



NJ Communi- CABLE

Winter 2019 Quarterly Newsletter

Communicable Disease Service Mission Statement

Our mission is to prevent communicable disease among all citizens of New Jersey, and to promote the knowledge and use of healthy lifestyles to maximize the health and well-being of New Jerseyans.

We will accomplish our mission through our leadership, collaborative partnerships, and advocacy for communicable disease surveillance, research, education, treatment, prevention and control.

Phil Murphy, Governor
Sheila Oliver, Lt. Governor
Shereef Elnahal, MD, MBA
Commissioner

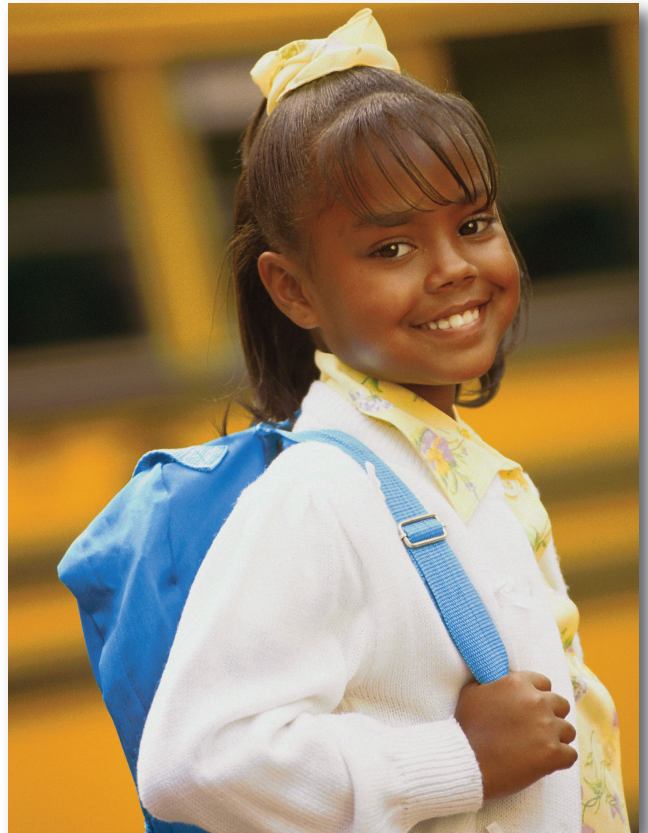
COMMUNICABLE DISEASE SERVICE

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Managing School Outbreaks

It's that time of the year when coughs and runny noses are common in schools. Since schools are close-contact environments, the flu and other illnesses can quickly spread throughout a facility. Many communicable diseases can be prevented by maintaining a clean environment, receiving immunizations, excluding sick students and staff or simple hygiene steps like handwashing, environmental cleaning and other basic control measures. These everyday preventive actions, especially frequent hand washing, are the **MOST** important ways to prevent the spread of communicable diseases.

Prevention and control of communicable diseases is a shared responsibility between schools, health care providers, parents, students, local and state health departments, and other community partners. The school environment is conducive to the acquisition and transmission of communicable diseases, but is also where good preventive practices can lessen the impact of these diseases. As part of maintaining a safe and healthy environment for the school community, certain general and disease specific infection control measures should be



instituted to minimize the risks. Partnerships and collaboration with community agencies such as local health departments (LHDs) are essential to helping schools stay healthy. As shown in the graphic on page 6 LHDs play an important role in schools in areas such as immunization, assessing and monitoring communicable disease, outbreak investigation, and food safety. LHDs can often provide valuable expertise, input, support, and evidence-based resources to schools

Continued on page 6



Infant Botulism

Infant botulism is an acute, life-threatening disease of infants and is the most common form of human botulism in the United States, with an average of approximately 110 cases reported annually. Infant botulism is caused by the ingestion of spores of *Clostridium botulinum* which germinate and produce botulinum neurotoxin in an infant's large intestine. This toxin is circulated systemically and causes several neurologic symptoms such as loss of muscle tone, inability to swallow, and flaccid paralysis as well as muscle weakness, poor gag reflex, and constipation. Soil is the natural habitat for *C. botulinum* and its spores are commonly found on fresh fruits, vegetables and other agricultural products such as honey. Exposure to construction sites must be considered when determining risk factors due to the disruption of soil and unearthing of the spores.

The disease occurs in infants up to 12 months of age with the majority (~90%) occurring in infants less than six months old. This is due to the infant's "immature gut" or inability to move the spores through the body before illness can occur; therefore, leading to an increased susceptibility to botulism spore germination. Honey is the one identified and avoidable source of botulinum spores and because it is not nutritionally essential, many pediatric, public health, and honey industry agencies in the United States recommend that honey not be fed to infants less than one year of age. In the majority of infant botulism cases, the source of

Table 1: Top Five States for Botulism Prevalence

State	Total cases
CA	557
PA	220
NJ	106
TX	77
MD	70

Source: Infant Botulism Treatment and Prevention Program

exposure is never identified or is attributed to ingesting dust particles or soil that carry the spores.

Botulinum toxin is one of the most poisonous substances known and exists in seven variants (A-G). Specifically, infant botulism can be caused by toxin types A, B, E or F. However, types E and F only account for <1% of cases. Almost all cases of infant botulism in the eastern United States are toxin type B with a mix of type A and B seen in the western part of the country. Table 1 above depicts the top five states for infant botulism occurrence from 2003-2017.

Soil ecology plays a large role regarding the number of infant botulism cases in a given area. *C. botulinum* prefers certain soil types and infant botulism is more common in those areas. New Jersey has been in the top five states for 12 of the past 15 years. In addition to

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CDS Helps Local Health Departments Prevent Tick Bites

The Communicable Disease Service (CDS) provided over 3,000 trail signs to county Local Information Network Communication System (LINCS) agencies in an effort to help New Jersey residents avoid tick bites while enjoying time outdoors. These sturdy trail signs, supplied through the Centers for Disease Control and

Prevention, contain helpful tips to prevent tick bites.

Katie Stewart, Health Educator/Risk Communicator for the Warren County Health Department, said “Warren County is known for its open spaces, farms and parks. The Delaware Water Gap National Recreation Area is located within the county and is part of the Appalachian Trail. Park administrators were excited to receive 90 trail signs for use on their 100+ miles of hiking trails. The signs will be an important reminder to prevent tick bites.”

The Camden County Department of Health and Human Services (CCDHHS) has partnered with the Public Works Department to place the tick signs throughout the community at parks, schools and community centers, according to Koren Norwood, Health Educator/Risk Communicator for CCDHHS. She stated that they will make the signs available to 37 municipalities at their Annual Local Boards of Health Summit.

Additional tick bite prevention materials can be found at the CDS Lyme disease website at <https://www.nj.gov/health/cd/topics/lyme.shtml>.



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Expanded Hepatitis C Testing in New Jersey

Hepatitis C is the most common bloodborne pathogen in the United States. Many individuals infected with the hepatitis C virus (HCV) are unaware of their HCV status. While many of those infected with HCV are baby boomers, (those born between 1945-1965), many more are infected because of injection drug use. As the opioid epidemic continues, there are a considerable amount of new or acute HCV infections among younger adults who inject drugs, mostly aged 15-30.

Increased testing is looking to determine the true burden of disease among New Jersey residents. The only way to determine HCV status is to get a blood test. For this reason, the state of New Jersey is expanding the locations where individuals can get tested for HCV. For those individuals who test positive, referring them for treatment and care is also an integral part in stopping the transmission.

Risk factors for HCV include injection drug use (current or only one time), sharing injection equipment (needle, syringe, cotton/cotton filters, cookers, spoons), receiving blood or blood products before 1992 (before blood screening for HCV became available), getting a tattoo in prison or at a location that is not licensed or regulated (jail or at a home party), being in jail (current or in the past). Hepatitis C often has no symptoms, so it is difficult to determine when a person was infected with the virus. However, anyone with any of the risk



factors, should consider getting tested. This includes pregnant women, as the virus may be passed to the baby.

Rapid HCV testing currently exists at most of the Access to Reproductive Care and HIV Services (ARCH) nurse locations with syringe access programs (SAPs): Camden, Atlantic City, Paterson, Newark, and Jersey City. In 2019, HCV testing will be expanded to include seven new ARCH nurses sites without SAP: Bergen County Health Department, Burlington County Health Department, Gloucester County Health Department, Monmouth County Health Department, Ocean County Health Department, Complete Care (Cumberland County) and South Jersey AIDS Alliance (Cape May County) and two new SAP sites in Trenton and Asbury Park. 

**Wash
Your
Hands**

NJ Health
New Jersey Department of Health

Get more information at
<http://nj.gov/health/cd/handwashing.shtml>.

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Antibiotic Awareness Week 2018

Each year, the third week of November marks the Centers for Disease Control's annual observance of Antibiotics Awareness Week. The New Jersey Department of Health's (NJDOH) Communicable Disease Service (CDS) participates in a variety of activities to heighten concern surrounding this important topic.

Medical students are the future prescribers of antibiotics and it is important to shape them as good stewards of antibiotics as they embark on their careers. For the second year, CDS presented a documentary film entitled "Resistance" to medical students, faculty and public health students at the medical schools of Rutgers University and Rowan University. The documentary provides a powerful look into antibiotic resistance, how it develops, the impact it is having on health care, and personal testimonies from people affected by antibiotic-resistant infections.

A major highlight of the week was the launch of the NJDOH Antibiotics Aware stewardship recognition



program. This program is designed to publicly acknowledge the health care facilities and individual providers who are actively working toward improved antibiotic prescribing practices. Information on the benefits of this award, and how to apply, can be found at <https://www.nj.gov/health/cd/topics/stewardship.shtml>. 

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School Outbreaks , continued from page 1

looking to strengthen the health environment for both students and staff.

Outbreaks and suspect outbreaks of illness should be reported immediately to the LHD where the school is located <http://localhealth.nj.gov>. When an outbreak is suspected, this report should be made even if the illness itself is common and not reportable, for example, flu. The New Jersey Department of Health (NJDOH) has guidance available for LHDs and schools for the prevention and control of outbreaks in a school setting. A recent addition to the guidance document includes a new outbreak checklist for schools. This checklist was designed to assist schools in following the steps when a communicable disease outbreak is suspected. Guidance documents and other resources can be found at <https://www.nj.gov/health/cd/topics/#O>.

outbreak is defined as an occurrence of disease greater than would otherwise be expected at a particular time and place. For example, there may be several children with similar symptoms in the same classroom or who attended a common event. There may be an increase in absences with parents reporting that the children had similar symptoms. Two or more students with the same reportable disease or a single case of a highly infectious disease may also be an indication of an outbreak. For example, during flu season you would expect to see sporadic cases of flu in your school, but if you have several cases in a single classroom, you may have an outbreak. When in doubt, schools should contact their LHD for guidance. The sooner a communicable disease outbreak is resolved, the sooner students can get back to learning and the school can get back to the business of educating students.



What is an “outbreak” and when would you suspect that one is occurring? An

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The Role of the Local Health Department





#FighttheFluNJ: It's Not Too Late to Vaccinate!

Even though it's January and flu season is already here, it's not too late to vaccinate. Influenza vaccination efforts can continue throughout the flu season. Health care providers and public health professionals are encouraged to continue to promote flu vaccination

to help reduce the amount of illness during peak months as well as late season illness. Flu season in New Jersey can extend into May, so getting a vaccination in January can still make a difference in reducing the amount of flu illness in the state. 

CDS Welcomes New Staff!

Stephen Perez – Stephen joins the CDS as the new Centers for Disease Control and Prevention Epidemic Intelligence Officer. He recently earned his doctorate in nursing from the University of Pennsylvania, focusing on health care-associated infections and their impact on public policy and patient outcomes. While pursuing his graduate studies, he also worked as an infection preventionist at the Hospital of the University of Pennsylvania. He comes with extensive experience as a practicing clinician, in addition to experience in quality improvement.

Tara Fulton – Tara joins the CDS as the new Health Care-Associated Infections/Antibiotic Resistance Epidemiologist, working on the prevention, response, and containment of multidrug-resistant infections. Tara has been working at NJDOH as an epidemiologist/lab liaison since 2016. She comes to this position with several years of experience and earned her Master of Public Health degree from the University of Pennsylvania.

Aissa Oduro – Aissa joins the CDS as a Public Health Representative with the Vaccines for Children (VFC) Program. She will be mainly working in the field conducting site visits at health care facilities that receive and administer VFC vaccines. Aissa earned a Bachelor of Science degree in public health and Spanish interpretation and translation from Rutgers University.

Sandhya Clark – Sandhya joins the CDS as the new Regional Epidemiologist serving the Northwest region of New Jersey. She will be providing support and guidance to local health departments in the region regarding communicable disease investigations and outbreak response. Sandhya has worked at the New York City Department of Health and Mental Hygiene on a variety of infectious disease responses and earned a Master of Public Health degree from the Columbia University Mailman School of Public Health. 

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Infant Botulism, continued from page 2

the type of soil, the high number of cases may be due to a high birth rate in the state as well as physicians who have experience in diagnosing the disease. Provider awareness, coupled with the relative frequency with which physicians may encounter a case of infant botulism may make it easier for New Jersey health care providers to consider this disease in the differential diagnosis of their patients. The other states listed in the table most likely also have a soil type that favors *C. botulinum* as well as a significant susceptible population secondary to high birth rates. There may be other areas of the country with a high birth rate, but less *C. botulinum* in the soil and, conversely, there may be parts of the country with high concentrations of *C. botulinum* in the soil but low birth rates.

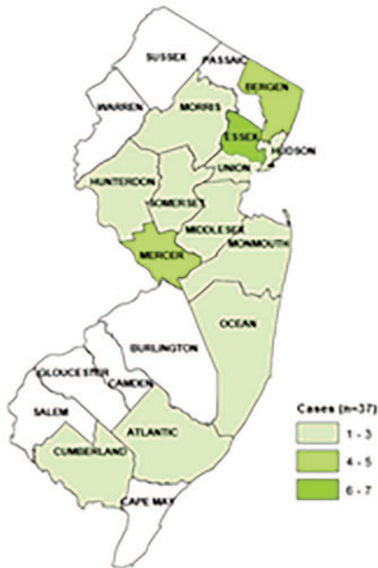
Figure 1 below depicts the number of cases, per quarter, from 2013 to 2017. New Jersey, on average, has seen seven cases per year. In any given quarter, there is a range between one to five cases with no discernible pattern in cases associated with the time of year.

Figure 2 depicts the number of cases, per county, within the state reported between 2013 and 2017. Although the majority of cases were reported in Bergen, Essex and Mercer counties, the total cases reported is so small that calculated rates are unreliable.

Infant botulism can be treated by the administration of Botulism Immune Globulin (BabyBIG) (Figure 3, page 9). This is an antitoxin that was licensed by the U.S. Food and Drug Administration (FDA) in 2003. This drug binds up and neutralizes all the free toxin in the blood stream and halts the progression of symptoms.

Figure 2

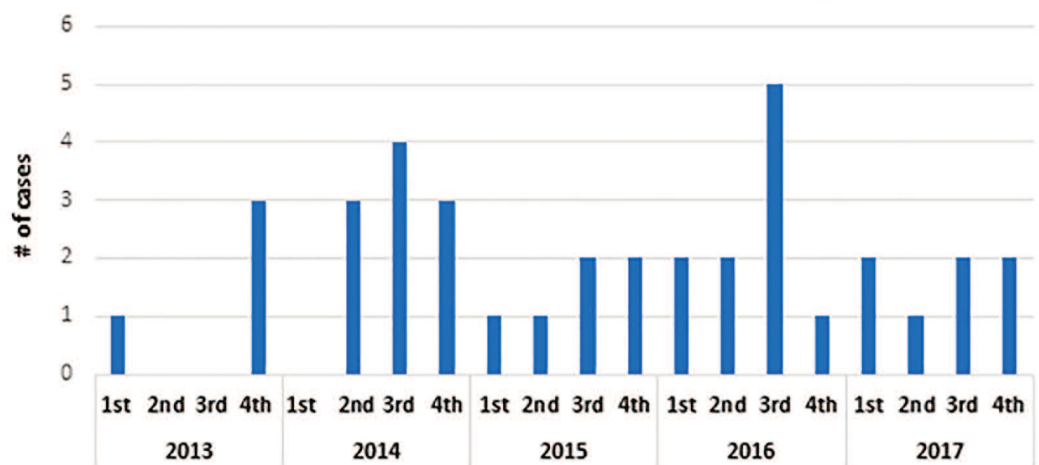
Number of Confirmed Infant Botulism Cases | by County, New Jersey, 2013-2017



source: CDRSS

Figure 1

Number of Infant Botulism Cases, NJ, 2013-2017 by Quarter



source: CDRSS

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Infant Botulism, continued from page 8

Improvement is seen within 24-48 hours post infusion. The recovery is gradual and occurs by the regrowth of nerve fibers and re-innervation of the muscle. The sooner the baby is treated the more efficacious the drug. If an infant presents to the hospital with symptoms consistent with infant botulism, the health care practitioner can consult with a physician at the Infant Botulism Treatment and Prevention Program (IBTPP) at the California Department of Public Health (CDPH). The decision to treat with BabyBIG is based on clinical presentation and should not be delayed by waiting for laboratory results due to the lengthy turn-around time to receive results. The telephone number for the on-call physician at IBTPP is 510-231-7600 (24/7/365). Upon the decision to treat with BabyBIG, the drug is shipped overnight by the IBTPP.

Although treatment is not withheld until a stool specimen is tested, all infants treated with BabyBIG should ultimately have a stool test performed. The current gold standard test is the mouse bioassay. Lab confirmation of the disease provides the physicians and families peace of mind that the patient has been appropriately treated for his/her symptoms. In addition, as BabyBIG's sponsor, it is CDPH's responsibility to ensure the drug is used in accordance with FDA's approved indication. Every year, as required by federal regulations, CDPH must report to the FDA on the number of confirmed infant botulism cases treated with BabyBIG. Therefore, CDPH makes stool testing a condition of disseminating the antitoxin.

The prognosis for infants with botulism is excellent with full and complete recoveries realized. Since the toxin does not enter the brain, cognitive deficits do not occur as a result of this disease. Once an infant has acquired this disease, he/she will not get botulism again.

For more information on infant botulism, you may visit the following websites:

The Communicable Disease Service at: <https://www.nj.gov/health/cd/topics/botulism.shtml>

The Infant Botulism Treatment and Prevention Program at:

<http://www.infantbotulism.org/> 

Figure 3, BabyBIG



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Congratulations, Jeni Sudhakaran!

**Jeni received the 2018
Partner of the Year Award
from the New Jersey
Association of Public
Health Nurse
Administrators.**

Kudos, Jeni!

**Thank you for all your hard
work and for representing
VPDP well.**



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