



NJ Communi- CABLE

Summer 2013

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.

Chris Christie, Governor
Kim Guadagno, Lt. Governor
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Commissioner

COMMUNICABLE DISEASE SERVICE

Christina Tan, MD, MPH
State Epidemiologist/
Assistant Commissioner
Gary Ludwig, MS, Director
Suzanne Miro, MPH, MCHES
Editor, Research Scientist

NJDOH Monitoring for Severe Acute Respiratory Illness (SARI) in Returning Travelers

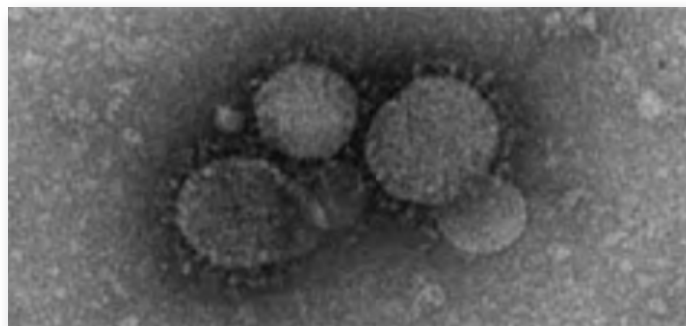
By: Lisa McHugh, Epidemiologist

The newly detected avian influenza virus (H7N9) and the Middle East Respiratory Syndrome coronavirus (MERS - CoV), which are currently causing illness in individuals internationally, continue to be of concern to the New Jersey Department of Health (NJDOH). While it is important to note that there have not been any cases of illness associated with these viruses in New Jersey or the United States, the NJDOH continues to closely monitor the situations. Officials from the NJDOH are conducting respiratory illness surveillance designed to rapidly identify any individuals who may become infected with these viruses.

While these two viruses are not related, and are currently affecting patients in different parts of the world, each of them may cause severe acute respiratory illness (SARI).

MERS-CoV

As of July 29, 2013 WHO has been informed of a total of 91 laboratory-confirmed cases of infection with MERS-CoV, including 46 deaths



Coronaviruses are common worldwide. They usually cause colds. However, a novel coronavirus called "Middle East Respiratory Syndrome Coronavirus" (MERS-CoV) has caused severe illness and death in people from several countries. Learn more about MERS-CoV at <http://www.cdc.gov/Features/novelcoronavirus/>.

internationally. These cases have all originated in the following countries in the Middle East Arabian Peninsula: Jordan, Qatar, Saudi Arabia, and the United Arab Emirates (UAE). France, Germany, Italy, Tunisia and the United Kingdom have also had cases that were either transferred there for care of the disease, or returned from the Middle East, and subsequently became ill. International public health officials are working with the Centers for Disease Control and Prevention (CDC) to learn more about the virus, its source, and how it is spread. Several clusters have been investigated indicating that person-to-person transmission has occurred but, to date, has not been

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You Don't Outgrow the Need for Immunizations

By: Jennifer Smith, Health Educator

Vaccine preventable diseases have no age limits—they can strike at any time in a person's lifespan. Far too many adults become ill, are disabled, and die each year from diseases that could easily have been prevented by vaccines. Throughout adulthood, immunizations help maintain protection against certain diseases.

Influenza: All adults are recommended to get a flu vaccine every year. Every year in the U.S., an average of 24,000 people die from the flu. Most of these deaths are among adults 65 years old and older. Flu vaccination is especially important for adults 65 years of age and older, people with chronic health problems (such as diabetes, asthma, sickle cell, lung, heart, liver, or kidney diseases), people who live with or care for people at high risk, people who live with or care for infants and children, pregnant women, and health care workers.

Pertussis (Whooping Cough): All adults need a one-time dose of tetanus, diphtheria, acellular pertussis (Tdap) vaccine. Adults should get Tdap in place of one of their regular tetanus boosters—the tetanus-diphtheria (Td) shot that is recommended for adults every 10 years. The dose of Tdap can be given no matter when the last Td shot was received.

Pertussis can be a serious, even deadly, disease in babies. For this reason, expectant mothers should



get one dose of Tdap during each pregnancy, preferably at 27 through 36 weeks. Receiving Tdap during pregnancy helps to provide the infant protection against pertussis in early life, before the baby is eligible to receive the childhood vaccine.

Chickenpox (Varicella): Chickenpox causes an itchy rash with blisters, tiredness, headache and fever. Chickenpox is usually mild, but it can lead to severe skin infections, pneumonia, or even death. Adults with chickenpox often have a higher fever, longer illness, and a worse rash than children. They are seven times more likely to suffer from encephalitis (infection of the brain).

Two doses of varicella vaccine are recommended for adults who have not had chickenpox disease.

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

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MERS - CoV, continued from page 1



CDC Expert Commentary: Be on the Alert for This Novel Coronavirus

sustained. No cases of MERS – CoV have been reported in the United States.

H7N9

An outbreak of avian influenza A (H7N9) virus has recently affected several provinces in China, with 132 human cases and 37 deaths reported.

Most cases have had direct or indirect contact with poultry. No person-to-person transmission has been definitively documented, though several small clusters have occurred in which person-to-person transmission could not be ruled out. No cases of H7N9 infection have been reported in the United States.

Advice for New Jersey Residents

If people get sick with fever, coughing, or shortness of breath within 10 days of returning from China, or within 14 days of returning from countries in or near the Arabian Peninsula*, they should seek medical care and inform the health care provider about recent travel. The NJDOH will update its website as more information becomes available. For more information, please visit:

MERS – CoV

http://nj.gov/health/cd/mers/index.shtml

H7N9

http://nj.gov/health/flu/surveillance.shtml

Additional information can also be found on the CDC website at:

http://www.cdc.gov/coronavirus/index.html

http://www.cdc.gov/flu/avianflu/h7n9-virus.htm

CDC travel websites:

http://wwwnc.cdc.gov/travel/notices/watch/coronavirus-saudi-arabia-qatar

http://wwwnc.cdc.gov/travel/notices/watch/avian-flu-h7n9-china

* Countries in and near the Arabian Peninsula: Bahrain, Iraq, Iran, Israel, Jordan, Kuwait, Lebanon, Oman, Palestinian territories, Qatar, Saudi Arabia, Syria, the United Arab Emirates (UAE), and Yemen.

MERS Cases and Deaths, April 2012 - Present

Current as of August 28, 2013

Table with 3 columns: Countries, Cases, (Deaths). Rows include France, Italy, Jordan, Qatar, Saudi Arabia, Tunisia, United Kingdom, United Arab Emirates, and Total (103 cases, 49 deaths).

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Immunizations, continued from page 2

Shingles (Herpes Zoster): Shingles is a disease that causes a painful, blistering rash. One in five people with shingles will have severe, long-term pain after the rash heals. Nearly one million Americans get shingles every year and about half of them are 60 years old and older. Anyone who has had chickenpox is at risk of shingles. One dose of this vaccine is recommended for adults 60 years and older, whether or not they have had shingles.

Measles, Mumps, Rubella (MMR): Measles, mumps, and rubella are serious diseases. Before vaccines they were very common, especially among children. Adults born in 1957 or later should have documentation of one or more doses of MMR vaccine.

Pneumococcal disease: Pneumococcal disease can cause serious infection of the lungs (pneumonia), the bloodstream (bacteremia), and the covering of the brain (meningitis).

Pneumococcal disease is one of the most common causes of vaccine-preventable death in the U.S. and is particularly dangerous for older adults. All adults ages 65 and older need one dose of pneumococcal polysaccharide vaccine (PPSV23). Some adults may need additional doses of this vaccine or may also need pneumococcal conjugate vaccine (PCV13).

The specific vaccines needed as an adult are determined by factors such as age, lifestyle, risk conditions, locations of travel, and previous

vaccines. Some adults may also need vaccines for human papillomavirus (HPV), meningococcal disease, hepatitis A, and hepatitis B. Health care personnel should have evidence of immunity to certain diseases to protect themselves and their patients. Please see the following link for the Centers for Disease Control and Prevention (CDC) recommendations of immunizations for health care personnel, <http://www.cdc.gov/mmwr/pdf/rr/rr6007.pdf>

Adult vaccination coverage remains low for most routinely recommended vaccines and well below *Healthy People 2020* targets. Many adults are not even aware that there are vaccines that can prevent these diseases and some adults are misinformed about their effectiveness and longevity of protection. Health care providers can implement practices shown to improve adult vaccination. These practices include assessing patients' vaccination needs, routinely recommending and offering needed vaccines to adults, implementing reminder-recall systems, creating standing orders for vaccination, and reviewing practice-level vaccination rates with feedback to staff members.

For more information about adult immunization, please visit the CDC's new adult vaccination website: <http://www.cdc.gov/vaccines/adults/index.html>



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Fungal Infections Associated with Contaminated Methylprednisolone Injections: Review and Insights*

By: Susan B. Fowler, PhD, RN, CNRN, FAHA and Barbara Carothers, LPN

When the word ‘research’ is mentioned, what words come to mind that are associated with it? Data might be one of the first ones spoken. When the word ‘epidemiology’ is mentioned, what words come to mind that are associated with it? Once again, data might be the first one spoken. Hence, the unique link between research and epidemiology. For this reason, we chose to review a timely article on fungal infections associated with contaminated methylprednisolone injections from a single compounding pharmacy in New England. Barbara Carothers, LPN, a public health staff person at the NJ Department of Health (NJDOH), and LPN Forum board member, participated in data collection related to this issue, and shared her knowledge and experience as part of this emergency public health response, as a coauthor in an article published in the *New England Journal of Medicine* (See reference below). In the following discussion, Dr. Susan Fowler, *New Jersey Nurse* Research Corner editor, and Barbara Carothers share the details of this critical event.

The trigger for this emergency public health response is referred to as an index patient, a 56 year old patient with aspergillus meningitis who had received an epidural glucocorticoid injection for lower back pain at an ambulatory surgical center 46 days earlier. Additional patients were identified in Tennessee, four of whom suffered posterior circulation strokes. All

patients had received medication from a single compounding pharmacy in New England. After being notified, the pharmacy voluntarily recalled three lots of medications, but more states began to report additional cases of fungal meningitis and stroke.

The NJDOH started a prompt investigation surrounding the facilities who received the products and the local health departments (LHDs) where these facilities were located. Regional epidemiologists covering the jurisdictions of facilities receiving implicated lots were initially notified and asked to assist facilities with identifying patients exposed to the three implicated lots. Regional epidemiologists were asked to make contact with these facilities and assist with assembling lists of patients exposed to these lots because of the amount of data collection necessary. The facilities (with help from the regional epidemiologist in some cases) were responsible to contact patients.

Patients who may have received the implicated medication were contacted by phone calls and door-to-door visits. They were instructed not to leave a voice message, but to speak with the patient or caregiver personally. The Centers for Disease Control and Prevention (CDC) requested all patient notification completed by 5 pm on Monday, October 8, 2012.

Staff at the NJDOH coordinated patient outreach and data collection for the

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Fungal Infections, continued from page 5

facilities in New Jersey. A script was provided and disseminated by the NJDOH to the facilities. NJDOH also provided them with talking points (which were updated throughout the outbreak), on-line lists, and questionnaires for use during communication with patients or caregivers.

The process of identifying cases began with a chart review to compile a list of patients potentially exposed to the contaminated product. Symptomatic patients were advised to seek medical evaluation immediately and asymptomatic patients were advised to seek medical evaluation should they become symptomatic. New Jersey's Communicable Disease Reporting and Surveillance System (CDRSS) was utilized to keep track of patients who presented for evaluation and/or became cases.

Staff at the NJDOH learned, through speaking with the providers' office personnel, that some patients were very concerned and sought medical evaluation immediately, even though they were not symptomatic. Some were concerned about the financial aspect of diagnosis and treatment, and were reluctant to have testing done.

The definition of a case changed along the course of this outbreak, but an early definition included one of the following: 1) meningitis of unknown cause that developed after an epidural or paraspinal injection; 2) posterior circulation stroke due to presumed meningitis after an injection; 3) clinician diagnosed osteomyelitis, abscess, or other infection of unknown cause in spinal or paraspinal structures or near injection site; and, 4) clinician diagnosed

osteomyelitis, or worsening inflammatory arthritis of a joint after an injection, without a known cause.

Physicians were asked to have a low threshold for lumbar puncture and magnetic resonance imaging (MRI) at the site of injection. Clinical records were reviewed and symptomatic patients classified using CDC case definitions. The current New Jersey case count as of January 28, 2013, was 48 with 41 meningitis cases, (six also have an abscess/osteomyelitis), six patients with abscess/osteomyelitis, and one individual suffering from a joint infection.

Initially, facilities were asked to follow-up with patients for three months after their last injection. As the investigation evolved and the incubation period became longer, follow-up has increased to six months following the last injection. The NJDOH has provided guidance, including an algorithm, to assist facilities with follow up.

Over 13,000 persons were identified nationally as having the potential for being exposed to medication from at least one of the three lots with most exposed through epidural, spinal, and paraspinal injections. By mid- December, 590 cases had been identified in 19 states with 37 patients having died. Thirty-three cases (9%) had suffered strokes and when the location was known, 24 (96%) involved the posterior circulation. Therefore, a relatively small proportion of exposed individuals developed disease as result of exposure. Unfortunately, these numbers may be underestimates since there still has not been sufficient time for symptoms to be manifested clinically.

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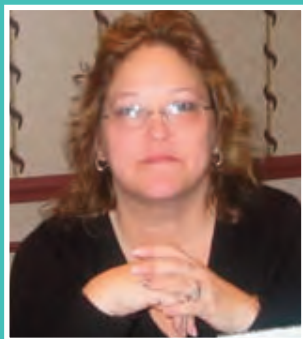
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Our dear friend and co-worker, Kim Bernini, passed away on Monday, June 10, 2013. Kim was an important part of the Communicable Disease support staff, having worked for the Department of Health for over 10 years. She was a friendly face in the workplace as well as a helpful voice on the phone, providing various callers with requested information.



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CDS Says Farewell, but Not Goodbye to Colleagues

Faye Sorhage, State Public Health Veterinarian

Faye Sorhage retired from the NJ Department of Health (DOH) on August 1st, after 28 years of service. She is looking forward to reading mysteries, gardening, going to museums, traveling, volunteering, and doing lots of walking and exercise. She also plans

to do part-time consulting on rabies, zoonotic diseases and animal facility/welfare issues. She can be reached at fsorhage@gmail.com.



A Personal Note from Fernando McLean

Without being selected to be a part of the Public Health Associate Program (PHAP) fellowship, I would not have had the exceptional opportunity to join the NJDOH. When asked about my fellowship experience, I say that "It was time well spent." I could not imagine a better entry-level experience into the incredible field of public health. The wealth of knowledge, and the beautiful personalities, amongst individuals in the program is extraordinary. Everyone contributed in making the new work environment, long commutes and stressful work days joyous. I gained exposure in many interesting areas of public health, which all were very

intriguing, and the fellowship provided an opportunity to develop various skills that will be transferable to my second-year assignment and throughout my professional career. In July, I transitioned into the second year of the fellowship, working at the CDC Department of Global Migration and Quarantine station, located at the Newark Liberty Airport. I'm certain that the professional relationships that were formed, will continue to grow for years to come.



FAREWELL





Fungal Infections, continued from page 6

In New Jersey, 40 cases were identified from 639 persons potentially exposed. This number equates to an attack rate of 6.3 (number of cases/100 persons potentially exposed). This number has changed to 705 potentially exposed.

When a symptomatic patient presents for evaluation, specimens obtained from lumbar puncture, joint aspiration, and surgical intervention, for example, are tested at the facility (or commercial lab). Specimens from case patients and cases under investigation are sent from the facility to the CDC for further testing. This process is coordinated by the state health department and public health laboratory. Any case or case under investigation is issued a NJ case number by the CDC. This number is used for tracking specimens and results.

Authors highlight the fact that this investigation was part of an emergency public health response. The experience definitely felt like an emergency, according to staff at the NJDOH. Across the country case counts and deaths were increasing and details were changing daily. It was of utmost importance to identify and notify patients potentially exposed to the implicated products. The NJDOH formed an outbreak investigation team consisting of experts in clinical care, surveillance, communications, and logistics. The NJDOH provided written guidance to the facilities, hosted conference calls for the affected facilities, clinicians, and regional epidemiologists. Various Local Information Network System (LINCS) messages to healthcare and public health groups were disseminated to provide an overview of the investigation, clarify clinical issues, offer guidance, and

provide updates on the situation. Information, Frequently Asked Questions, and talking points were posted on the NJDOH website and updated as the outbreak evolved.

Treatment was critical for suppressing or preventing fungal infection. Over 50% of case patients received voriconazole alone, 42% received both voriconazole and amphotericin B, and less than 1% amphotericin B alone. The overall attack rate was 4.4 cases per 100 exposed persons.

Authors presented substantial data reflecting epidemiological and laboratory answers and trends. Tables and figures can succinctly explain the data, often more than written words. Columns in tables addressed all cases, those with meningitis only, spinal and paraspinal injections only, and peripheral joint infections only. The first column held the most data followed by the meningitis only column. The article included a figure from date of initial symptom onset with a steady increase from Sept. 7, 2012 to October 5, 2012 (almost one month). Readers can visit the CDC website for additional information (www.cdc.gov).

Note: Carothers comments that “My primary role in this investigation was to assist with case finding and data collection by reviewing medical records including results of diagnostic studies. I continue today to sift through emergency room (ER) records, clinic charts, progress notes and MRIs to help identify and classify new cases. I also assist with patient follow-up and provide facility guidance.”

Rachel M. Smith, M.D., M.P.H., Melissa

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Bridging Hepatitis and STD Prevention

In May, staff from the Communicable Disease Service and the Division of HIV/AIDS, TB and STD Services presented a day-long training called “Birds of a Feather: Integrating Hepatitis into STD and HIV Prevention Services” to 25 HIV and Risk Reduction Counselors at Rutgers University. This is a new training designed to integrate hepatitis prevention into existing STD and HIV prevention services. The training coincided with May as National Hepatitis Awareness Month. 🇺🇸



Amelia Hamarman, Health Educator in the Division of HIV/AIDS, TB and STD Services, leads the group in a learning activity.

Injection Safety

A big thank you to the “Safe Injection Ambassadors,” a valuable group of 25 health care professionals who volunteered to help the New Jersey Department of Health educate health professionals about safe injection practices. Ambassadors attended a day-long training, received materials to teach about NJ’s safe injection program, agreed to

present at least two presentations within one year of being trained and passed a qualifying exam! Since being trained in 2012, the Ambassadors have conducted 61 presentations to nearly 800 individuals! 🇺🇸



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Fungal Infections, continued from page 8

K. Schaefer, M.D., Marion A. Kainer, M.B., B.S., M.P.H., Matthew Wise, Ph.D., Jennie Finks, D.V.M., M.V.P.H., Joan Duwve, M.D., M.P.H., Elizabeth Fontaine, M.S.P.H., Alvina Chu, M.H.S., Barbara Carothers, L.P.N., Amy Reilly, R.N., Jay Fiedler, M.S., Andrew D. Wiese, M.P.H., Christine Feaster, R.M., Lex Gibson, B.S., Stephanie Griese, M.D., Anne Purfield, Ph.D., Angela A. Cleveland, M.P.H., Kaitlin Benedict, M.P.H., Julie

R. Harris, Ph.D., M.P.H., Mary E. Brandt, Ph.D., Dianna Blau, D.V.M., Ph.D., John Jernigan, M.D., J. Todd Weber, M.D., and Benjamin J. Park, M.D., for the Multistate Fungal Infection Outbreak Response Team. (Dec. 19, 2012). Fungal Infections Associated with Contaminated Methylprednisolone Injections—Preliminary Report. *New England Journal of Medicine*. DOI: 10.1056/NEJMoa1213978 🇺🇸





In The NEWS.....

Antibiotic Resistance

April 17, 2013

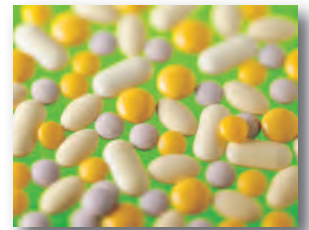
Edward J. Septimus, MD, Clinical Professor of Internal Medicine at Texas A&M Health Sciences Center, a proponent of antimicrobial stewardship, recently stated during an interview for the Agency for Healthcare Research and Quality that antibiotic resistance continues to be a serious threat to public health. This is a global phenomenon with the World Health Organization reporting that 440,000 new cases of multidrug-resistant tuberculosis occur annually. Extensively drug-resistant tuberculosis has been reported in 64 countries to date. Dr. Septimus promotes the Centers for Disease Control and Prevention’s campaign “Get Smart About Antibiotics” as a way to educate health care providers to reduce the inappropriate use of antibiotics. The campaign provides resources for the public and for health care professionals.



<http://innovations.ahrq.gov/content.aspx?id=3762>

May 22, 2013

The U.S. Department of Health and Human Services (HHS) has formed a strategic alliance to develop new antibiotics. The drugs will be developed under a public-private partnership agreement between the HHS’ Biomedical Advanced Research and Development Authority and GlaxoSmithKline. This initiative will take a portfolio approach to developing multiple products in an effort to develop a robust pipeline of novel antibiotics rather than individual products. Ultimately, it is hoped that this will enhance the ability to provide medical countermeasures for biodefense.



<http://www.phe.gov/Preparedness/news/Pages/strategic-alliance-130522.aspx>



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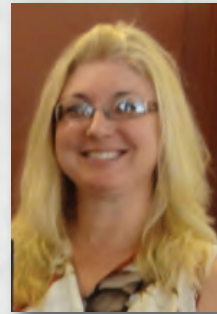
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CDS Health Educator Talks History at National Conference

Suzanne Miro, Health Educator with the Communicable Disease Service, was invited to speak at the 64th Annual Meeting of the Society for Public Health Education, April 19, 2013. An unlikely gathering of three health educators, with very different backgrounds, provided for an interesting and lively panel presentation of how health education has evolved over the years and has been shaped by three significant public health issues (polio, bioterrorism, and war).



Suzanne's role in the 2001 anthrax emergency was one that has provided unique insight regarding health education during a bioterrorism response effort. "It has been quite a while since I have given a talk about the anthrax response so it was an opportunity I welcomed." Titled "Eleven Years Later: Health Education After Anthrax" the presentation provided an overview of the anthrax response and how bioterrorism changed the way health educators within public health departments do their jobs. Waxing and waning federal funding has also had a great impact on the role of health educators in emergency preparedness. "Even though funding for public health preparedness continues to shrink, I hope I was able to convey the fact that the skills of a health educator are extremely valuable during an emergency and that our skills are not easily replaced," stated Suzanne. 



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