Indiana State Department of Health

Indiana Epidemiology Newsletter

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Public Health Nurse Conference 2007

Tom Duszynski, BS

Indiana's public health nurses play a vital role in protecting, aiding, and educating Hoosiers. The Indiana State Department of Health (ISDH) recognizes the contribution these nurses make to public health in Indiana and assists their efforts by offering continuing education opportunities, such as the annual Public Health Nurse Conference.

On June 8, more than 150 public health nurses and nursing students attended the 2007 ISDH Public Health Nurse Conference. This year's conference was the most well attended in conference history. Several years ago, the conference began as a "training day" to provide newly hired public health nurses with general education about public health responsibilities within local health departments. The conference has consistently grown over the past several years, and new ideas and different topics have emerged based on suggestions from those who have attended. Conference planners have used participants' input to restructure the program to meet the needs of public health nurses. This year's conference was no exception.

Deputy State Health Commissioner Mary Hill, an attorney and registered nurse, opened the conference by reminding public health nurses and nursing students of the important work they do every day for Hoosiers and how, since September 11, 2001, their roles and knowledge have changed and expanded to include the world of preparedness, again demonstrating the flexibility of public health nursing. Three plenary sessions followed, including updates on syndromic surveillance, cultural competency, and vaccine-preventable diseases.

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Following the plenary sessions, the conference included concurrent sessions for the first time. Designed for a smaller audience, these sessions provided more in-depth information about various topics highlighted in the 2006 conference. According to participant evaluations, overall, the sessions were well received. Topics included case investigation and surveillance, tuberculosis, outbreak investigation, HIV/STD case interviewing, and viral hepatitis. Each session was offered three times during the day to give those who wanted to attend the opportunity to do so.

The conference concluded with a plenary session describing two case studies. One described a recent case of eczema vaccinatum that occurred in an Indiana child following exposure to a family member recently vaccinated for smallpox and subsequent tertiary transmission to the mother. The second case study described a large outbreak of salmonellosis during the summer of 2006 in which 199 confirmed cases were identified in 15 Indiana counties and 2 other states.

The ISDH was fortunate to have a team from the Indiana Mid-America Public Health Training Center (IMAPTHC) film the sessions; copies should be available in early August.

During the conference, we asked all attendees to complete a survey about public health nursing in Indiana. We gave separate surveys to public health nurses and nursing students. The information from these surveys will be shared with those who completed the surveys as well as with other program areas within the state of Indiana and the schools of nursing. This will provide policymakers and curriculum coordinators with a better understanding of the current public health nursing situation within Indiana. The results will be posted in an upcoming edition of the *Indiana Epidemiology Newsletter*.

Planning has begun for next year's conference, which is scheduled for **Wednesday, June 4, 2008**. The planning team is reviewing participant evaluations for suggestions and comments. The ISDH would like to thank everyone who attended this year's conference. We look forward to seeing you next year!

Background – Smallpox Vaccine and Eczema Vaccinatum

The World Health Organization (WHO) declared smallpox eradicated in 1980 (1). In response to terrorist attacks, the U.S. government recommended the reinstatement of smallpox vaccination for military personnel, public health response teams and health care response teams in 2002-03. Over 1.2 million persons have been vaccinated as a result of the renewal of smallpox vaccination. In Indiana, over 750 hospital and public health staff were vaccinated against smallpox in 2002-03, and over 3,000 persons have been trained as smallpox vaccinators.

Smallpox vaccine contains live vaccinia virus, which confers protection against the smallpox virus. Vaccinia virus can be transmitted from a vaccine recipient to other persons by direct skin-to-skin contact through material from the unhealed vaccine site or indirectly through contact by means of fomites (e.g., towels, linen) (2 and 3). The virus can be cultured from the primary vaccination site beginning at the time of the development of a papule (usually 2-5 days following vaccination). Normally, a scab forms at the vaccination site by day 14 and will have separated from the vaccination site by day 21 (1 and 4). It is generally thought that, once the scab separates, the vaccinee is no longer contagious. Unintended transmission of vaccinia virus to others can occur until the scab has separated from the person who has been vaccinated. Persons who are infected through contact are at risk for the same adverse events as the vaccine recipient (5).

Eczema vaccinatum (EV) is a rare and serious life-threatening smallpox vaccination adverse event that can occur in those with a history of atopic dermatitis (eczema) regardless of disease severity or activity (6). Patients with EV are often systemically ill and usually require vaccinia immune globulin (VIG). Prior to 1990, the incidence rate for EV was approximately 8-80 cases per one million smallpox vaccinations (7). One study determined that, following the introduction of intramuscularly administered VIG treatment, the mortality rate of EV was reduced from 30-40% to 7% (8).

Eczema Vaccinatum in Child Resulting from Transmission of Vaccinia from Smallpox Vaccinee with Tertiary Spread to the Mother

This report serves as a companion article to one published in the MMWR on May 18, 2007. Please check the MMWR Web site at http://www.cdc.gov/mmwr/ to view this related article.

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On March 8, 2007, the Illinois Department of Public Health (IDPH) notified the Indiana State Department of Health (ISDH) of a two-year-old male resident of northwestern Indiana who had been admitted to a hospital in Chicago with presumed eczema vaccinatum (EV) infection. Preliminary laboratory results from the IDPH indicated the presence of non-variola orthopoxvirus (thought to be vaccinia virus due to contact with his father who had recently been vaccinated for smallpox). This report describes the case histories of a two-year-old EV case and his mother,

who later became a case of contact vaccinia. The report also details the joint epidemiologic and environmental investigation conducted by state and local public health authorities in Indiana and Illinois, the CDC, and hospitals in both states.

Case Histories and Family Information

Two-Year-Old Case

On January 26, 2007, an active-duty service member received a dose of smallpox vaccine prior to overseas deployment. During the screening process prior to the vaccination, the service member had reported a history of eczema as a child. His deployment was delayed, and he traveled home (on leave) to be with his family from February 16-20. He self-reported a scab falling off around 14 days post-vaccination and stated he continued to wear a bandage while on leave with his family. During the visit, the service member engaged in extensive physical contact with his two-year-old son who had a history of severe atopic dermatitis. Activities included hugging, wrestling, sleeping with, and bathing the child.

Because of an increasingly severe rash on his face, neck, and upper extremities, the child was taken to the Emergency Department of St. Catherine's Hospital in East Chicago, Indiana, on March 3. Due to the severity of the illness, the child was transferred to the University of Chicago Children's Hospital (UCCH); contact precautions were implemented at the hospital.

The child's mother indicated that the boy had a fever two days before his hospital admission and weeping skin lesions as early as February 24. By March 7, the rash had progressed to umbilicated lesions with an erythematous base, primarily involving the child's hands, forearms, neck, chest, face, and knees and encompassing 50 percent of his keratinized skin. On March 8, lesion specimens were analyzed at the Illinois Department of Public Health Laboratory (IDPHL) in Chicago by real-time polymerase chain reaction (PCR) orthopoxvirus generic assay and nonvariola orthopoxvirus assay. The results of the assays were positive for orthopoxvirus DNA, supporting the clinical diagnosis of EV. The diagnosis of vaccinia was confirmed at CDC (9).

During March 8-28, the child was treated with a combination of immunotherapy and antivirals targeting vaccinia virus. The initial treatment included Vaccinia Immune Globulin Intravenous (Human) (VIGIV); supportive care included sedation, intubation, and mechanical ventilation. Despite these interventions, on March 10, the child's illness had progressed to hypothermia and hemodynamic instability requiring vasopressor support. Antiviral therapies with cidofovir and an investigational drug, ST-246 (SIGA Technologies) under an Emergency Investigational Drug application, were initiated and additional infusions of VIGIV were administered. After approximately one week of interventions, the child began to improve.

Clinical specimens from blood and skin were analyzed at the CDC Poxvirus Laboratory. All specimens obtained during the first 10 days of the child's hospitalization were positive for orthopox DNA using a real-time PCR assay (9). Vaccinia virus was also cultured from many of the specimens during this time. Scab formation occurred and, eventually, all scabs crusted over and had separated by April 11. All scab separation sites tested on or after March 31 were negative for vaccinia virus by PCR analysis.

After 48 days of hospitalization, the child was released on April 19 with no known sequalae other than potential scarring. The child has been scheduled for follow-up with Infectious Disease, Dermatology, Plastic Surgery, Allergy, Physical and Occupational Therapy, and his primary pediatrician.

Mother
On March 6, the mother of the child developed a rash on her face with additional lesions visible on her right finger and near her eyelid. Lesion material was analyzed by the IDPHL and found to contain orthopox DNA signatures, which was later confirmed as vaccinia virus by the CDC. The mother voluntarily isolated herself with her child. On March 10, she was hospitalized and placed in a room next to her son. Within 72 hours of her VIGIV administration, her lesions began to scab over. She was released from the hospital on March 23 but continued to stay with her son and took up residence near the hospital. Epidemiologic and serologic evidence suggests that tertiary transmission may have occurred between the child and mother, but fomite transmission cannot be ruled out.

Other Family Background
Two siblings of the two-year-old left the family residence at the time of the hospitalization on March 3. One of the two siblings had a history of atopic dermatitis. Both siblings were cared for by their grandmother at her residence while the case and the mother were considered contagious. Neither sibling developed vaccinia infection.

2. Epidemiologic Investigation

Since the child was shedding virus on March 3 and most likely several days prior to his hospitalization, contact tracing was initiated to identify persons potentially exposed to the virus. On March 9, the local health department (LHD) that had jurisdiction, the local hospital where the case was first observed, and the ambulance service that transported the case to Chicago were notified. All three organizations were asked to identify and monitor persons who may have had contact with the child, the mother, or the father during their contagious period.

Based on information provided by the child's mother and grandmother, the LHD identified 17 persons (all relatives of the child and mother) who had contact with the infected individuals. The hospital identified seven employees who were potentially exposed, and the ambulance service provided the names of two staff members who transported the child to Chicago on March 3. All 26 persons were contacted at least every other day, and in most cases every day, for 21 days following their last potential vaccinia exposure. Persons under surveillance were asked if they had rash, fever, or eye irritation during each call or visit.

Active surveillance was implemented on either March 9 or 10 for each of the 26 potentially exposed persons. The last day of potential vaccinia contact for 25 of the 26 individuals was March 3, the day the child was admitted to the hospital and placed in isolation. Surveillance of these persons ended on March 24. The only person not having contact with the case on March 3 was a relative living in central Indiana. His contact was with the father of the case during his leave from February 16-20. Surveillance ended for this person on March 12. None of the 26 persons who had contact with the child or mother developed vaccinia rash, fever, eye irritation, or other vaccinia-compatible symptoms during the surveillance period. A young relative of the case developed a rash of low suspicion around March 12. The rash was cultured and was found negative by PCR for vaccinia virus at the CDC Poxvirus Laboratory.

Sixty-four health care workers were also monitored for symptoms compatible with vaccinia infection at the hospital in Chicago. All were symptom free during and at the conclusion of their 21-day monitoring period with the exception of one person who developed a fever, which was determined not to be vaccinia related. The IDPH also conducted surveillance of family members living in Illinois who had contact with the father during his leave period, none of whom developed symptoms.

In addition to the active surveillance described above for persons identified as being potentially exposed to vaccinia, the ISDH Public Health Emergency Surveillance System (PHESS) was monitored for increased reports of rash illness in Public Health Preparedness District 1 (five-county area in northwestern Indiana). None of the investigated PHESS-reported cases was vaccinia related or epidemiologically linked to the two confirmed cases.

3. Environmental Assessment and Disinfection of the Home

In order to establish whether viable virus was still present in the home, a CDC Epi-Aid Team conducted an environmental assessment in the presence of the father on March 13 (10 days after the child was hospitalized). Staff members from the LHD and the ISDH were also present during the environmental assessment of the home. Swabs of clothing, furniture, topical medications, and other items that were in most frequent contact with the child (as indicated by the father) were collected. Other items (car seat and infant drinking cup) were collected from the hospital. Twenty-five samples were analyzed by quantitative orthopox generic real-time polymerase chain reaction (PCR) assay and culture in BSC-40 cells was performed for orthopox-PCR positive specimens. Eight of 25 environmental samples were positive by PCR for vaccinia virus, and 3 of the 8 yielded viable vaccinia virus in cell culture. Items found to be positive for vaccinia virus DNA by real-time PCR assay from the home were a washcloth, a slipper, a toy drum, a nightstand, a booster seat, and an ointment container. Items brought to the hospital room, including an infant drinking cup and a car seat, were also found to be positive by PCR assay. The three samples found to contain viable virus by cell culture testing were the booster seat, the toy drum, and the slipper.

On March 23, the father, assisted by one employee of the LHD and one employee of the ISDH, disinfected the home. Both health department staff members had been vaccinated for smallpox within the past five years. Disinfection procedures included cleaning of household surfaces with phenolics, steam and hot water/soap cleaning of carpeted and other plush surfaces, and hot wash with phenolic pre-soak for clothing and linen.

During the course of the epidemiologic investigation and environmental assessment, local and state public health officials and hospital staff recommended that the mother and child remain isolated until all vaccinia scabs had separated.

4. Conclusions

This is the first reported case of EV in the United States since 1988 (9). The epidemiologic investigation indicates that secondary transmission of vaccinia virus occurred between the father and the child. Further, epidemiologic and laboratory evidence strongly suggests that tertiary transmission occurred between the child and the mother, although transmission by fomites cannot be ruled out.

Information gathered indicates that the father should not have been vaccinated due to his reported history of eczema. According to military sources, his history of eczema was recorded on his smallpox vaccination screening form. Given: 1) the date of contact with the son was 21 days following the father's vaccination; 2) the father's scab reportedly had fallen off; and 3) the father stated he followed guidelines provided to him regarding the care of his vaccination site, it is not clear whether anything further could have been done, given current guidelines, to prevent the son's infection once the father was vaccinated.

Environmental evaluation confirmed the presence of infectious vaccinia virus in the home environment 10 days after infected family members were removed from the home. Results of the household environmental assessment support the disinfection of the home environment especially in the setting of: 1) extensive skin involvement and viral shedding (i.e., eczema vaccinatum) and 2) high-risk susceptible household members. In this instance, alternative housing for the two susceptible children was maintained until both the mother and child were free of vaccinia scabs and the home environment could be appropriately disinfected.

It is likely that strict isolation measures implemented with the child and mother in conjunction with the disinfection of the home environment contributed to no additional cases being documented.

5. Recommendations

These findings have implications for smallpox bio-preparedness and vaccination procedures, especially in situations where all members of a residence may not be candidates for, or do not consent to, vaccination. Although smallpox vaccination for health care workers and other selected individuals has been suspended in Indiana, this case presents issues for health care professionals and others who may be involved with the care of patients with pustular rash illness and for those who may later be involved if smallpox vaccination programs are reinstated. Based on the findings reported above, the following recommendations are made:

- Health care providers should maintain a high degree of suspicion for vaccinia infection in persons with clinically compatible vaccinia lesions who have had recent contact with smallpox vaccinees. Health care professionals and public health officials should specifically seek information regarding contact with military personnel when evaluating a patient with vesicular-pustular lesions or lesions compatible with vaccinia infection. Early identification of contacts of military vaccinees can guide diagnostics, allow for timely contact tracing and clinical intervention, and facilitate prompt patient counseling to prevent further spread of vaccinia virus.

- Suspected cases of contact transmission of vaccinia virus should be reported immediately to the ISDH and the appropriate LHD for follow-up investigation. The ISDH Laboratory has the ability to assess clinical specimens for the presence of non-variola orthopox virus by PCR assay. Clinical specimens from persons suspected of being infected with vaccinia should be submitted to the ISDH Laboratory for analysis. Specimens testing positive at the ISDH Laboratory should be submitted to the CDC Poxvirus Laboratory for species confirmation.

- In the unlikely event that smallpox vaccination would need to be reinstated in Indiana for health care workers or the general public, vaccinators would have to be ready on short notice. Therefore, persons currently trained, or trained in the future, as smallpox vaccinators should periodically review guidelines for smallpox vaccine administration and education of vaccinees (4). As part of that review, contraindications to vaccination should be considered carefully. Contraindications to vaccination include pregnancy, immune-compromising conditions (e.g., human immunodeficiency virus infection), and chronic skin conditions such as eczema. Having household contacts with any of these conditions is also a contraindication.

Additional information may be obtained from the Centers for Disease Control and Prevention (CDC) Web site at http://www.bt.cdc.gov/agent/smallpox/index.asp

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A Decade of Indiana Sentinel Influenza Data Surveillance

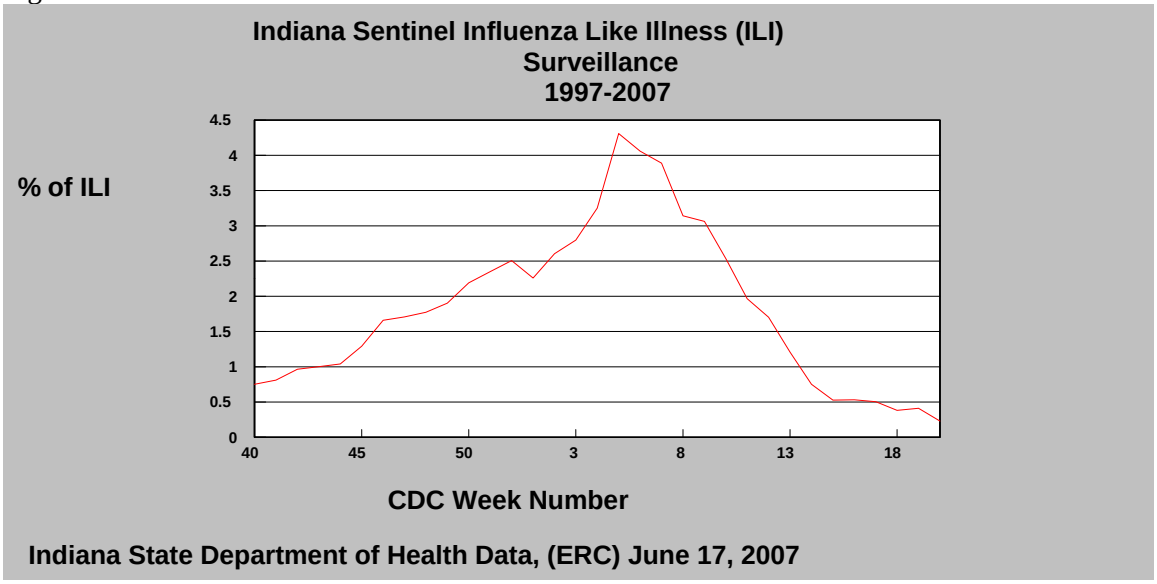
Shawn Richards, BS

The Indiana State Department of Health (ISDH) has participated in the Centers for Disease Control and Prevention (CDC) national Influenza Sentinel Provider Surveillance program for the past 10 years. This article describes the influenza baseline for the past 10 years as well as other information that has been observed over the past decade.

The Indiana Sentinel Provider Surveillance program includes 40 of the 1,000 sentinel sites included in the national program. These health care providers report the number of patients seen in their offices and, specifically, the number of patients with influenza-like-illness (ILI) on a year-round basis. For surveillance purposes, the CDC defines ILI as fever (>100 ^{o}F [37.8 ^{o}C] oral or equivalent) and cough or sore throat (in the absence of a known cause). Sentinel sites report weekly, submitting their data to the repository at the CDC via Internet or fax. Additionally, sentinel participants collect nasopharyngeal swabs from random patients with ILI whose onset of classic clinical symptoms started within 72 hours of the appointment. The swabs are sent to the ISDH Laboratories for viral isolation and identification by IFA, DFA, or PCR methods.

The ISDH uses these data to monitor influenza activity and establish baseline levels over time. A baseline level assists in monitoring trends of influenza activity and provides comparison to indicate influenza activity that may be significant. A baseline of 10 years provides a strong determination of ILI activity in Indiana. The baseline level of ILI for the past 10 years is shown in Figure 1.

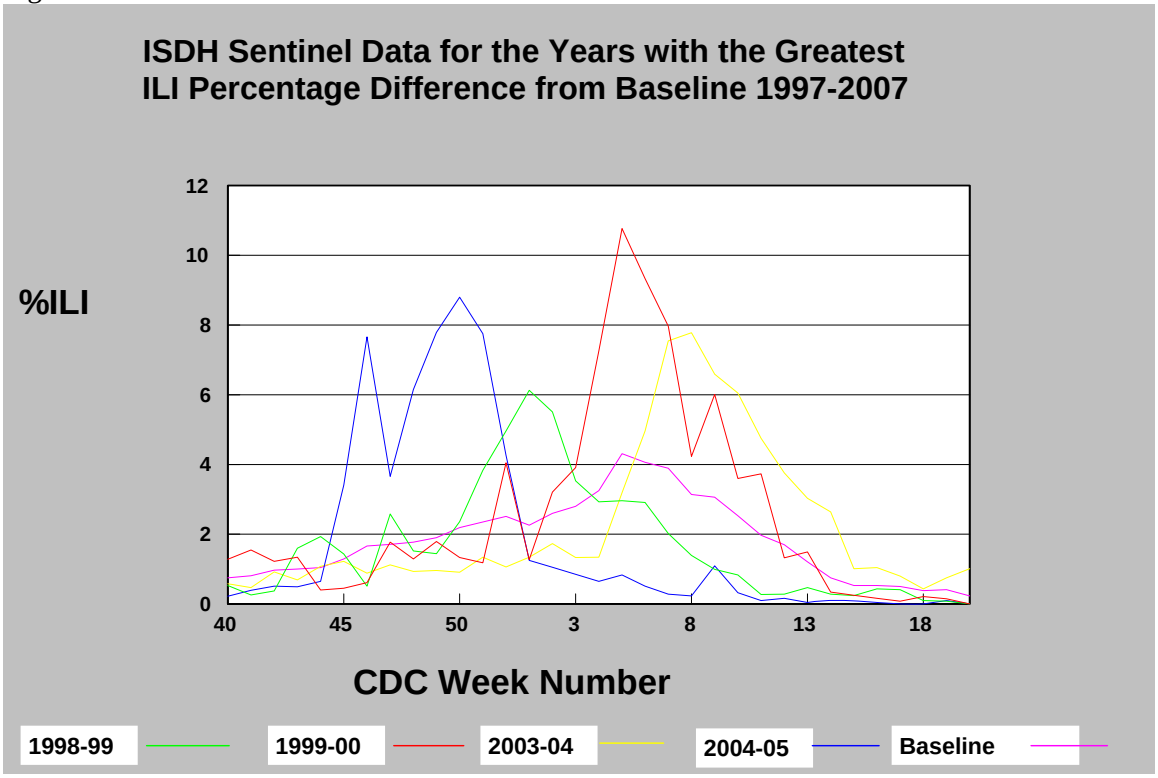
Figure 1.



Click here for data for individual years.

In a typical influenza season, the baseline level peaks in early-to-mid February in Indiana. Influenza activity was particularly significant during 1998, 1999, 2003, and 2004. Figure 2 compares the levels in these 4 years to the 10-year baseline.

Figure 2.



In addition to providing baseline levels of activity and patterns of transmission, influenza sentinel surveillance data also help determine the viral components for influenza vaccine. The ISDH sends laboratory results of viral strains identified in specimens collected at sentinel sites to the CDC, as do all other states. Each year, usually in February, the CDC compiles these laboratory results to determine which influenza strains are most likely to circulate during the following influenza season. Most of the time, the vaccine strains closely match the circulating strains. Occasionally, due to antigenic drift, the circulating viruses are different enough from the vaccine strains that they do not match well. When this occurs, the vaccine does not provide as much protection, and influenza epidemics usually result. The viral components of the influenza vaccine and the predominating strains of the corresponding year are found in Table 1.

Table 1.

Year Match	H1N1Strain	H3N2 Strain	B Strain
1996-97	A/Texas/36/91	A/Wuhan/359/95 (A/Nanchang/933/95)	B/Beijing/184/93 (B/Harbin/07/94)
1997-98	A/Bayern/07/95 (A/Johannesburg/82/96) A/Sydney/05/97 (H3N2)	A/Wuhan/359/95 (A/Nanchang/933/95)	B/Beijing/184/93 (B/Harbin/07/94)
1998-99	A/Beijing/262/95	A/Sydney/05/95 A/Wuhan/359/95 (H3N2)	B/Beijing/184/93 (B/Harbin/07/94)
1999-2000	A/Beijing/262/95	A/Sydney/05/95	B/Beijing/184/93 (B/Yamanashi/166/98)
2000-01 A B	A/New Caledonia/20/99	A/Moscow/10/99 (A/Panama/2007/99)	B/Beijing/184/93 (B/Yamanashi/166/98)
2001-02	A/New Caledonia/20/99	A/Moscow/10/99 (A/Panama/2007/99)	B/Sichuan379/99 (B/Johannesburg/05/99,

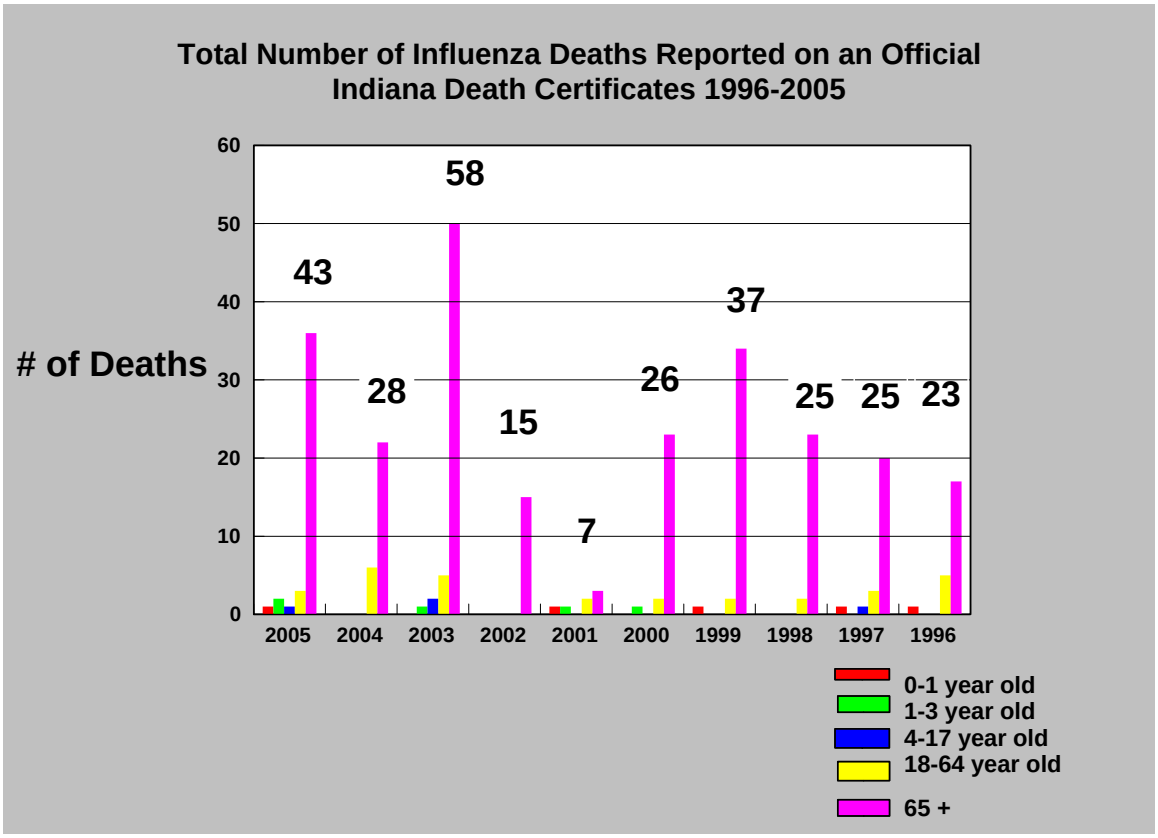
Year Match	H1N1Strain	H3N2 Strain	B Strain B/Victoria/504/2000, or B/Guangdong/120/2000)
2002-03	A/New Caledonia/20/99	A/Moscow/10/99 (A/Panama/2007/99)	B/Hong Kong/330/2001 (B/Hong Kong/330/01 or B/Hong Kong/1434/02)
2003-04	A/New Caledonia/20/99	A/Moscow/10/99 A/Fujian/411/2002 (H3N2) (A/Panama/2007/99)	B/Hong Kong/330/2001 (B/Hong Kong/330/01 or B/Hong Kong/1434/02)
2004-05	A/New Caledonia/20/99	A/Fujian/411/2002 A/California /7/2004 (A/Wyoming/3/2003)	B/Shanghai/361/2002 (B/Jilin/20/2003 or B/Jiangsu/10/2003)
2005-06	A/New Caledonia/20/99	A/California/7/2004 (A/New York/55/2004)	B/Shanghai/361/2002 (B/Jilin/20/2003 or B/Jiangsu/10/2003)

Predominant Strain
Strain Not In Vaccine

It is well known that the seasonal impact of influenza is very significant. During 1990-1999, the CDC estimates that 36,000 deaths each year in the United States were related to influenza (1). Calculating the exact number of deaths from influenza is difficult, because influenza is not reportable in Indiana and is not always diagnosed at time of death, although it may be a contributing factor. According to CDC data, Indiana should record approximately 600 deaths per year from influenza. However, Indiana death certificates reflect only a percentage of those deaths. Due to the delay in filing death certificates and the current method of tabulating these data, ISDH death data are usually unavailable for up to 1½ years following the event. In October 2006, the ISDH Executive Board approved mandating the reporting of influenza deaths in

Indiana. An emergency rule mandates that all influenza deaths are reportable within 72 hours of the knowledge of death. The rule is expected to be processed through formal promulgation by the end of 2007. Figure 3 shows the total number of Indiana deaths due to influenza reported on an official death certificate for the years 1996-2005.

Figure 3.



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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 reference **http://www.IN.gov/isdh/programs/immunization.htm.**

ISDH Data Reports Available

The ISDH Epidemiology Resource Center has the following data reports and the Indiana Epidemiology Newsletter available on the ISDH Web Page:

http://www.IN.gov/isdh/dataandstats/data_and_statistics.htm

HIV/STD Quarterly Reports (1998-June 06)	Indiana Mortality Report (1999, 2000, 2001, 2002, 2003, 2004, 2005)
Indiana Cancer Incidence Report (1990, 95, 96, 97, 98)	Indiana Infant Mortality Report (1999, 2002, 1990-2003)
Indiana Cancer Mortality Report (1990-94, 1992-96)	Indiana Natality Report (1998, 99, 2000, 2001, 2002, 2003, 2004, 2005)
Combined Cancer Mortality and Incidence in Indiana Report (1999, 2000, 2001, 2002, 2003)	Indiana Induced Termination of Pregnancy Report (1998, 99, 2000, 2001, 2002, 2003, 2004, 2005)
Indiana Health Behavior Risk Factors (1999, 2000, 2001, 2002, 2003, 2004, 2005)	Indiana Marriage Report (1995, 97, 98, 99, 2000, 2001, 2002)
Indiana Health Behavior Risk Factors (BRFSS) Newsletter (9/2003, 10/2003, 6/2004, 9/2004, 4/2005, 7/2005, 12/2005, 1/2006, 8/2006, 10/2006, 5/2007)	Indiana Infectious Disease Report (1997, 98, 99, 2000, 2001, 2002, 2003, 2004, 2005)
Indiana Hospital Consumer Guide (1996)	Indiana Maternal & Child Health Outcomes & Performance Measures (1990-99, 1991-2000, 1992-2001, 1993-2002, 1994-2003, 1995-2004)
Public Hospital Discharge Data (1999, 2000, 2001, 2002, 2003, 2004, 2005)	

HIV Disease Summary

Information as of May 31, 2007 **(based on 2000 population of 6,080,485)**

HIV - without AIDS to date:

408	New HIV cases from June 2006 thru May 31, 2007	12-month incidence	7.09 cases/100,000
3,767	Total HIV-positive, alive and without AIDS on May 31, 2007	Point prevalence	65.49 cases/100,000

AIDS cases to date:

340	New AIDS cases from June 2006 thru May 31, 2007	12-month incidence	5.91 cases/100,000
4,014	Total AIDS cases, alive on May 31, 2007	Point prevalence	69.78 cases/100,000
8,272	Total AIDS cases, cumulative (alive and dead)		

REPORTED CASES of selected notifiable diseases

Disease	Cases Reported in May *MMWR* Weeks 19-22		Cumulative Cases Reported January – May *MMWR* Weeks 1-22	
	2006	2007	2006	2007
Campylobacteriosis	39	34	145	136
Chlamydia	1,419	1,416	8,636	8,810
Cryptosporiosis	8	5	20	20
Cyclosporiosis	0	0	1	1
E. coli O157:H7	3	2	14	11
Haemophilus influenzae	11	3	33	20
Hepatitis A	3	0	10	5
Hepatitis B	4	2	14	15
Gonorrhea	608	546	3,729	3,532
Legionellosis	2	2	5	7
Listeriosis	1	2	5	6
Lyme Disease	0	2	2	4
Measles	0	0	1	0
Meningococcal, invasive	2	0	11	14
Mumps	3	0	6	0
Pertussis	23	2	80	14
Rocky Mountain Spotted Fever	0	0	1	1
Salmonellosis	56	46	200	214
Shigellosis	12	2	54	24
Streptococcus pneumoniae (invasive, all ages)	56	58	311	292
Streptococcus pneumoniae (invasive, drug resistant)	14	15	82	81
Streptococcus pneumoniae (invasive, <5 years of age)	4	2	29	18
Syphilis (Primary and Secondary)	8	3	34	17

REPORTED CASES of selected notifiable diseases (cont.)

Disease	Cases Reported in May *MMWR* Weeks 19-22		Cumulative Cases Reported January – May *MMWR* Weeks 1-22	
	2006	2007	2006	2007
Tuberculosis	13	16	53	62
Yersiniosis	3	2	4	6
Animal Rabies	1 (bat)	4 (bats)	2 (bats)	5 (bats)

For information on reporting of communicable diseases in Indiana, call the *Epidemiology Resource Center* 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

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