



**LaSalle County Health Department**  
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To: Health Care Providers

Date: September 4, 2018

From: LaSalle County Health Department

Re: Semi- Annual Communicable Disease Report

Enclosed you will find the 2018 LaSalle County Health Department's Semi Annual Communicable Disease Report. Included you will find updated contacts, information on recent outbreaks and information on several current topics for your convenience. Please feel free to contact us with any questions you may have.

Sincerely,

Chris Pozzi, LEHP

Director of Environmental Health

Debra Hart, RN

Director of Nursing

# LaSalle County Health Department

## Communicable Disease Contact Information

### Environmental Health Division

Communicable Diseases/Epidemiological/Surveillance (includes reportable diseases and non-reportable diseases such as influenza, lice, and scabies)

Primary Contact	Erika Walzer, BS	Back up Contact	Matthew Devine, MA
Email	<a href="mailto:ewalzer@lasallecounty.org">ewalzer@lasallecounty.org</a>	Email	<a href="mailto:mdevine@lasallecounty.org">mdevine@lasallecounty.org</a>
Phone	815-433-3366 xt 220	Phone	815-433-3366 xt 228
Fax	815-433-1636	Fax	815-433-1636

### Personal Health Division

Other Communicable Diseases such as STDs, TB, HIV

Primary Contact	Tiffany Moody RN	Back Up Contact	Tina Craig RN
Email	<a href="mailto:tmoody@lasallecounty.org">tmoody@lasallecounty.org</a>	Email	<a href="mailto:tcraig@lasallecounty.org">tcraig@lasallecounty.org</a>
Phone	815-433-3366 xt Ext 242	Phone	815-433-3366 xt 237
Fax	815-433-2876	Fax	815-433-2876

### Immunizations & Travel Recommendations

Primary Contact	Tina Craig RN	Back Up Contact	Debra Hart RN
Email	<a href="mailto:tcraig@lasallecounty.org">tcraig@lasallecounty.org</a>	Email	<a href="mailto:dhart@lasallecounty.org">dhart@lasallecounty.org</a>
Phone	815-433-3366 xt 237	Phone	815-433-3366 xt 244
Fax	815-433-2876	Fax	815-433-2876

### REPORTING:

#### **WHO, WHAT, WHERE**

Who is required to report?

Health care providers, hospitals and laboratories (a full list is on the link below).

What is required to be reported, refer to:

<https://dph.illinois.gov/topics-services/diseases-and-conditions/infectious-diseases/infectious-disease-reporting> and the **IDPH STOP and Report Infectious Disease chart**.

All reporting begins with the Local Health Department. If your patient lives in a different county or state, initial reporting is still to the Local Health Department. Reporting can be done by phone, fax and INEDSS.



**STOP**  
and Report  
*Infectious Disease*

**Illinois Reportable Diseases**

Mandated reporters, such as health care providers, hospitals and laboratories, must report suspected or confirmed cases of these diseases to the local health department within the number of days or hours indicated in parentheses.

\*For reporting purposes, "immediate" means as soon as possible within three hours.

Anaplasmosis (7d)	Hepatitis A (24h), B (7d), C (7d), D (7d)	Severe Acute Respiratory Syndrome (SARS) (immediate)*
Any suspected bioterrorist threat (immediate)*	Histoplasmosis (7d)	Shigellosis (7d)
Any unusual case or cluster of cases that may indicate a public health hazard (immediate)*	HIV infection (7d)	Smallpox (immediate)*
Anthrax (immediate)*	Influenza, deaths in <18 yr olds (7d)	Smallpox vaccination, complications of (24h)
Arboviruses (including WNV) (7d)	Influenza A, variant (immediate)*	Spotted fever rickettsioses (7d)
Babesiosis (7d)	Influenza, ICU admissions (24h)	<i>S. aureus</i> , Methicillin resistant (MRSA) clusters (two or more lab confirmed cases) in a community setting (24h)
Botulism, foodborne (immediate)*	Legionellosis (7d)	<i>S. aureus</i> , Methicillin resistant (MRSA) in infants <61 days (24h)
Botulism, infant, wound, other (24h)	Leprosy (7d)	<i>S. aureus</i> infections with intermediate or high level resistance to vancomycin (24h)
Brucellosis (24h, unless bioterrorism suspected, then immediate)*	Leptospirosis (7d)	Streptococcal infections, Group A, invasive including STSS and necrotizing fasciitis (24h)
Campylobacteriosis (7d)	Listeriosis (7d)	<i>S. pneumoniae</i> , invasive in those <5 yrs (7d)
Chancroid (7d)	Lyme disease (7d)	Syphilis (7d)
Chlamydia (7d)	Malaria (7d)	Tetanus (7d)
Cholera (24h)	Measles (24h)	Toxic shock syndrome due to <i>S. aureus</i> (7d)
Creutzfeldt-Jakob Disease (7d)	Mumps (24h)	Trichinosis (7d)
Cryptosporidiosis (7d)	<i>N. meningitidis</i> , invasive (24h)	Tuberculosis (7d)
Cyclosporiasis (7d)	Ophthalmia neonatorum (gonococcal) (7d)	Tularemia (24h unless bioterrorism suspected then immediate)*
Diphtheria (immediate)*	Outbreaks of public health significance (24h)	Typhoid fever (24h)
Drug-resistant organism, extensively (7d)	Pertussis or whooping cough (24h)	Typhus (24h)
Ehrlichiosis (7d)	Plague (immediate)*	Varicella (chickenpox) (24 h)
Enteric <i>E. coli</i> infections (STEC, O157:H7, ETEC, EPEC, EIEC) (24h)	Pollomylelitis (immediate)*	Vibriosis (non cholera) (7d)
Foodborne or waterborne outbreaks (24h)	Psittacosis (7d)	Yersiniosis (7d)
Gonorrhea (7d)	Q fever (24h unless bioterrorism suspected then immediate)*	
<i>Haemophilus influenzae</i> , invasive (24h)	Rabies, human and potential human exposure and animal (24h)	
Hantavirus pulmonary syndrome (24h)	Reye syndrome (7d)	
Hemolytic uremic syndrome, post diarrheal (24h)	Rubella (24h)	
	Salmonellosis, other than typhoid (7d)	

Laboratories must report positive test results of these diseases to their local health department within the time frame indicated.

**All reports are confidential and should include—**

- the disease or condition being reported
- patient's name, date of birth, age, sex, race/ethnicity, address, and telephone number
- physician's name, address, and telephone number
- method of diagnosis, if available

**TO REPORT A CASE**

contact your local health department:

During regular business hours, call \_\_\_\_\_

For emergencies after business hours, call \_\_\_\_\_

If no local health department is available, contact the

Illinois Department of Public Health

217-785-7165 • TTY (hearing impaired use only) 800-547-0466



State of Illinois  
Illinois Department of Public Health

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## 2018 LaSalle County Reportable Disease Summary

<u>Reportable Diseases</u>	Jan 2018	Feb 2018	Mar 2018	Apr 2018	May 2018	June 2018	Total YTD	Total 2017
Arboviral	0	0	0	0	0	0	0	2
Bacterial Meningitis	0	0	0	0	0	0	0	5
Brucellosis	0	0	0	0	0	0	0	0
Campylobacter	3	3	1	1	0	0	8	84
Chickenpox	0	2	1	0	0	0	3	9
Creutzfeldt-Jakob Disease	0	0	0	0	0	0	0	0
Cryptosporidiosis	0	0	0	0	0	0	0	2
Haemophilus Influenzae	0	0	1	1	0	0	2	2
E. coli 0157:H7**	0	0	0	0	0	0	0	3
Hepatitis A	0	0	0	0	0	0	0	0
Hepatitis B	0	0	0	0	1	1	2	5
Hepatitis C	3	4	10	10	2	2	31	88
Histoplasmosis	0	0	1	0	0	0	1	3
Influenza A or B	18	2	5	1	0	0	26	18
Legionnaires Disease	0	0	0	0	0	0	0	1
Listeriosis	0	0	0	0	0	0	0	0
Lyme Disease	1	0	0	0	0	0	1	5
Mumps (Physician Verified)	0	0	1	0	0	0	1	0
Pertussis	0	0	0	1	0	0	1	3
Rabies Potential Exposure	0	0	0	4	0	1	5	3
Rocky Mountain Spotted Fever	0	0	0	0	0	0	0	0
Rubella	0	0	0	0	0	0	0	0
Salmonella	0	1	3	1	0	0	5	19
Shigella	0	0	0	0	0	2	2	19
Staph Inf. < 61 days old	0	0	0	0	0	1	1	1
Strep - Invasive Group A	1	0	1	0	0	0	1	0
Strep Pneu. Inv. , age 5 years	0	0	0	0	0	1	1	0
Yersiniosis	0	0	0	0	0	0	0	1
West Nile Virus	0	0	0	0	0	0	0	1
<b>INVESTIGATIONS</b>								
Non-immunizable	8	8	16	15	2	7	56	222
Immunizable	18	4	7	4	1	1	35	39
<b>Total</b>	26	12	23	19	3	8	91	261
<b>Tuberculous</b>								
Client's Tested	61	25	28	27	28	36	179	549
Newly Found Reactors	11	3	1	2	0	2	19	18
Clients Placed on Preventive treatment	1	1	0	0	0	0	2	4
Confirmed or Suspect TB Cases	1	3	1	2	1	0	8	18
Active TB Cases	0	0	0	0	0	1	1	2
<b>STD</b>								
Chlamydia	26	26	40	24	22	26	144	368
Gonorrhea	5	4	7	4	5	4	29	89
Syphilis	1	2	2	1	2	1	9	15
<b>HIV</b>								
Newly Identified LC Cases	0	0	0	0	0	0	0	0
<b>Foreign Travel Recommendations</b>								
Immunization Clinics	6	3	5	8	8	4	34	43
Total Client Seen	41	24	23	26	32	39	185	673
Total Immunizations Given	64	45	44	55	46	74	270	1186

## **LASALLE COUNTY HEALTH DEPARTMENT WEB SITE**

<http://lasallecounty.org/lasalle-county-health-department-2/>

You will find very useful forms, guidelines and information on our website. If you don't see something you need let us know!

### **Current Health Information Available includes:**

- Prepare Yourself for an Emergency
- Ebola Virus Information
- Zika Virus Information
- Lyme Disease
- Flood Disaster Information
- West Nile Virus
- Animal/Insect Spread Diseases
- Hand, Foot, Mouth Disease
- Mold and Your Health
- Immunizations Required (Child/Adult)
- WIC
- Bed Bugs
- Scabies
- Seoul Virus

### **Health Care Info & Forms Currently Available**

- 2017 Semi-Annual Communicable Disease Report
- Confidential Morbidity Report of STDs
- Illinois Reportable Diseases
- Infectious Disease School Manual
- Varicella (Chickenpox) Report Form
- Lice and Head Lice
- Influenza Outbreaks in Long Term Care
- What Is An Outbreak?
- A.G.E. Control Viral Acute Gastroenteritis in Long Term Care
- Bat Exposure Guidelines
- Exclusion of Bats & Contractors
- Capturing a Bat
- Wildlife and Animal Removal
- Animal Bite Protocol

## OTHER HOT TOPICS WORTH MENTIONING

### Cyclospora Outbreak Updates

Between May and the beginning of August, there have been 777 reported cases of *Cyclospora cayetanensis* in the State of Illinois. 253 cases were linked to eating a salad from McDonald's, 156 cases were linked to a private event held at the Evanston Golf Club on July 3<sup>rd</sup>, and 57 cases were linked to various restaurants in the Chicago and Rock Island areas. The remaining 311 cases are still being investigated. Some cases may be linked to prepackaged salads and wraps containing romaine lettuce that were distributed by Caito Foods LLC.

*Cyclospora cayetanensis* is a one-celled parasite that is spread through fecal to oral contamination, for example, consuming food or water that has been contaminated with infected stool. Cyclospora is not infectious at the time it is passed in the stool of an infected person. It can take days for the parasite to become infectious after it is passed, depending on temperature and humidity, so it is unlikely that this parasite is spread from direct contact with an infected person. Symptoms include watery diarrhea, loss of appetite, bloating, weight loss, abdominal cramping, nausea, vomiting, and other flu-like symptoms.

### Arboviruses

Arboviruses (Arthropod Borne Viruses) are spread to humans from a bite by an infected insect such as ticks and mosquitos. These diseases include West Nile Virus, Lyme disease, St. Louis Encephalitis, as well as the less common Heartland Virus, Rocky Mountain Spotted Fever, and Bourbon Virus. During the warmer months, when ticks and mosquitos are more active, is when we see an increase in arboviral disease reports. These diseases are common and do happen in our area. It is important to remember to test for them. Ask patients about outdoor activities and don't rule out arboviral diseases even if patients, especially children, have no evidence or recollection of a bite. Here are some updates about arbovirus protocol:

Starting October 1, 2018, the IDPH Division of Laboratories will no longer be accepting specimens for Dengue, Chikungunya, California Encephalitis serogroup or Zika virus testing. As of that date, healthcare providers should utilize commercial laboratories for available testing for these pathogens. Specimens that test IgM positive and PCR negative for any of these pathogens at commercial laboratories may be forwarded to IDPH Chicago Laboratory, where they will be sent to CDC for confirmatory PRNT testing. A testing authorization number is not required for these specimens.

As of August 6, 2018, the CDC Division of Vector-Borne Diseases has put out a toolkit for Rocky Mountain Spotted Fever (RMSF) and other tick-borne diseases. The toolkit offers opportunities for continuing education in seven professional categories. Here's the link for the tool kit: <https://www.cdc.gov/rmsf/resources/toolkit.html>

## Rabies Update

In early August, a bat tested positive for rabies in LaSalle County. Since then, we have been flooded with calls about bat exposures. As a reminder, patients should not be started on pre-exposure prophylaxis (PEP) before consulting with the health department first. In the case of an animal bite, a bite report needs to be filled out and faxed to animal control as well as to the health department as soon as possible. The bite report form can be found on the LaSalle County Health Department website. An important question to ask the patient is the whereabouts of the animal. If the animal can be tested for rabies, then the patient might not have to go through unnecessary PEP treatment, saving everyone time and money. ICPs were previously provided with a rabies flip book with the necessary protocols when handling a rabies patient. If you need this flip book again, please call the Health Department.

## Sexually Transmitted Disease Update

Recently the Illinois Department of Public Health released the finalized data for STD's for 2017. Statewide Chlamydia, Gonorrhea and all Syphilis cases have increased. Statistical data show Chlamydia is up 4.6%, Gonorrhea has increased 12.5% and Early Syphilis up 0.8%.

LaSalle County also experienced increases in Gonorrhea 12.5%, Chlamydia 4.6%, and Syphilis. Locally we keep statistics for all Syphilis cases not just Early Syphilis. In 2017 there were 14 Syphilis cases reported. The breakdown is 2 Early Syphilis cases, 1 Secondary, and 9 Latent Syphilis cases. Current statistics for 2018 reflect an ongoing increase in Syphilis cases as a whole in LaSalle County. As of July 30, 2018 we have had 2 Secondary Syphilis cases, 3 Early Syphilis, 4 Late Latent, and 1 Congenital Case reported.

As with any STD, partner notification for Syphilis cases is part of our investigation process. Clients are not always forth coming with partner information and/or partners do not always respond to requests made by the health department. Without reaching partners for notification of possible exposure and adequate treatment, the cycle of infection continues.

*Syphilis cases in Illinois continue to rise. There has been a 50% increase in early syphilis cases from 2013-2017. Illinois has also seen a 39% increase of syphilis (all stages) in females from 2013-2017. Increases in female syphilis cases typically correspond to an increase in congenital syphilis (CS) cases, and unfortunately this has been seen in Illinois. In 2017, Illinois reported 21 CS cases including two stillbirths. Provisional data for 2018 indicate that Illinois (excluding Chicago) has already reported nine CS cases in the first six months,*

*with Chicago CS cases not yet known. This is one case less than what was reported by Illinois (excluding Chicago) in all of 2017.*

## **National Hepatitis A Outbreak**

In the fall of 2017, the Illinois Department of Public Health (IDPH) issued a memo regarding multiple outbreaks of hepatitis A in the U.S. So far in 2018, many of these outbreaks are still ongoing and additional outbreaks have been reported in several neighboring states including Indiana, Michigan and Kentucky. These outbreaks are predominantly occurring in the homeless populations and in persons who use injection and non-injection drugs, along with close contacts of both groups. Additional outbreak clusters have also been identified in men who have sex with other men (MSM) and persons who are or have recently been incarcerated. On June 5, 2018, IDPH sent a memo to local health departments and medical providers encouraging the continuation of testing, reporting and vaccination of populations at risk for Hepatitis A.

As part of this response, the LaSalle County Health Department currently has Hep A vaccine available for free or a reduced cost for people at the greatest risk of infection. *Contact Tina Craig at 815-433-3366 for an appointment.*

# WHAT IS HEPATITIS A?

It is a highly contagious liver disease caused by a virus. It is spread from person to person and can last weeks to months. Symptoms usually start within 15-50 days of exposure to hepatitis A.



Sharing personal items or having sex with someone who is infected

## HOW IS HEPATITIS A SPREAD?



Consuming food or drinks handled by an infected person



Contact with an infected person's waste



Sharing needles, other drugs, or cigarettes handled by an infected person

## WHAT ARE THE SYMPTOMS OF HEPATITIS A?



Fever



Loss of appetite



Nausea or vomiting



Jaundice



Dark urine, pale stool, diarrhea



Fatigue



Stomach pain



Joint pain



Get TWO shots of the hepatitis A vaccine

## HOW DO I PREVENT HEPATITIS A?



Do NOT share food, drinks, or cigarettes



Wash hands thoroughly with soap and water



Do NOT share needles or have sex with someone who has hepatitis A



Do NOT share eating utensils or personal items

## What Health Care Providers Can Do

### Syphilis Is Preventable and Treatable...And May Not Be On Your Radar

1 in 3 physicians have not received any post-medical school training in sexually transmitted diseases. And if knowing syphilis is knowing medicine, then too many providers now find themselves at a great disadvantage. If you have had limited, or no, experience with diagnosing and treating syphilis, do you know where to turn? Simply look to [CDC's STD Treatment Guidelines](#) for recommendations and strategies that you can use to help prevent and treat this ancient disease.

The troubling reality is that when not adequately treated, syphilis can lead to visual impairment, hearing loss, stroke, and other neurological problems. Syphilis infection can also increase a person's risk for getting HIV or giving it to others. As a provider, you need to be aware that all 50 states *require* that syphilis cases be reported to the state or local public health agency so that it can take action to find and treat exposed persons.

### Syphilis Rates Are Increasing in Men, Women, and some Newborns in the United States

Knowledge about the prevention and treatment of syphilis is especially important nowadays. Why? Because recent data show that syphilis rates are on the rise. Rates of primary and secondary (P&S) syphilis—the most infectious stages of the disease—increased a troubling **18%** between 2015 and 2016.

While rates have increased among both men and women, men account for **89%** of all P&S cases. Gay, bisexual, and other men who have sex with men (MSM) account for **81%** of male cases where the sex or gender of the partner is known.

Likewise, increases in congenital syphilis (CS) have paralleled the national increase in P&S syphilis among women of reproductive age. CS can cause miscarriage, stillbirth, early infant death, or severe illness in those infants who survive. Cases of CS increased by a staggering **87%** between 2012 and 2016.

### What Healthcare Providers Can Do



SYPHILIS AND YOUR PATIENTS:  
A GUIDE FOR HEALTH CARE PROVIDERS

## TEST PREGNANT WOMEN:

## TEST MSM PATIENTS:

at first prenatal visit

at beginning of 3rd trimester and at delivery, if at risk

annually if sexually active

more frequently if at risk

As a health care provider, you play an important role in reducing CS. Here's what you can do:

- **Complete a Sexual History for Your Patients.** Have an honest and open talk with your patients about their sexual history. STD counseling should be provided to those at risk for STDs, and contraceptive counseling should be provided to those at risk of unintended pregnancy.
- **Test All Pregnant Women for Syphilis.** This should occur at the first prenatal visit or at the time pregnancy is confirmed. Repeat screening for pregnant women at high risk and in areas of high prevalence (<https://www.cdc.gov/nchhstp/atlas/>) at the beginning of the third trimester and at delivery.
- **Treat Women Infected with Syphilis Immediately.** If a woman has syphilis or suspected syphilis, treat her immediately with long-acting penicillin G, especially if she is pregnant, according to CDC's STD Treatment Guidelines. Test and treat the infected woman's sex partner(s) to avoid reinfection. If you have challenges obtaining penicillin G, contact your state or local health department.
- **Confirm Syphilis Testing at Delivery.** Before discharging the mother or infant from the hospital, make sure the mother has been tested for syphilis at least once during pregnancy or at delivery. If she tests positive, manage the infant appropriately. All women who deliver a stillborn infant should be tested for syphilis.
- **Quickly Report All Cases of Syphilis and CS.** Report cases of syphilis by stage to the local or state health department right away; CS cases should be reported within 24 hours.

You also play an important role in reducing syphilis in MSM. Here are the actions you can take:

- **Complete a Sexual History for Your Patients.** Have an honest and open talk with your patients about their sexual history. Order CDC-recommended tests based on age, gender, sex or gender of sex partners, anatomic sites of exposure, and risk.
- Perform a syphilis test for sexually active MSM, including those with HIV infection, at least annually, and as frequently as every 3 to 6 months if there are multiple sex partners or substance use.
- **Immediately Treat and Report Syphilis Cases.** Stage and treat syphilis cases according to CDC's STD Treatment Guidelines. Presumptively treat all MSM with signs or symptoms suggestive of primary or secondary syphilis

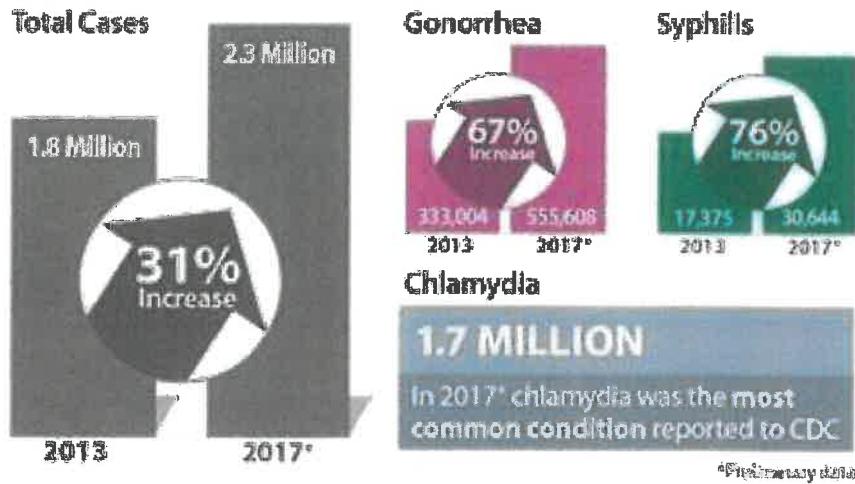
and all MSM who are sexual contacts to a case of syphilis at the initial visit. If you have challenges obtaining penicillin G, contact your state or local health department. Report all syphilis cases by stage to your state or local health department.

For clinician resources, see [Syphilis Treatment and Care](#).

**CDC is working with other federal agencies and national partners to reduce congenital syphilis and syphilis among men who have sex with men. In order to accomplish this, CDC needs your support.**

# THE U.S. IS EXPERIENCING STEEP, SUSTAINED INCREASES IN SEXUALLY TRANSMITTED DISEASES

Combined diagnoses of chlamydia, gonorrhea, and syphilis increased sharply over the past five years



## UNDIAGNOSED STDs CAN LEAD TO SEVERE HEALTH PROBLEMS

Diagnosed cases of chlamydia, gonorrhea, and syphilis represent just a small fraction of the true disease burden

Left untreated, these STDs can produce severe, adverse effects

**infertility** *ectopic pregnancy*  
**increased HIV risk**

## CONTINUED CONCERNs ABOUT ANTIBIOTIC RESISTANT GONORRHEA



Gonorrhea is expected to eventually wear down our last highly effective antibiotic



Lab tests show a small but growing fraction of gonorrhea samples have signs of emerging antibiotic resistance



CDC recommends a two-drug combination to preserve our last highly effective antibiotic

For more information, visit [cdc.gov/nchhstp/newsroom](http://cdc.gov/nchhstp/newsroom)



U.S. Department of  
Health and Human Services  
Centers for Disease Control and Prevention

**RETURN TO:**

**LaSalle County Animal Control**

**Dell Brodd, D.V.M. Administrator**

119 W. Madison Street, Room 100

Ottawa, Illinois 61350

Phone: (815) 434-8661

Fax: (815) 434-7725

**DATE OF REPORT** \_\_\_\_\_

**PERSON BITTEN** \_\_\_\_\_ Sex \_\_\_\_\_ Date of Birth \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Date of Bite \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ Home Phone \_\_\_\_\_ Work Phone \_\_\_\_\_

Parent or Guardian of person bitten \_\_\_\_\_ Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_ Home Phone \_\_\_\_\_ Work Phone \_\_\_\_\_

Did Animal Attack Victim? \_\_\_\_\_ Describe \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**ATTENDING PHYSICIAN** \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**REPORTED BY** \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**OWNER OF ANIMAL** \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Animal Type Dog  Cat  Other \_\_\_\_\_ Breed \_\_\_\_\_ Name \_\_\_\_\_

Rabies Vaccination Yes  No  Unknown  Date Vaccinated \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ 1 year  3 year  Tag # \_\_\_\_\_

Clinic where vaccinated \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**VETERINARY HOSPITAL WHERE BITING ANIMAL IS CONFINED:**

Name \_\_\_\_\_ Phone \_\_\_\_\_

Address \_\_\_\_\_ City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

**COMMENTS**



August 2018

## NERVE AGENT INFORMATION FOR EMERGENCY MEDICAL SERVICES AND HOSPITALS

**\*\*Meticulous attention to standard protocols for personal protection, recognizing toxidromes, and treating patients continues to be the best way to prepare for and respond to chemical agent exposures\*\***

### PURPOSE

This document provides a quick refresher on standard protocols for recognizing, treating, and protecting yourself from nerve agent exposures. Comprehensive follow-up guidance for Law Enforcement, Fire, EMS, HazMat, and Hospital-Based First Receivers incorporating lessons learned and best practices from the recent United Kingdom incidents will be forthcoming.

### BACKGROUND

Nerve agents are extremely toxic chemical warfare agents. Several nerve agents exist and are generally categorized as either "high volatility" or "low volatility" chemicals, a measure of how likely they are to disperse in air. A high volatility nerve agent (easily dispersed in air) means that the exposure is likely to occur from breathing in its vapors resulting in the rapid onset of symptoms. A low volatility nerve agent (not easily dispersed in air) typically gets absorbed through the skin and has a delayed onset of signs and symptoms. An example of a high volatility nerve agent is sarin, whereas VX is a low volatility agent. In the body, a nerve agent exerts its effects by inhibiting an enzyme (acetylcholinesterase), resulting in acute illness - specifically, cholinergic crisis. Organophosphorus or carbamate pesticides produce similar effects to nerve agents.

### SIGNS AND SYMPTOMS OF NERVE AGENT POISONING

**Caveat: Poisoned patients may not demonstrate all of these symptoms**

- **Mouth/Skin:** Drooling (Salivation), foaming at the mouth, and excessive sweating
- **Nose/Eyes:** Runny nose and watery eyes (Lacrimation) with small (often pinpoint) pupils (Miosis)
- **Chest:** Cough, chest tightness, difficulty in breathing, wheezing, respiratory failure, "wet" fluid filled lungs
- **Abdominal:** Urination, Diarrhea, abdominal (Gastrointestinal) cramps, belching, nausea, and/or vomiting (Emesis)
- **Mental Status:** Confusion, drowsiness, slurred speech, ataxia, unconsciousness, coma
- **Muscle/Neurological:** Fatigue, weakness, twitching, tremors, cramps, absent reflexes, seizures

**Underlined findings = "SLUDGE" - Salivation, Lacrimation, Urination, Diarrhea, Gastrointestinal cramps, Emesis**

**Other mnemonic used = "DUMBBELS" - Diarrhea, Urination, Miosis/Muscle weakness, Bronchospasm/Bronchorrhea, Bradycardia, Emesis, Lacrimation, Salivation/Sweating**

Clinical Effects of Nerve Agents versus Opioids		
	Nerve Agent	Opioid
<b>Nose</b>	Runny nose	Normal
<b>Airway</b>	Secretions/drooling/foaming at the mouth	Normal
<b>Breathing / Respiratory status</b>	Increased work of breathing/chest tightness/wheezing/difficulty in breathing/cough/"wet" fluid filled lungs- more prominent with inhaled exposure; dermal exposure may not cause bronchoconstriction or bronchospasm	Decreased respiratory rate
<b>Heart rate</b>	Slowed	Normal
<b>Mental Status / Neurological</b>	Slow/unconscious/seizures/confusion/slurred speech/ataxia/coma/absent reflexes/tremors	Slow or unconscious/coma/seizures
<b>Eyes</b>	Tearing/small pupils-pinpoint	Small pupils-pinpoint
<b>Skin</b>	Wet/sweaty/cyanosis	Normal/cyanosis
<b>Gastrointestinal</b>	Belching/cramps/vomiting/diarrhea	Normal
<b>GU</b>	Urination	Normal
<b>Muscles</b>	Fatigue/weakness/twitching/ cramps	Normal

**A KEY DISTINCTION BETWEEN NERVE AGENT POISONING AND OPIOID POISONING IS "SLUDGE" OR "DUMBBELS."**

## DETECTION (IF YOU STRONGLY SUSPECT A NERVE AGENT)

- Contact HazMat or special operations teams
- Notify the local FBI Field Office WMD coordinator

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

- Emergency responders should have the proper training and education to work with hazardous materials.
- Those providing or assisting with patient care including decontamination should follow institutional policy for a chemical incident, wearing a recommended chemical protective suit, gloves, boots, and respiratory protection to prevent any secondary exposure from patients or objects.
- After patient decontamination is complete, providers should wear a gown and a double layer of nitrile gloves during patient contact.

## PATIENT DECONTAMINATION

- A person potentially exposed to a nerve agent should be decontaminated whether they develop signs of acute illness or not.
- Removal of clothing is a vital step to reduce ongoing and secondary exposure. Responders should pay particular attention to the risk of secondary exposure during clothing removal. Double bagging removed clothing is ideal.
- Wiping skin with a paper towel, dry wipe, or other cloth will also contribute to effective decontamination. This dry decontamination step can be performed by patients themselves and, along with clothing removal, should be done as early as possible.
- If contamination with liquid agent is suspected, patients should be decontaminated with water, ideally with a high-volume, low-pressure shower, including soap if available, gentle rubbing with a soft cloth or sponge, and active drying with a clean towel after the shower.
- If Reactive Skin Decontamination Lotion (RSDL) is available, it is recommended for spot decontamination.

## TREATMENT\*

- Nerve agent toxicity is the result of excessive acetylcholine, causing cholinergic crisis. Therapy focuses on treating the excessive secretions and bronchospasm with anticholinergic medications such as atropine with dosing titrated to respiratory secretions and airway resistance. Pralidoxime chloride (2-PAM Cl), a specific nerve agent antidote, augments the primary therapy of atropine; continuous infusions may be beneficial.
- Seizures should be managed with escalating doses of benzodiazepines (midazolam, lorazepam, or diazepam). All patients, even without convulsions, who meet the severe criteria should be treated with midazolam, lorazepam, or diazepam 10 mg IV/IM/IO. A pediatric patient in this setting is defined as an individual less than 18 years old AND with an ideal body weight (IBW) of  $\leq 40$  kg. If IBW is  $> 40$  kg, adult medication and dosing are more appropriate. For patients under 40 kg, use midazolam only: 0-13 kg – 70 mcg/kg,  $>13$ -40 kg – 5 mg.
- Autoinjectors (AI) are a convenient means of rapidly administering drugs to treat nerve agent exposure, which may be especially useful pre-hospital or at a hospital managing a large number of patients. However, only certain drugs in specific doses are available in autoinjectors: DuoDote or Antidote Treatment Nerve Agent Autoinjector (ATNAA) or Mark 1 kit (atropine 2 mg/2-PAM Cl 600 mg); atropine 2 mg, 1 mg, or 0.5 mg; 2-PAM Cl 600 mg; diazepam 10 mg.

## EMS AGENCIES SHOULD FOLLOW THEIR ESTABLISHED TREATMENT PROTOCOLS

\*National Model EMS Clinical Guidelines are also acceptable: <https://www.nasemso.org/Projects/ModelEMSClinicalGuidelines/>

**NOTE:** dosages in the model clinical guidelines are based on National Library of Medicine references; dosages noted below are based on the Agency for Toxic Substances and Disease Registry's medical management guidelines.

Patient Age	Antidotes <sup>1</sup>		Other Treatment
	Mild / Moderate Symptoms <sup>2</sup>	Severe Symptoms <sup>3</sup>	
Infant (0-2 yrs)	Atropine: 0.05 mg/kg IV/IM/IO 2-PAM Cl: 15 mg/kg IV/IM/IO	Atropine: 0.1 mg/kg IV/IM/IO 2-PAM Cl: 25 mg/kg IV/IM/IO	Assisted ventilation should be started after administration of antidotes for severe exposures.
Child (2-10 yrs)	Atropine: 1 mg IV/IM/IO 2-PAM Cl: 15 mg/kg IV/IM/IO	Atropine: 2 mg IV/IM/IO 2-PAM Cl: 25 mg/kg IV/IM/IO	Repeat atropine (2 mg IV/IM) at 5- 10 minute intervals until secretions have diminished and breathing is comfortable or airway resistance has returned to near normal.
Adolescent (>10 yrs)	Atropine: 2 mg IV/IM/IO/AI; 2-PAM Cl: 15 mg/kg IV/IM/IO	Atropine: 4 mg IV/IM/IO/AI; 2-PAM Cl: 25 mg/kg IV/IM/IO	
Adult	Atropine: 2 to 4 mg IV/IM/IO/AI; 2-PAM Cl: 600 mg IV/IM/IO/AI	Atropine: 6 mg IV/IM/IO/AI; 2-PAM Cl: 1800 mg IV/IM/IO/AI	
Elderly, Frail	Atropine: 1 mg IV/IM/IO 2-PAM Cl: 10 mg/kg IV/IM/IO	Atropine: 2 to 4 mg IV/IM/IO 2-PAM Cl: 25 mg/kg IV/IM/IO	

1 If 2-PAM Cl solution is needed, prepare from a vial containing 1 g desiccated 2-PAM Cl; reconstitute with 20 ml sterile water.

2 Mild/Moderate symptoms include localized sweating, muscle fasciculations, nausea, vomiting, weakness, dyspnea.

3 Severe symptoms include unconsciousness, convulsions, apnea, flaccid paralysis.

## SPECIFIC PEDIATRIC CONSIDERATIONS

For pediatric patients, existing autoinjectors may provide more than the recommended doses of atropine and pralidoxime. The reference below provides a strategy to mitigate this issue if time and resources allow. This method allows you to discharge the contents of autoinjectors and dilute the drug to prepare the proper dose. Expert opinion would still recommend that, given the benefit compared to the possible harm in delaying treatment, severe patients should be treated with autoinjectors even if they provide doses above recommendations.

Corvino TF, Nahata MC, Angelos MG, Tschampel MM, Morosco RS, Zerkle J, Nelson RN. Availability, stability, and sterility of pralidoxime for mass casualty use. *Ann Emerg Med.* 2006 Mar; 47(3):272-7.

## ADDITIONAL CONSIDERATIONS

- If faced with a mass casualty incident and if pharmaceutical therapies become exhausted, consider contingency medical countermeasures at your discretion.
- Poison Control Centers provide 24-hour-a-day patient care support at 1-800-222-1222.
- The Secretary of Health and Human Services issued a declaration, effective April 11, 2017, under the Public Readiness and Emergency Preparedness Act (PREP Act) to provide liability immunity to certain individuals and entities against any claim of loss relating to the use of medical countermeasures against nerve agents, given certain conditions are met:  
<https://www.federalregister.gov/documents/2017/05/10/2017-09455/nerve-agents-and-certain-insecticides-organophosphorous-and-or-carbamate-countermeasures>

## OTHER RESOURCES

### U.S. Department of Health and Human Services

#### Centers for Disease Control and Prevention / Agency for Toxic Substances and Disease Registry

<https://emergency.cdc.gov/agent/nerve/index.asp>

<https://www.atsdr.cdc.gov/mmg/mmg.asp?id=523&tid=93>

#### Office of the Assistant Secretary for Preparedness and Response

[https://chemm.nlm.nih.gov/na\\_hospital\\_mmg.htm](https://chemm.nlm.nih.gov/na_hospital_mmg.htm)

### Personal Protective Equipment

#### U.S. Department of Labor

#### Occupational Safety and Health Administration

<https://www.osha.gov/Publications/OSHA3370-protecting-EMS-respondersSM.pdf>

[https://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=standards&p\\_id=9765](https://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=standards&p_id=9765)

### Patient Decontamination

#### U.S. Departments of Health and Human Services and Homeland Security

<https://www.phe.gov/Preparedness/responders/Pages/patientdecon.aspx>

### General

#### U.S. Department of Health and Human Services

#### Office of the Assistant Secretary for Preparedness and Response

<https://asprtracie.hhs.gov/>

#### National Fire Protection Association

<https://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=473>