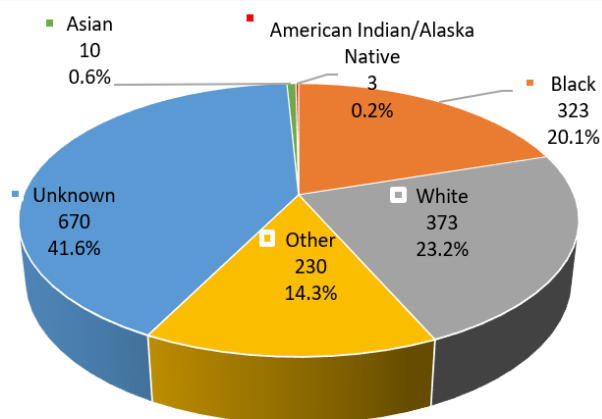


Figure 2. Number of Cases Reported by Race, Miami-Dade County, 2018.

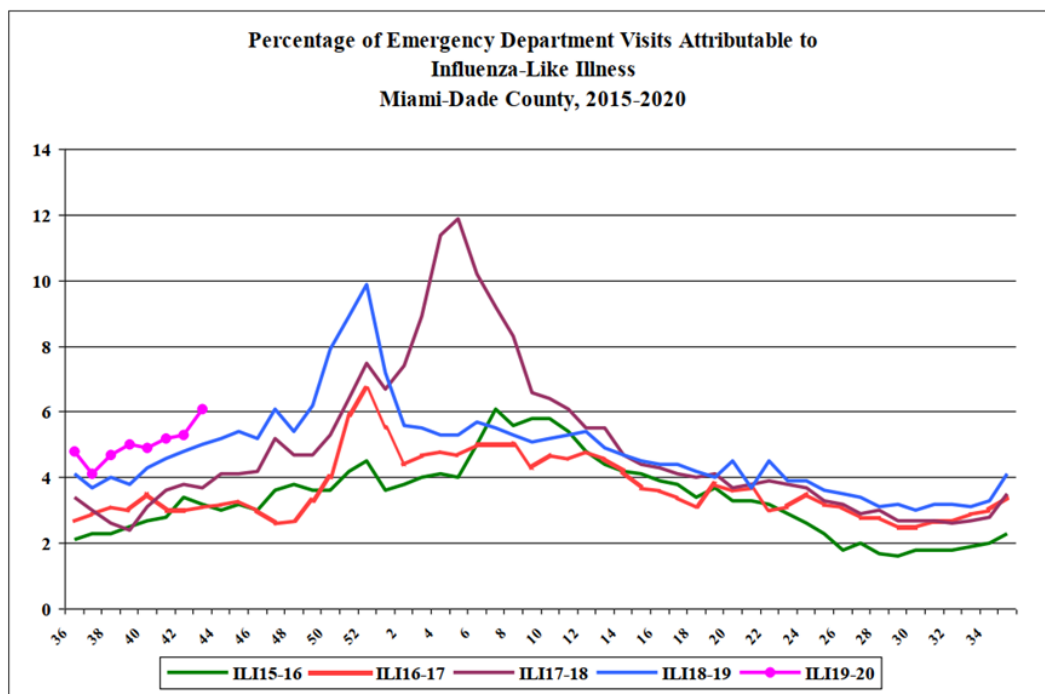


# Florida Department of Health in Miami-Dade County Epidemiology, Disease Control and Immunization Services

## Influenza Like Illness Surveillance Report

On a daily basis, all of Miami-Dade County's emergency department (ED) hospitals electronically transmit ED data to the Florida Department of Health. This data is then categorized into 11 distinct syndromes. The influenza-like illness (ILI) syndrome consists of fever with either cough or sore throat. It can also include a chief complaint of "flu" or "ILI". This season's 2019-2020 data is compared to the previous 4 influenza seasons (2015-2016, 2016-2017, 2017-2018, 2018-2019).

### Influenza-Like-Illness, All Age



Across all ages, there were 36,805 ED visits; among them 2,231 (6.1%) were ILI. During the same week last year, 5.0% of ED visits were ILI.

### PARTICIPATE IN INFLUENZA SENTINEL PROVIDER SURVEILLANCE

#### Florida Department of Health in Miami-Dade County NEEDS Influenza Sentinel Providers!

Sentinel providers are key to the success of the Florida Department of Health's Influenza Surveillance System. Data reported by sentinel providers gives a picture of the influenza virus and ILI activity in the U.S. and Florida which can be used to guide prevention and control activities, vaccine strain selection, and patient care.

- Providers of any specialty, in any type of practice, are eligible to be sentinel providers.
- Most providers report that it takes **less than 30 minutes a week** to compile and report data on the total number of patients seen and the number of patients seen with influenza-like illness.
- Sentinel providers can submit specimens from a subset of patients to the state laboratory for virus isolation **free of charge**.

For more information, please contact  
**Stephanie Calle** at 305-470-5660.



## Miami-Dade County Monthly Report Select Reportable Disease/Conditions September 2019

Diseases/Conditions	2019 Current Month	2019 Year to Date	2018 Year to Date	2017 Year to Date
<b>HIV/AIDS</b>				
AIDS*	23	314	332	287
HIV	100	1053	984	893
<b>STD</b>				
Infectious Syphilis*	28	285	355	276
Chlamydia*	1112	11239	9987	9119
Gonorrhea*	419	3557	3155	2479
<b>TB</b>				
Tuberculosis**	7	91	88	74
<b>Epidemiology, Disease Control &amp; Immunization Services</b>				
<b>Epidemiology</b>				
Campylobacteriosis	62	664	621	494
Chikungunya Fever	0	0	1	0
Ciguatera Poisoning	9	41	27	7
Cryptosporidiosis	11	50	35	32
Cyclosporiasis	1	26	0	1
Dengue Fever	55	137	9	3
Escherichia coli, Shiga Toxin-Producing	8	108	137	24
Encephalitis, West Nile Virus	0	0	0	0
Giardiasis, Acute	8	135	135	103
Influenza Novel Strain	0	0	0	0
Influenza, Pediatric Death	0	0	0	0
Legionellosis	4	39	44	31
Leptospirosis	0	0	1	0
Listeriosis	0	1	4	6
Lyme disease	0	2	4	3
Malaria	0	3	10	5
Meningitis (except aseptic)	0	9	8	7
Meningococcal Disease	1	3	0	6
Salmonella serotype Typhi (Typhoid Fever)	1	3	4	2
Salmonellosis	96	750	605	568
Shigellosis	16	212	237	82
Streptococcus pneumoniae, Drug Resistant	4	14	14	22
Vibriosis	3	15	4	3
West Nile Fever	0	0	0	0
Zika Virus (non-congenital)	3	24	23	101
<b>Immunization Preventable Diseases</b>				
Measles	0	0	3	0
Mumps	1	55	7	4
Pertussis	3	28	13	31
Rubella	0	0	0	0
Tetanus	0	0	0	0
Varicella	24	128	62	30
<b>Hepatitis</b>				
Hepatitis A	1	30	13	94
Hepatitis B (Acute)	4	49	39	32
<b>Healthy Homes</b>				
Lead Poisoning	6	92	148	302

\*Data is provisional at the county level and is subject to edit checks by state and federal agencies.

\*\* Data on tuberculosis are provisional at the county level.

Data on EDC-IS includes Confirmed and Probable cases.

# What's New at DOH Miami-Dade

- In October the DOH Miami-Dade celebrated National Latinx AIDS Awareness Day (NLAAD) by joining local partners in hosting three free community events offering testing, health screenings, health resources, and referrals to PrEP throughout Miami-Dade County. This year's theme was Living with HIV or not... we're fighting this together, emphasizing that everyone has a role in helping end HIV.
- The Florida Department of Health in Miami-Dade and Broward counties are launching an **Ending the HIV Epidemic Survey** to provide communities an opportunity to provide input on how to improve prevention and care efforts. The Miami-Dade County Survey can be found at <https://www.surveymonkey.com/r/EtHEMiami> or by visiting [www.TestMiami.org](http://www.TestMiami.org). The survey is open until to November 15th.

## Dengue Preventions



The Florida Dept of Health reminds everyone to #DrainandCover to help prevent mosquito borne diseases

### Lead Poisoning

The Invisible Toxicity

Lead is a heavy metal found in many items around us such as paint, dust, and soil. It can be dropped into the home from soil or lead dishes or stored, or it can be blown in from lead dust on windows. It is most commonly found in paint from homes built before 1978.

#### WHO IS MOST AT RISK?

Pregnant women, breastfeeding mothers, and children between ages 0-6 years are primarily at risk

NEWBORNS & TODDLERS  
YOUNG CHILDREN

#### EFFECTS OF CHILDHOOD LEAD POISONING

- Damage to brain
- Damage to nervous system
- Damage to other organs
- Behavior and learning problems
- Seizures
- Coma

#### SOURCES OF EXPOSURE

- LEAD-BASED PAINT
- LEAD-BASED GLAZE POTTERY
- LEADS AND JEWELRY
- IMPORTED FOOD/CANDY
- TILES AND COUNTERTOPS
- LEAD DUST

#### HOBBY RELATED EXPOSURES

- Using solder
- Citrus-based glass work
- Coloring
- Drawing games
- Working with cars, car parts, or car batteries
- Working with model cars or boats
- Pottery work

#### JOB RELATED EXPOSURES

- Construction work
- Auto repair/battery repair
- Welding
- Sheet metal and cutting
- Plumbing
- Shooting range
- Maritime industry

#### RISK FACTORS

- Living in central urban area or close to major highways
- Having a sibling or playmate with lead poisoning
- Having been exposed to lead poisoning in another country

#### REPORTING GUIDELINES

**When:** All healthcare providers are required to report lead poisoning (Florida Statute 361.003(1), 2) and Florida Administrative Code 64D-3)

**What:** Reportable level: greater than or equal to 5 µg/dL blood

**How:** Phone: (305) 470-6877 Fax: (305) 470-5533

#### Conclusion

Reporting both positive and negative blood lead levels is a vital step in reducing and preventing lead poisoning in Miami-Dade County

## To report diseases and for information, call EDC-IS at:

Childhood Lead Poisoning Prevention Program	305-470-6877
Epidemiology and Disease Surveillance	305-470-5660
Hepatitis Program	305-470-5536
HIV/AIDS Program	305-470-6999
Immunization Services	305-470-5660
STD Program	305-575-5430
Tuberculosis Program	305-575-5415
Appointment Line	786-845-0550

## About the Epi Monthly Report

The Epi Monthly Report is a publication of the Florida Department of Health in Miami-Dade County: Epidemiology, Disease Control & Immunization Services. The publication serves a primary audience of physicians, nurses, and public health professionals. Articles published in the Epi Monthly Report may focus on quantitative research and analysis, program updates, field investigations, or provider education. For more information or to submit an article, please contact Vanessa Villamil at 305-470-5643 or [vanessa.villamil@flhealth.gov](mailto:vanessa.villamil@flhealth.gov).

