



# EPI WATCH

Monthly Epidemiology and Preparedness Newsletter

October 2017

### Florida Department of Health in Pinellas County

205 Dr. Martin Luther King Jr. Street N.  
St. Petersburg, FL 33701  
(727) 824-6900  
[www.PinellasHealth.com](http://www.PinellasHealth.com)

#### Director

Ulyee Choe, DO  
[Ulyee.Cho@flhealth.gov](mailto:Ulyee.Cho@flhealth.gov)

#### Editor

JoAnne Lamb, MPH  
[JoAnne.Lamb@flhealth.gov](mailto:JoAnne.Lamb@flhealth.gov)

**For more information, or to add your e-mail address to the distribution list, please contact the Editor.**

### Division of Disease Control and Health Protection

#### Disease Reporting

To report diseases and clusters of illness:

Phone: (727) 824-6932

Fax: (727) 820-4270 (excluding HIV/AIDS)

To report HIV/AIDS by mail:

Surveillance Room 3-138

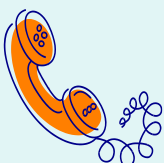
205 Dr. MLK Jr St. N.

St. Petersburg, FL 33701

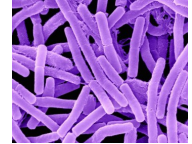
Possible Rabies Exposure/

Animal Bite Reports:

Phone: (727) 524-4410 x7665



## Bomb vs. Bacteria: Bioterrorism



Bioterrorism is defined as the deliberate or threatened use of biological agents, viruses, bacteria, toxins, or other agents to cause illness or death in people, animals or plants. Pound for pound, the use of weaponized biological agents is more devastating to a population than a hydrogen bomb, in fact, it has been estimated that if 100 kilograms of anthrax was aerosolized in a city the area of Washington D.C. there is the potential for up to three million casualties. Furthermore, in contrast to its nuclear counterpart, biological agents can be relatively easy and inexpensive to produce.<sup>1</sup>

#### What are the characteristics of biological weapons?

The ideal biological weapon has been described as one that is extremely toxic, highly infectious, communicable among humans, environmentally stable (for long term storage and dispersal), complex medical response, and is easy to grow and modify.<sup>1</sup>

#### How are biological weapons classified?

Biological weapons have been classified into three categories (A, B and C) based on four criteria: 1) ease of dissemination or transmission, 2) high mortality rates and public health impact, 3) capacity for public panic and social disruption, and 4) specialized action for public health preparedness.<sup>1</sup> Category A bioweapons have been classified as such due to ease of disseminations and/or contagious capacity; high mortality, high ability to disrupt society, and requirement for special action of public health preparedness.

#### What to watch out for?

Any case of a recognized bioterrorism agent is to be treated as a sentinel event and warrants a thorough investigation, especially in non-endemic regions. Familiarity with the local incidence, demographic and geographic distribution of these disease in the United States would be useful in identifying cases. Thus, clustered reports in different demographic groups may suggest potential bioterrorism.<sup>3</sup>

Type	Disease	Lethality if un-treated	Symptoms	Treatment
	Anthrax ( <i>Bacillus anthracis</i> )	High, if inhaled	Fever, cough, profound sweats, malaise, fatigue	Antibiotics
Bacteria	Plague ( <i>Yersinia pestis</i> )	High, unless treated within 12-24 hours (Pneumonic)	Fever, cough, shortness of breath, sore lymph nodes	Antibiotics
	Tularemia ( <i>Francisella tularensis</i> )	Moderate	Fever, cough, pneumonia, headache	Antibiotics
	Smallpox (Variola major virus)	High to moderate; ≥30% lethal	Fever, aches, after 2 - 4 days rash appears	Supportive
Viruses	Viral Hemorrhagic Fevers (Multiple families of viruses)	50-80% lethal	Sudden onset, fever, headache, followed by vomiting and diarrhea, rash, generalized bleeding in severe cases	Supportive
Biotoxins	Botulism ( <i>Clostridium botulinum</i> toxin)	High, without respiratory support	Muscle paralyzing illness	Antitoxin if administered timely

#### References:

1. Pal M, Tsegaye M, Girzaw F, Bedada H, Godishala V, Kandi V. An Overview on Biological Weapons and Bioterrorism. American Journal of Biomedical Research. (2017). 5(2):24-34.
2. The National Academies and Department of Homeland Security. Biological Attack human pathogens, biotoxins, and agricultural threats. News & Terrorism Communicating in a crisis. 2004. [https://www.dhs.gov/xlibrary/assets/prep\\_biological\\_fact\\_sheet.pdf](https://www.dhs.gov/xlibrary/assets/prep_biological_fact_sheet.pdf)
3. Chang M, Glynn K, Groseclose S. Endemic, Notifiable Bioterrorism-Related Diseases. United States, 1992-1999. Emerging Infectious Diseases. (2003). 9(5):556-564.
4. Anthrax Bacteria Image Source: <http://zarga.us/image/data/Vaccination/BACILLUS-ANTHRACIS.png>

# Breast Cancer Awareness Month: Who is it Affecting?

By Alissa Brown, MPH



October is Breast Cancer Awareness Month. The goal for this month is to increase awareness about breast cancer, provide education on prevention measures, raise funds for research and ultimately find the cure. Approximately 1 in 8 women in the United States will be diagnosed with breast cancer. Breast Cancer is the most commonly diagnosed cancer in women regardless of race and ethnicity. It is also the leading cause of cancer death of women in the United States.<sup>1</sup> According to the Centers for Disease Control and Prevention (CDC), as women age, the risk of breast cancer increases. Other risk factors that contribute to breast cancer include changes in breast cancer related genes (BRCA1 or BRCA2); never giving birth, or being older when your first child is born; starting menopause after age 55; taking oral contraceptives; having a family history of breast cancer; or being overweight, specifically after menopause.

Since the first decade of the twenty-first century the incidence and mortality rates have been declining in the United States for breast cancer.<sup>2</sup> This is in part due to increased awareness of breast cancer, greater uptake of prevention measures and improved treatments.<sup>3</sup> However, African American/black women continue to have a higher breast cancer mortality rate than any other race or ethnic group. African American/black women were 40% more likely to die due to breast cancer than any other race or ethnicity.<sup>1,2</sup> The cause for such a high rate in African American/black women can be reflective of several factors including comorbidities, lack of access to screening or treatment and stage at which diagnosed. Therefore, women should know their cancer risk and be proactive about their health to lower their risk of breast cancer and increase the chance of early detection.

#### References:

1. Breast Cancer. Centers for Disease Control and Prevention. <https://www.cdc.gov/vitalsigns/breastcancer/>. Published November 14, 2012. Accessed September 26, 2017.
2. O'Keefe EB, Meltzer JP, Bethea TN. Health Disparities and Cancer: Racial Disparities in Cancer Mortality in the United States, 2000–2010. *Frontiers in Public Health*. 2015;3(51). doi:10.3389/fpubh.2015.00051.
3. Cancer Prevention and Control. Centers for Disease Control and Prevention. <https://www.cdc.gov/cancer/dccp/resources/features/cancerhealthdisparities/>. Published April 17, 2017. Accessed October 16, 2017.

# Carbon Monoxide Poisoning Linked to Post-Disaster Generator Use

By Kevin Baker, MPH

Florida is prone to experiencing major storm systems such as tropical storms and hurricanes due to its tropical climate and proximity to warm bodies of water. These natural disasters can cause wind damage, flooding, injuries, and death. In the aftermath of a natural disaster, there are many dangers that pose a threat to public health, one of which is carbon monoxide (CO). CO is an odorless and colorless gas that can be produced from a variety of fossil fuel-powered sources such as cars, boats, space heaters, power tools, stoves, lanterns, grills, fireplaces, gas ranges, furnaces, and generators. An individual can experience CO poisoning when he/she breathes in CO for an extended period of time. The illness is characterized by symptoms such as weakness, dizziness, fatigue, headache, confusion, nausea, vomiting, shortness of breath, numbness, loss of consciousness, and may result in death.

Once a major storm passes through an area, many people are left without electricity and therefore utilize generators to supply power to their homes. If generators are not operated following the owner manual, individuals within a residence can be exposed to high levels of CO, which may cause illness, injury, and death. After Hurricane Irma, the Florida Department of Health (DOH) received numerous reports of CO-related poisonings and deaths associated with generator use statewide, which made national headlines. DOH has been conducting epidemiological investigations to further investigate these cases to guide public health messaging and interventions to reduce the likelihood of CO poisonings following natural disasters in the future.

While CO cannot be seen, smelled, or heard, CO poisoning can be easily prevented. The Centers for Disease Control and Prevention recommends taking the following measures to prevent individuals from exposing themselves to CO from generators: never use a generator inside your home or garage, even with open windows and doors; place generators at least 20 feet away from your home; install battery-operated CO detectors in or around every sleeping area in your home; and check the detectors regularly to ensure they are functioning appropriately.

More information about carbon monoxide poisoning and generator use can be found here, <https://www.cdc.gov/co/default.htm>.

# Selected Reportable Diseases in Pinellas County

Disease	Pinellas		YTD Total		Pinellas County Annual Totals		
	September 2017	September 2016	Pinellas 2017	Florida 2017	2016	2015	2014
<b>A. Vaccine Preventable</b>							
Measles	0	0	0	3	0	0	0
Mumps	0	0	1	44	0	0	0
Pertussis	2	3	30	294	18	17	19
Varicella	3	5	17	494	74	38	35
<b>B. CNS Diseases &amp; Bacteremias</b>							
Creutzfeldt-Jakob Disease (CJD)	0	0	1	21	2	3	0
Meningitis (Bacterial, Cryptococcal, Mycotic)	0	1	7	85	7	6	4
Meningococcal Disease	0	0	0	19	0	1	0
<b>C. Enteric Infections</b>							
Campylobacteriosis	15	13	155	3262	146	104	103
Cryptosporidiosis	5	3	28	388	27	49	240
Cyclosporiasis	1	0	6	111	5	3	0
<i>E. coli Shiga Toxin (+)</i>	0	1	2	92	3	2	6
Giardiasis	2	4	35	772	41	30	42
Hemolytic Uremic Syndrome (HUS)	0	0	0	8	0	0	0
Listeriosis	0	0	0	0	2	2	0
Salmonellosis	36	29	182	4381	188	196	216
Shigellosis	3	2	21	984	19	174	21
<b>D. Viral Hepatitis</b>							
Hepatitis A	0	0	0	201	2	4	2
Hepatitis B: Pregnant Woman +HBsAg	0	0	23	358	28	37	21
Hepatitis B, Acute	2	7	33	554	68	57	44
Hepatitis C, Acute	4	3	19	276	49	32	19
<b>E. VectorBorne/Zoonoses</b>							
Animal Rabies	0	1	2	29	4	1	2
Rabies, possible exposure	9	14	112	2489	131	114	190
Chikungunya Fever	0	0	0	1	1	2	10
Dengue	0	0	0	18	2	3	1
Eastern Equine Encephalitis	0	0	0	1	0	0	0
Lyme Disease	1	2	13	146	11	6	5
Malaria	0	0	0	44	0	2	3
West Nile Virus	0	0	0	3	1	1	0
<b>F. Others</b>							
Chlamydia	325	316	4193	n/a	4084	4168	3853
Gonorrhea	142	129	1496	n/a	1560	1439	1295
Hansen's Disease	0	0	0	0	0	0	0
Lead Poisoning	2	0	22	539	32	40	62
Legionellosis	4	2	16	312	19	18	13
Mercury Poisoning	0	0	0	31	0	1	2
Syphilis, Total	18	24	321	n/a	400	289	186
Syphilis, Infectious (Primary and Secondary)	6	11	128	n/a	187	151	75
Syphilis, Early Latent	5	8	108	n/a	144	83	61
Syphilis, Congenital	0	0	4	n/a	2	3	0
Syphilis, Late Syphilis (Late Latent; Neurosyphilis)	7	5	81	n/a	68	52	50
Tuberculosis	0	3	25	n/a	31	14	25
<i>Vibrio Infections</i>	1	1	6	203	8	11	10

n/a = not available at this time. Reportable diseases include confirmed and probable cases only. All case counts are provisional. Data is collected from the Merlin Reportable Disease database, surveillance systems maintained at the Florida Department of Health in Pinellas County, and Florida CHARTS <http://www.floridacharts.com/charts/default.aspx>.

\*STD data in PRISM is continually updated. Please note, data from the previous month takes up to an additional month or more to be correctly updated.

\* Florida tracks cases of HIV/AIDS. For the most up to date data, please visit: <http://www.floridahealth.gov/diseases-and-conditions/aids/surveillance/index.html>