Indiana Epidemiology Newsletter

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Respiratory Outbreak Among Residents of a Johnson County Assisted Living Community

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Background
On February 22, 2012, the Indiana State Department of Health Long Term Care Division notified Sandra Gorsuch, District 5 Field Epidemiologist (FEPI), that multiple residents of a Johnson County assisted living community were experiencing upper respiratory and cold-like symptoms.

Epidemiologic Investigation
The District 5 FEPI initiated an investigation, to determine if there was an outbreak or if the disease was resolving and informed Johnson County Health Department of the situation. According to the facility Executive Director, the facility is an assisted living community and residents have their own personal physician. As of February 21, 11 of 48 residents were ill with cold-like symptoms and congestion. One resident was diagnosed with pneumonia and another physician diagnosed a second resident with bronchitis. A third resident was diagnosed with pneumonia at a local hospital. All ill patients sought medical treatment through their personal physicians. On February 22, the Executive Director reported that all of the 11 patients were improving and there were no new ill residents or staff illness.

The assisted living facility implemented the following infection control measures:

- Signs were posted on the doors for a 48-hour quarantine,
- No group gatherings occurred during quarantine,
- Hand sanitizer was placed at the entrance of the facility,
- Housekeeping increased cleaning of all hand contact surfaces; e.g. handrails, door knobs, light switches, with Virex germicidal disinfectant,
- Staff was educated on proper hand washing techniques and practiced standard precautions including use of gloves on potentially contaminated surfaces,

- All potential sources of transmission, such as candy dishes, were removed,
- All meals were served in residents' apartments with disposable service during quarantine.

Environmental Assessment
A facility inspection was not conducted.

Laboratory Results
Clinical specimens were not collected due to the Assisted Living Community Executive Director's request not to disturb the residents..

Conclusions
The investigation confirmed an increase in the expected level of resident respiratory symptoms at the assisted living community including physician-diagnosed pneumonia and bronchitis.

Pneumonia, a lung infection, is caused by a variety of disease agents, including several bacteria and viruses. Pneumonia seasonality corresponds with influenza, occurring primarily in winter and is a common infection in long term care facilities. Pneumonia accounts for 13% - 48% of all nursing home infections, and the mortality rate can range from 6% -23%.[1] Some causes of pneumonia can be prevented with immunizations. Some forms are commonly treated with antibiotics or antiviral drugs.[2]

Bronchitis, often called a "chest cold," occurs when bronchial tubes in the lungs become inflamed and subsequently produce mucus which causes cough. Additional signs and symptoms of bronchitis include low-grade fever (less than 102ºF), mild headache and body aches and sore throat. Bronchitis is normally caused by viruses, air pollutants and rarely bacteria.[3]

Control measures implemented by the assisted living community staff ended disease transmission.

Recommendations:
In general, most respiratory illness can be prevented by strictly adhering to the following guidelines: [2,3]

- Use your elbow or upper arm (instead of your hands) or a tissue to cover your mouth and nose when you cough or sneeze. Immediately dispose of used tissue.
- To clean your hands after coughing or sneezing, wash with soap and water, or clean with alcohol-based hand cleaner if water is not available.
- Clean hard surfaces that are touched often like doorknobs and countertops.
- Avoid close contact with people who are sick.
- If you become ill, stay home from work, school and social gatherings.
- Try not to touch your eyes, nose or mouth.
- Avoid smoking and exposure to second hand smoke.
- Keep up to date with recommended immunizations.

Resources:

1. Guidelines for Preventing Health-Care-Associated Pneumonia, 2003. Recommendations of CDC and the Healthcare Infection Control Practices Advisory Committee. http://www.cdc.gov/hicpac/pdf/guidelines/HApneu2003guidelines.pdf
2. Pneumonia Can Be Prevented – Vaccines Can Help. Centers for Disease Control and Prevention. http://www.cdc.gov/Features/Pneumonia/
3. Bronchitis (Chest Cold). Centers for Disease Control and Prevention. http://www.cdc.gov/getsmart/antibiotic-use/URI/bronchitis.html

Tdap Vaccination Recommendations for Health Care Workers

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The reported incidence of infant pertussis has tripled in the United States since the 1980's. It is estimated that up to 3.3 million cases of pertussis occur each year in adults and children. More than 27,550 cases were reported to the CDC in 2010 alone (1). Pertussis is the only vaccine-preventable disease that is on the rise. One way to prevent this from continuing is to be sure health care workers (HCW's) are getting booster Tdap vaccinations.

HCW's are typically the first line of defense when it comes to pertussis patients. In most healthcare settings, a focus on patient safety includes the need to prevent the transmission of infectious diseases from HCW's to patients, including vaccine-preventable diseases. Currently, vaccination is one of the most effective public health tools to accomplish this goal, along with consistent hand-washing. It is important to be aware of this issue because health-care associated infections contribute to patient illness and deaths, as well as cause a major financial impact on the health care system.

In Indiana, 744 cases of pertussis were reported to the Indiana State Department of Health in 2010. This represents the largest number of cases since the previous peak of 394 cases reported in 2005. Approximately 90 percent of deaths from pertussis occur in infants less than six months of age (1). Typically, an infant is infected from an adult who is unaware of having pertussis, but may have symptoms of a persistent cough. Contagiousness does occur in asymptomatic infectious persons, and outbreaks of pertussis in both inpatient and outpatient settings from infected HCW's have been documented.

Promotion of Tdap vaccination of HCW's in both hospital and ambulatory settings is an important step in controlling the spread of pertussis. Health care facilities should examine their current policy regarding the need for Tdap investigation and update it accordingly to protect vulnerable infants from this devastating infection. The following recommendations were published by the Advisory Committee on Immunization Practices (ACIP) on February 23, 2011:

1. The ACIP recommends that all health care personnel, regardless of age, should receive a single dose of Tdap as soon as feasibly possible if they have not previously received Tdap, regardless of the time since last Td dose.

2. Tdap is currently licensed for multiple administrations. After receipt of Tdap, HCW's should receive routine booster immunization against tetanus and diphtheria according to previously published guidelines.
3. Hospitals and ambulatory care facilities should provide Tdap for HCW's and use approaches that maximize vaccination rates (e.g. education about the benefits of vaccination, convenient access and the provision of Tdap at no charge).

This document is available at: http://www.cdc.gov/vaccines/recs/provisional/default.htm

References:
1. Health Care Worker Immunization to Protect Patients. Indiana Chapter of the American Academy of Pediatrics, September 2011. www.inaap.org/immunizations
2. ACIP Provisional Recommendations, www.cdc.gov/vaccines/recs/provisional.htm, May 2012.

Honor Roll for Patient Safey for Indiana Hosptials

Dr. Joan Duwve, MD, MPH
Chief Medical Officer

HOSPITAL AND HEALTHCARE SYSTEM MANDATES

Decatur County Memorial Hospital, Greensburg, IN

All healthcare workers and volunteers, as well as dietary, janitorial and laboratory staff are required to receive influenza vaccine. Exemption to immunization is allowed for medical and religious reasons, but employees covered by this policy will be required to wear a mask while at work during influenza season. If discovered four times to be unmasked, they are dismissed. Four times refers to verbal, written, suspension and dismissal.
Implementation date: November 11, 2011

Franciscan Alliance, Inc, Mishawaka, IN

All healthcare workers and volunteers, as well as clerical, dietary, janitorial and laboratory staff, are required to receive influenza vaccine or face dismissal. Exemption to immunization is only allowed for approved medical and religious reasons.
Implementation date: October 1, 2011

Health South Deaconess Rehabilitation Hospital, Evansville, IN

All healthcare workers and volunteers, as well as clerical, dietary, janitorial and laboratory staff, must receive influenza vaccine or face dismissal. Exemption to immunization is only allowed for valid medical contraindications and religious reasons.
Implementation date: September 2011

Indiana University Health Arnett, Lafayette, IN

All healthcare workers and volunteers, as well as clerical, dietary, janitorial and laboratory staff, must receive influenza vaccine or face dismissal. Exemption to

immunization is only allowed for valid medical contraindications, but employees covered by this policy will be required to wear a mask while at work during influenza season.
Implementation date: October 1, 2011

St. Joseph County Health Department, South Bend, IN

All healthcare workers and volunteers, as well as clerical and janitorial staff, must receive influenza vaccine. Exemption to immunization is only allowed for valid medical contraindications, but employees covered by this policy will be required to wear a mask while at work during influenza season.
Implementation date: September 6, 2011

St. Mary's Medical Center, Evansville, IN

All healthcare workers, contract workers, students and volunteers, as well as clerical, dietary, janitorial and laboratory staff, must receive influenza vaccine or face dismissal. Medical and religious declinations must be accompanied by a healthcare provider or clergy and are reviewed by a committee for approval or denial.
Implementation date: September 1, 2011

The Women's Hospital, Newburgh, IN

All healthcare workers and volunteers, as well as clerical, dietary, janitorial and laboratory staff, must receive the influenza vaccine or face suspension from work until vaccine is received. Exemption to immunization is allowed for medical reasons only.
Implementation date: October 2010

Training Room

INDIANA STATE DEPARTMENT OF HEALTH IMMUNIZATION PROGRAM PRESENTS:

Immunizations from A to Z

Immunization Health Educators offer this FREE, one-day educational course that includes:

- Principles of Vaccination
- Childhood and Adolescent Vaccine-Preventable Diseases
- Adult Immunizations
    - Pandemic Influenza
- General Recommendations on Immunization
    - Timing and Spacing
    - Indiana Immunization Requirements
    - Administration Recommendations
    - Contraindications and Precautions to Vaccination
- Safe and Effective Vaccine Administration
- Vaccine Storage and Handling
- Vaccine Misconceptions
- Reliable Resources

This course is designed for all immunization providers and staff. Training manual, materials and certificate of attendance are provided to all attendees. Please see the Training Calendar for presentations throughout Indiana. Registration is required. To attend, schedule/host a course in your area or for more information, please visit http://www.in.gov/isdh/17193.htm**.**

ISDH Data Reports Available

The following data reports and the *Indiana Epidemiology Newsletter* are available on the ISDH Web Page:

http://www.IN.gov/isdh/

HIV/STD/Viral Hepatitis Semi-Annual Report (June 2007- June 2011)	Indiana Mortality Report (1999-2008)
Indiana Cancer Report: Incidence; Mortality; Facts & Figures	Indiana Infant Mortality Report (1999, 2002, 1990-2003)
Indiana Health Behavior Risk Factors Report (1999-2010)	Indiana Natality Report (1998-2008)
Indiana Health Behavior Risk Factors (BRFSS) Newsletter (2003-2011)	Indiana Induced Termination of Pregnancy Report (1998-2009)
Indiana Hospital Consumer Guide (1996)	Indiana Marriage Report (1995, 1997-2004)
Public Hospital Discharge Data (1999-2010)	Indiana Infectious Disease Report (1997-2009)
Assessment of Statewide Health Needs – 2007	Indiana Maternal & Child Health Outcomes & Performance Measures (1989-1998, 1990-1999, 1991-2000, 1992-2001, 1993-2002, 1994-2003, 1995-2004, 1996-2005, 1997-2006, 1998-2007)

HIV Disease Summary

Information as of December 31, 2011 **based on 2000 population of 6,080,485**

HIV - without AIDS to date:

333	New HIV cases from May 1, 2011 thru April 30, 2012	12-month incidence	5.48 cases/100,000
4,740	Total HIV-positive, alive and without AIDS on April 30, 2012	Point prevalence	77.95 cases/100,000

AIDS cases to date:

327	New AIDS cases from May 1, 2011 thru April 30, 2012	12-month incidence	5.38 cases/100,000
5,672	Total AIDS cases, alive on April 30, 2012	Point prevalence	93.28 cases/100,000
11,684	Total AIDS cases, cumulative (alive and dead) on April 30, 2012		

REPORTED CASES of selected notifiable diseases

Disease	Cases Reported in March – April *MMWR* Weeks 9-17		Cases Reported in January - April *MMWR* Weeks 1-17	
	2011	2012	2011	2012
Campylobacteriosis	85	81	158	153
Chlamydia	4,797	4,757	9,460	8,344
Cryptococcus	10	9	14	19
Cryptosporidiosis	15	15	40	30
E. coli, shiga toxin-producing	7	21	11	30
Giardiasis	56	41	101	82
Gonorrhea	1,123	1,075	2,279	1,956
Haemophilus influenzae, invasive	25	26	36	44
Hemolytic Uremic Syndrome (HUS)	1	1	1	1
Hepatitis A	2	0	8	7
Hepatitis B	10	15	19	28
Hepatitis C Acute	24	11	39	27
Histoplasmosis	25	24	43	47
Influenza Deaths (all ages)	8	1	24	2
Legionellosis	7	8	12	12
Listeriosis	1	1	1	4
Lyme Disease	4	1	4	3
Measles	0	0	0	15
Meningococcal, invasive	8	0	10	1
Mumps	0	1	0	2
Pertussis	23	35	87	67
Rocky Mountain Spotted Fever	0	0	0	0
Salmonellosis	70	102	111	139
Shigellosis	14	9	25	18

Disease	Cases Reported in March – April *MMWR* Weeks 9-17		Cases Reported in January - April *MMWR* Weeks 1-17	
	2011	2012	2011	2012
Severe *Staphylococcous aureus* in Previously Healthy Person	5	7	7	12
Group A Streptococcus, invasive	46	33	93	79
Group B, Streptococcus, Invasive (All ages)	45	69	105	121
Streptococcus pneumoniae (invasive, all ages)	215	125	370	275
Streptococcus pneumoniae (invasive, drug resistant)	52	33	95	68
Streptococcus pneumoniae (invasive, <5 years of age)	12	8	18	12
Syphilis (Primary and Secondary)	25	40	51	71
Tuberculosis	17	18	26	27
Vibriosis	1	0	0	3
Varicella	11	24	39	56
Yersiniosis	2	2	2	4
Animal Rabies				

For information on reporting of communicable diseases in Indiana, call the *Surveillance and Investigation Division* at 317.233.7125.

Indiana State Department of Health
Epidemiology Resource Center
2 North Meridian Street, 5-K
Indianapolis, IN 46204
317/233-7125

Cover photo of Cryo-EM reconstruction of a norovirus capsid.courtesy of Dr. B.V.V. Prasad, Baylor College of Medicine, Houston, TX 77030

The *Indiana Epidemiology Newsletter* is published bi-monthly by the Indiana State Department of Health to provide epidemiologic information to Indiana health care professionals, public health officials and communities.