Indiana Epidemiology Newsletter

Volume 11, Issue 6 June 2008

Awareness of INShape Indiana: Data from the 2007 Indiana Behavioral Risk Factor Surveillance System

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Introduction

INShape Indiana (INShape), Governor Daniels' Web-based health initiative, was created in 2005 to help Hoosiers make healthy choices by linking them to valuable resources and offering fun challenges to improve overall health and well-being. To date, more than 76,000 participants have enrolled in the program. It is hoped that INShape will continue to increase awareness and promote wellness throughout Indiana.

In 2007, INShape sponsored a question in the Indiana Behavioral Risk Factor Surveillance System (BRFSS) survey to assess awareness of the INShape program: *"Are you aware of the state's effort to improve Hoosier health through INShape Indiana?"* Knowledge gained from this question could be very useful in developing future strategies to promote INShape.

The BRFSS is an annual random digit-dial telephone survey of adults aged 18 years and older to obtain information on health behaviors and risk factors. The survey is conducted through a cooperative agreement with the Centers for Disease Control and Prevention (CDC). All 50 states and the District of Columbia participate. Indiana has participated since the inception of the survey in 1984.

Analysis

Overall, almost half of the adults (48.8%) surveyed reported that they were already aware of INShape Indiana. Awareness differed by age group, with adults aged 45-54 being more likely to report awareness (55.3%) than adults aged 18-24 (42.7%), and those aged 65 and older (43.4%) were less likely to know about INShape than adults aged 25-54 (range of 51.8% to 55.3%).

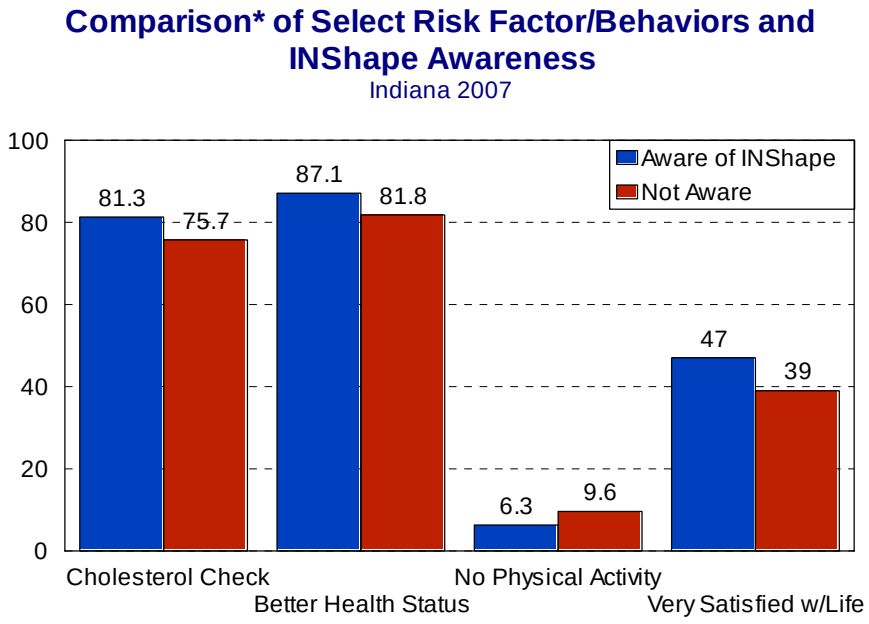
There was no significant difference by race, as 52.9 percent of Other/Multiracial respondents, 51.0 percent of white, non-Hispanic, and 46.0 percent of black, non-Hispanic respondents reported awareness of INShape Indiana.

Survey respondents with household incomes of $75,000 or greater (56.6%) and those with household incomes of $25,000-$49,999 (51.7%) were more likely to report awareness than respondents with household incomes of $15,000-$24,999 (43.0%).

Awareness also differed by educational level, with respondents who were college graduates being the most likely to be aware of INShape (57.9%). Respondents with less than a high school education were less likely to report awareness (39.2.9%) than those with some college or technical school (50.0%) or college graduates.

Respondents reporting awareness were statistically significantly more likely to report some beneficial behaviors than those without awareness (See Figure 1). Respondents reporting awareness were also statistically less likely to report being dissatisfied with their lives. There were no statistically significant differences between respondents who were aware of INShape and those who were not in terms of current smoking, body mass index, moderate or vigorous physical activity, or fruit and vegetable consumption. However, the question specifically addressed awareness of the program, not if respondents had actually modified their behavior as a result of INShape.

Figure 1



*Differences are statistically significant.
Source: 2007 Indiana BRFSS

IN SHAPE INDIANA
Governor Mitch Daniels

Indiana
Tuberculosis Annual Summary 2007

Sarah Burkholder, RN, MPH
TB/Refugee Health Division Director

Tina Feaster
ISDH Tuberculosis Epidemiologist

Shameer Poonja, MPH
CDC Public Health Advisor

Cases = 129

Crude Incidence Rate per 100,000 population = 2.0 (U.S. 2006 = 4.6)

Race and Ethnicity-specific Incidence Rates per 100,000 population [1]
White = 1.5
Black or African-American = 5.0
Asian = 18.1
Hawaiian Native or other Pacific Islander = N/A
American Indian or Alaska Native = N/A
Hispanic or Latino, all races = 11.3

Gender-specific Incidence Rates per 100,000 population
Male = 2.6
Female = 1.5

Executive Summary

During 2007, 129 new cases of tuberculosis (TB) were reported to the Indiana State Department of Health. Figures 1a and 1b show long-term and 6-year trends, respectively. TB cases were reported by 33 of Indiana's 92 counties. The three most populous counties (according to the estimated 2006 census), Marion, Lake, and Allen, accounted for 56 percent of all new TB cases. While the number of reported cases in Marion County decreased from 47 cases in 2006 to 42 cases in 2007, the number of reported cases in both Lake and Allen Counties increased during 2007. Allen County increased from 10 cases in 2006 to 15 cases in 2007; Lake County increased from 10 cases in 2006 to 16 in 2007. The number of reported cases in Kosciusko County has continued to decline since the 2005 outbreak. The number of reported cases in the Northwest region (Figure 2) increased from 12 in 2006 to 22 cases in 2007. The number of reported cases in the Southern region experienced a similar increase, with 11 reported cases in 2006 and 22 in 2007. Sixteen new Indiana genotype clusters (two or more molecular matched isolates) were identified in 2007. Seven of these clusters were located exclusively in Marion County.

High-risk populations include: children, persons infected with HIV, and persons who abuse drugs and/or alcohol. Reporting for HIV increased in all age groups: In 2007, HIV status was known for 87 percent of those in the 25-44 age group, compared to 66 percent in 2006 (Table 1).

[1] Incidence rates based on population estimates 2006 census

Pediatric cases decreased in 2007 to 6 percent from 13 percent of the total reported cases in 2006 (Figure 3). Excess alcohol use and non-injection drug use increased from 18 percent in 2006 to 26 percent in 2007 and 4 to 9 percent, respectively (Table 2). The percentage of cases started on appropriate therapy increased from 82 percent in 2006 to 88 percent in 2007 (Figure 4). There was one multi-drug resistant case in 2007 and eight cases resistant to Isoniazid only (Figure 5).

U.S.-born cases continue to make up the majority of TB cases diagnosed in Indiana (Figure 6). Of those non-U.S.-born cases, the majority come from Central/South America (Figure 7). National trends show most non-U.S.-born cases are diagnosed within the first three years after entry into the U.S. In Indiana, the largest number of non-U.S.-born individuals diagnosed with TB have lived in the U.S. for longer than five years.

Figure 1a.

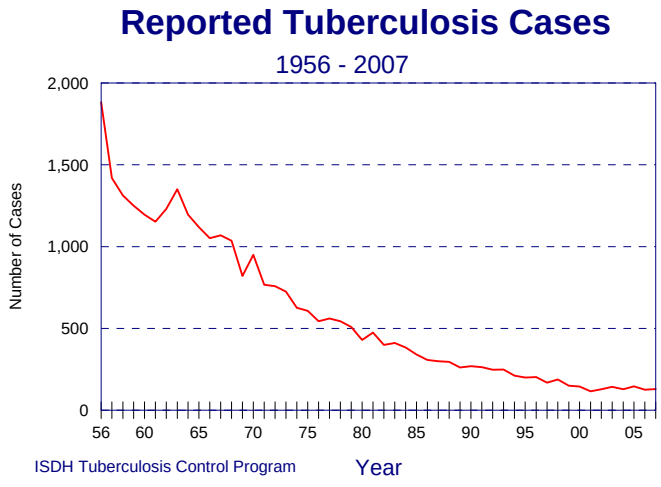


Figure 1b.

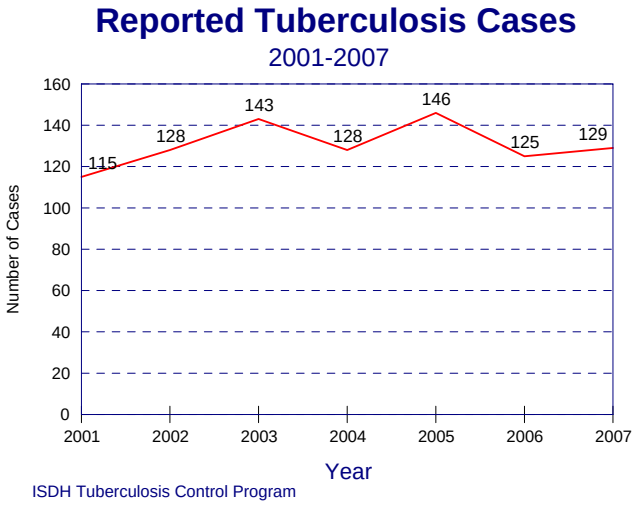


Table 1.

HIV Counseling and Testing

Number and percent of adult patients reported in 2007 offered counseling and testing

Status	Age group 25-44 (n=47)	All adult cases >=15 years of age (n=124)
Tested, results known or pending	41 (87%)	89 (72%)
Patient refused	0	7 (6%)
Test not offered	6 (13%)	28 (22%)

ISDH Tuberculosis Control Program

Figure 2.

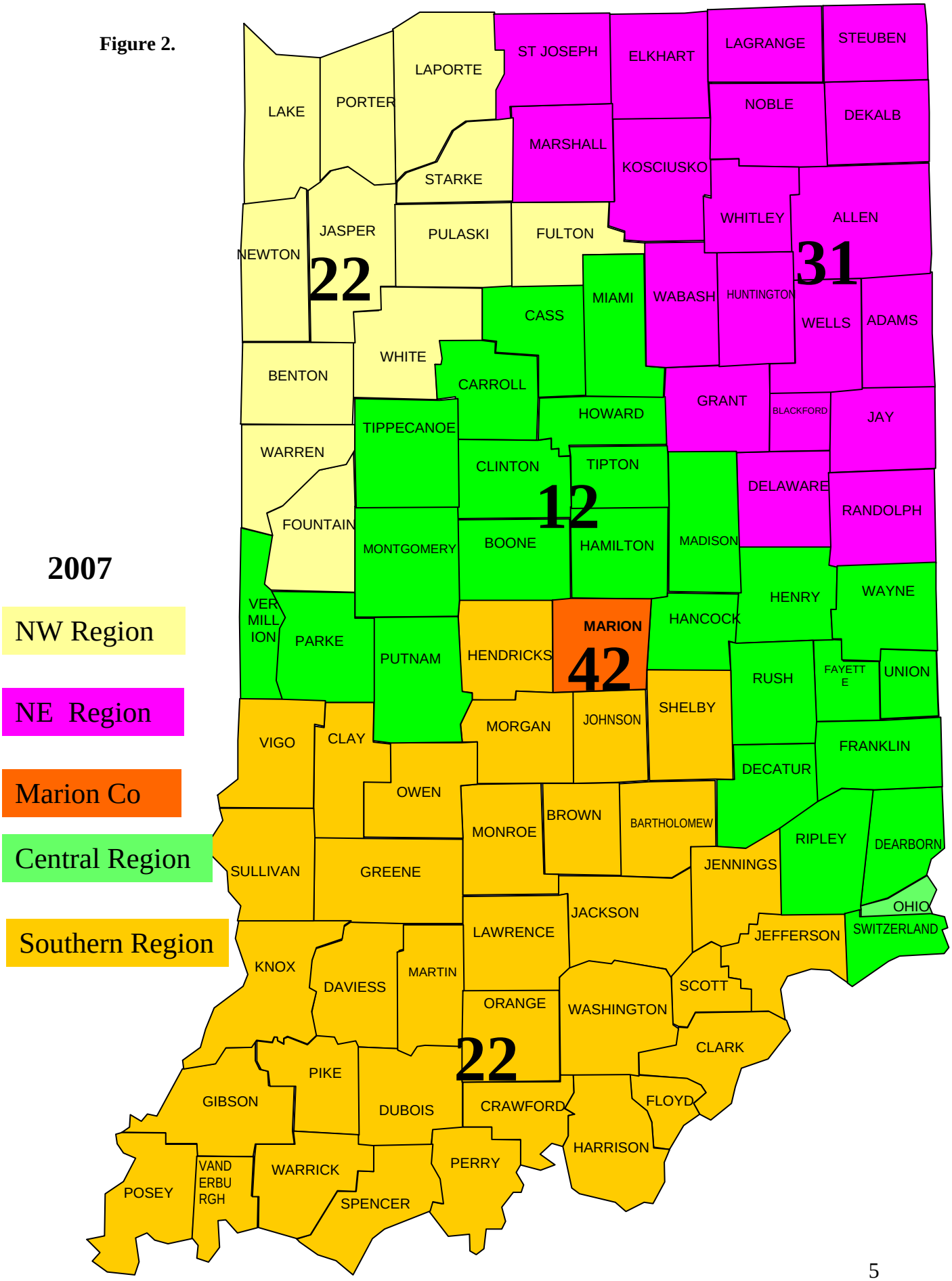

2007
NW Region
NE Region
Marion Co
Central Region
Southern Region
LAKE
PORTER
LAPORTE
ST JOSEPH
ELKHART
LAGRANGE
STEUBEN
NOBLE
DEKALB
MARSHALL
KOSCIUSKO
STARKE
WHITLEY
ALLEN
JASPER
NEWTON
22
PULASKI
FULTON
31
MIAMI
WABASH
HUNTINGTON
WELLS
ADAMS
CASS
WHITE
BENTON
CARROLL
GRANT
BLACKFORD
JAY
HOWARD
TIPPECANOE
WARREN
CLINTON
TIPTON
12
DELAWARE
RANDOLPH
FOUNTAIN
MONTGOMERY
BOONE
HAMILTON
MADISON
VER
MILL
ION
PARKE
PUTNAM
HENDRICKS
MARION
42
HANCOCK
HENRY
WAYNE
RUSH
FAYETT
E
UNION
VIGO
CLAY
OWEN
MORGAN
JOHNSON
SHELBY
DECATUR
FRANKLIN
MONROE
BROWN
BARTHOLOMEW
RIPLEY
DEARBORN
SULLIVAN
GREENE
JENNINGS
OHIO
SWITZERLAND
JACKSON
LAWRENCE
JEFFERSON
KNOX
DAVIESS
MARTIN
SCOTT
ORANGE
WASHINGTON
22
CLARK
PIKE
GIBSON
DUBOIS
CRAWFORD
FLOYD
HARRISON
VAND
ERBU
RGH
POSEY
WARRICK
PERRY
SPENCER

Figure 3.

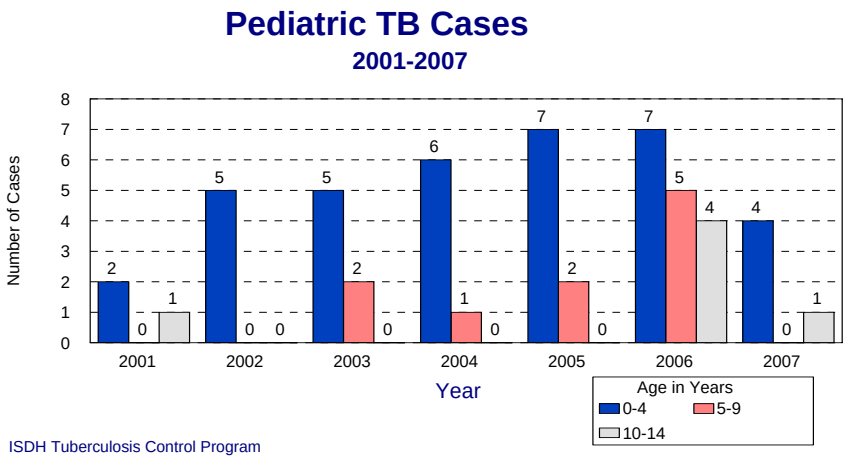


Table 2.

Reported Tuberculosis Cases in 2007

with Selected Exposure and Medical Risk Factors*
(n=129)

Risk Factor	Number of Cases	Percent of Cases
Excess alcohol use	34	26
Injection drug use	6	5
Non-injection drug use	12	9
Homelessness	10	8
Resident of long-term care facility	4	3
Resident of correctional facility	3	2

*at the time of diagnosis

Figure 4.

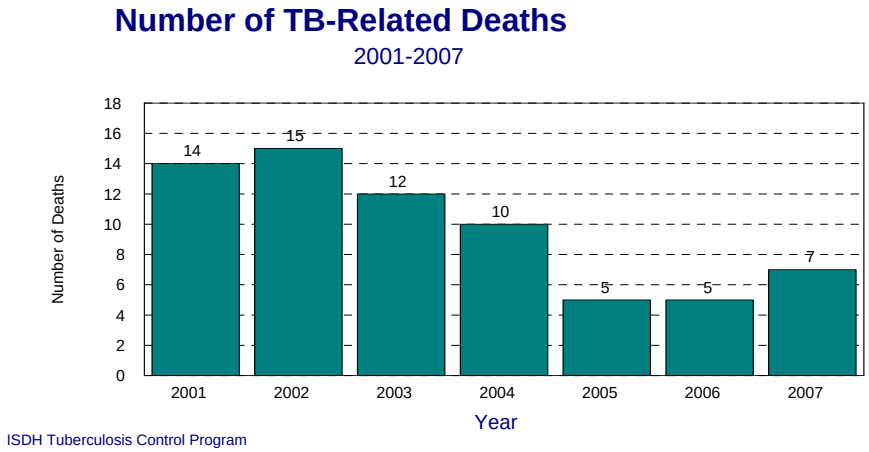
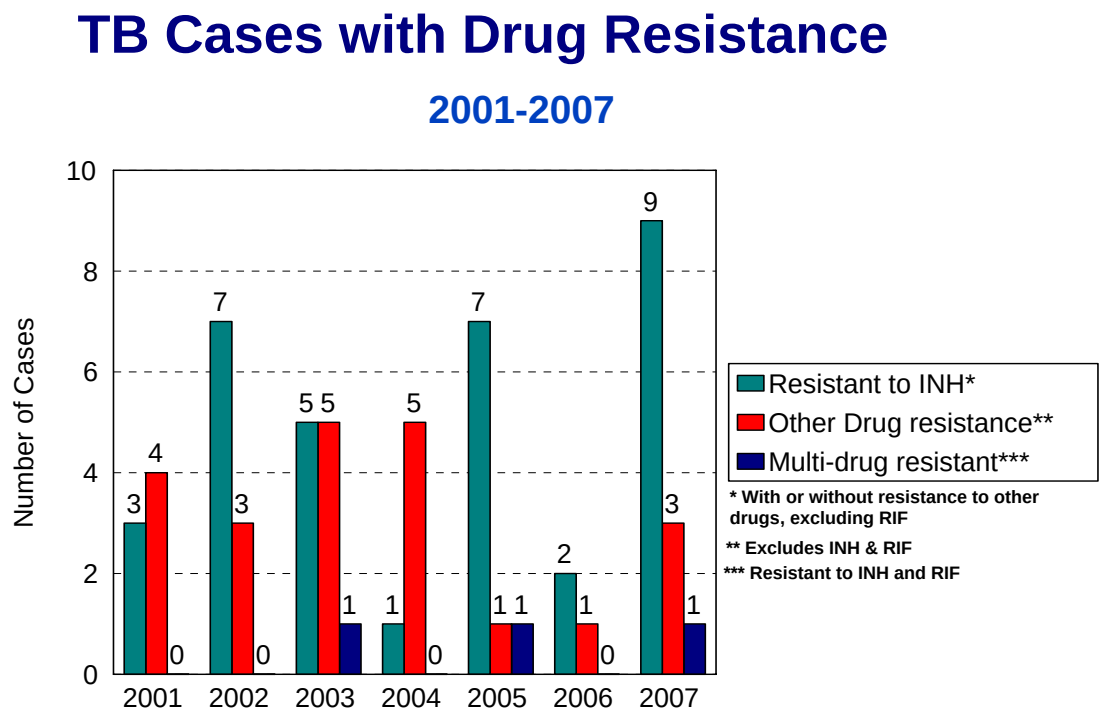
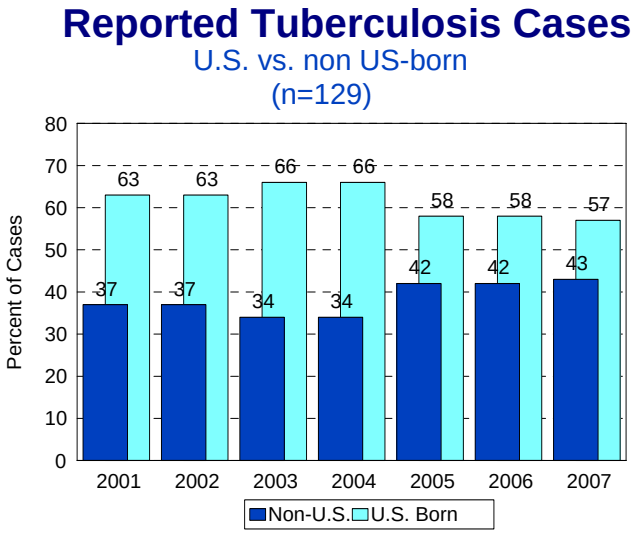


Figure 5.



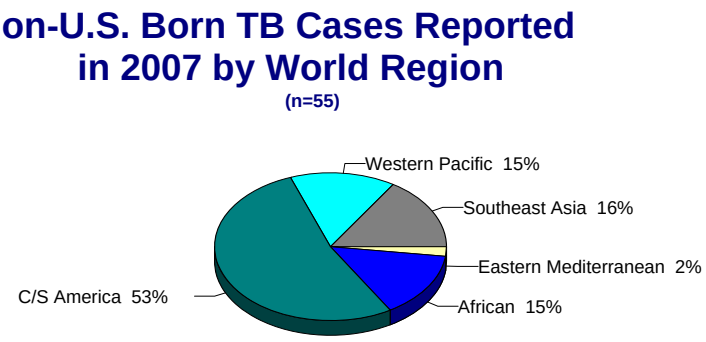
ISDH Tuberculosis Control Program

Figure 6.



ISDH Tuberculosis Control Program

Figure 7.



ISDH Tuberculosis Control Program

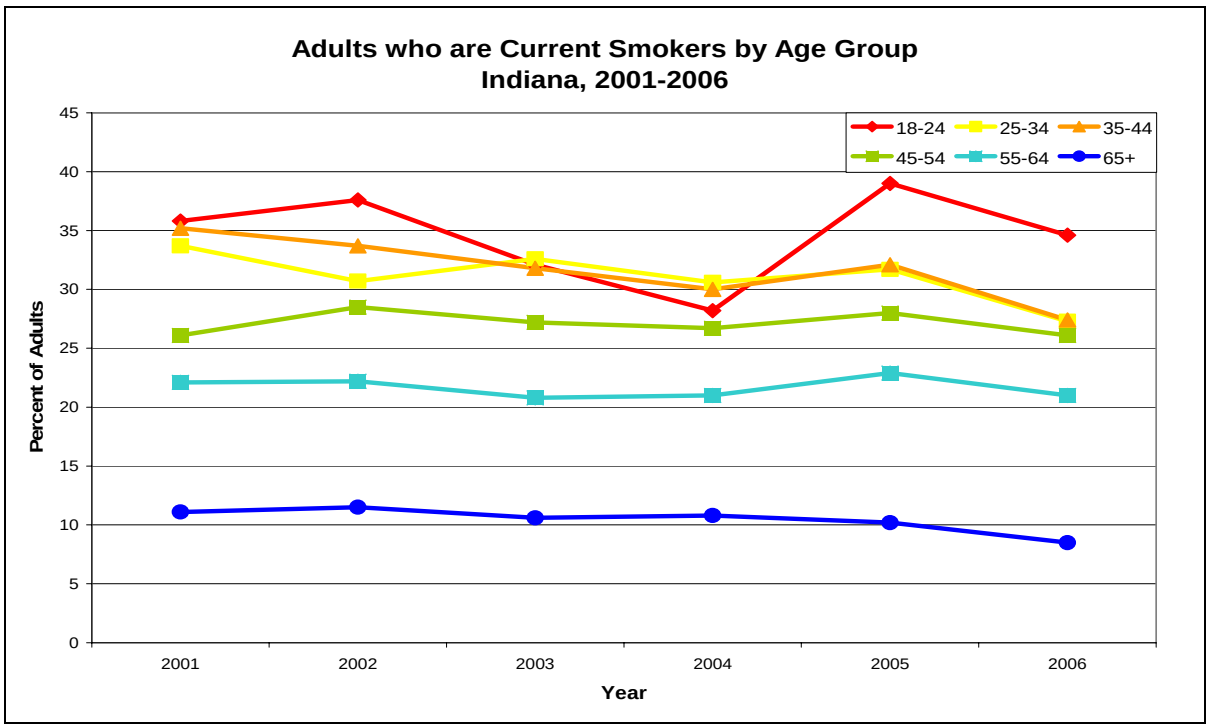
For the full report, go to: http://www.in.gov/isdh/files/2007_Annual_TB_Report.pdf.

Smoking Prevalence Among College Students

Adrienne Durham, MPH
Health Disparities Epidemiologist

An estimated 20 percent of the U.S. adult population are current smokers. Recent trends in adult tobacco use reveal that smoking prevalence among U.S. adults has decreased across all age groups. With an adult smoking rate of 24 percent, Indiana has gone from ranking second to fifth in the nation for adult smoking prevalence. Despite this decline in national and state adult smoking rates, young adults ages 18-24 have the highest (26.8%) adult smoking prevalence in the U.S. Similarly, Indiana young adults ages 18-24 have the highest (34.6%) smoking rate among adults in the state (1).

Figure 1



Source: Indiana BRFSS Newsletter. Volume 5, Issue 1, May 2007

Approximately one third of young adults attend colleges and universities. For the majority of these students, it is a time of experimentation and transition into adulthood. Research shows that many 18- to 24-year-olds try tobacco for the first time while in college. Students who were occasional smokers in high school are more likely to increase their smoking frequency and amount while in college (2). During 2005, nearly 24 percent of full-time students enrolled in two- or four-year colleges reported that they had smoked cigarettes within the last 30 days. In comparison, approximately half (12.4%) of those students reported daily cigarette smoking, which suggests that most of them were occasional smokers (3).

A vast majority of college students describe themselves as “social smokers.”
They do not consider themselves to be regular smokers. Social smoking is strongly associated with alcohol use and attending social events. It is often viewed as “a harmless pleasure.” Social

smoking is a pattern of tobacco use that sets young adults apart from the general adult population (4, 5, and 6).

College students who smoke intermittently believe they will be able to quit at some future time, usually after graduation. This line of thinking suggests college students who smoke do not fully understand the health risks associated with social smoking. Researchers regard social smoking as a stage of initiation. Social smokers either quit, become regular smokers, or become heavier smokers, and, more often than not, they become regular smokers. By ignoring the risks of short-term smoking, students who are "social smokers" set themselves up for a lifetime of addiction to nicotine and smoking-related health problems (4, 5, 6 and 7).

The tobacco industry has studied the smoking behavior of young adults. As a result, they have developed marketing strategies aimed at getting young adults to become regular smokers. Tactics include sponsoring social events at clubs, bars, and college campuses. Other young adults are hired to distribute free cigarettes and promotional items at these events. College students are receptive to these types of promotions, particularly students who did not smoke prior to entering college (7, 8, and 9).

Studies suggest that smoke-free residence halls may be a deterrent to smoking. College students residing in smoke-free dorms who are non-smokers before entering college are less likely to start smoking (10, 11). According to the Harvard School of Public Health 2001 College Alcohol Study, "College students who live in smoke-free dorms are forty percent (40%) less likely to take up smoking than their counterparts who live in unrestricted housing." (11)

Research has shown that a majority of college students, smokers and non-smokers alike, support tobacco-free policies on their campus. More than three fourths of students supported smoke-free campus buildings, including dormitories. The majority (71%) of students surveyed, both smokers and non-smokers, supported banning tobacco sponsorship of campus events and tobacco advertising on campus. Students also supported prohibiting tobacco sales on campus (59%), and more than half (51%) of the students supported smoke-free campus bars. Support for smoke-free policies was strong, even among smoking students (12).

There are resources available to assist colleges and universities in creating tobacco-free environments. The American Cancer Society developed the *Smoke-free New England Campus Initiative*, which includes a seven-step policy plan (13). This program was designed to empower college students to make their campuses smoke free. Also, the American College Health Association (ACHA) has recommended guidelines to address prevention, policy, and cessation for tobacco control (14). These programs provide colleges and universities with the necessary strategies to achieve tobacco-free campuses.

In addition to developing and implementing campus smoking/tobacco policies, campuses should partner with their local communities in supporting smoke-free ordinances to include night clubs and bars. Inclusive smoke-free ordinances will help break the connection of drinking and social smoking among young adults (8).

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OUTBREAK SPOTLIGHT....

Outbreak Spotlight is a regularly occurring feature in the Indiana Epidemiology Newsletter to illustrate the importance of various aspects of an outbreak investigation. The event described below highlights the investigation of a parasitic outbreak in a daycare facility.

Cryptosporidiosis and Giardiasis Outbreak Associated with a Local Daycare Facility

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ISDH Field Epidemiologist, District 5

Lynae Granzow, MPH
ISDH Enteric Epidemiologist

Background

On December 3, 2007, the Boone County Health Department (BCHD) notified the Indiana State Department of Health (ISDH) that a child who attended a local daycare was diagnosed with cryptosporidiosis. The daycare director stated that other children had symptoms of diarrhea. The BCHD initially instructed the daycare director to exclude all symptomatic attendees and staff.

Epidemiologic Investigation

The ISDH and the BCHD initiated a collaborative investigation to implement control measures and to prevent further transmission of the illness in the daycare. The daycare was an unlicensed facility. The index case, a daycare attendee, had onset of symptoms on November 15, 2007, and tested positive for *Cryptosporidium* and *Giardia*.

According to the Indiana Communicable Disease Reporting Rule (410 IAC 1-2.3), Section 61, when an outbreak of *Cryptosporidium* occurs in a daycare, all attendees and staff shall be required to submit stool specimens for laboratory analysis. All symptomatic attendees and staff shall be isolated from other attendees and staff and excluded, and admission of all new attendees shall be suspended until the outbreak has ceased.

To minimize exposure during the outbreak, the daycare attendees and staff were separated into three different groups:

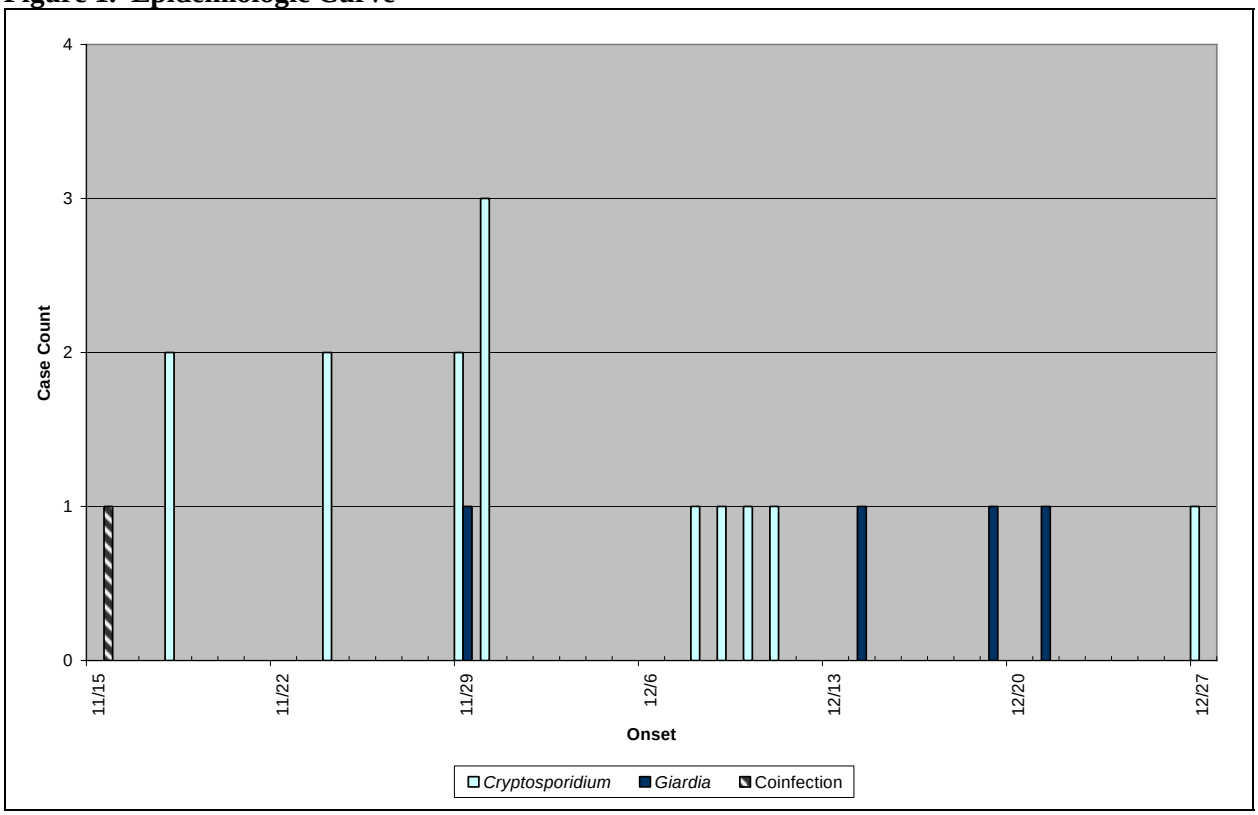
- Those treated for at least three days with nitrazoxanide, or tested negative and without symptoms
- Those without symptoms
- Those with symptoms

To prevent disease transmission to other daycare facilities, health officials decided to keep symptomatic attendees in the daycare if the parents were unable to care for the children during daycare hours. The BCHD provided parents with fact sheets and a letter informing them of the outbreak. All daycare attendees and staff members were asked to provide stool specimens using the ISDH 4A parasitology container. A confirmed case was defined as any daycare symptomatic or asymptomatic attendee or staff member testing positive for *Cryptosporidium* or *Giardia*. A probable case was defined as any daycare attendee or staff member having compatible clinical symptoms in the absence of a known cause.

Fourteen attendees and one asymptomatic staff member tested positive for *Cryptosporidium;* five attendees (one asymptomatic) tested positive for *Giardia*, and one attendee was co-infected with both parasites (see Figure 1). The BCHD notified all Boone County school nurses about the outbreak, instructing them to take control measures to prevent spread of the illness in their schools. The majority of the daycare attendees and staff submitted stool specimens to the ISDH Laboratories for analysis (see Laboratory Results). Some attendees and staff were tested by their health care providers using private laboratories. New attendees were accepted into the daycare on January 14, 2007, one incubation period after the onset date of the last symptomatic case.

Seventy-five children attended the daycare at the time of the outbreak; the attack rate for *Cryptosporidium* was 19 percent and 7 percent for *Giardia*. Six children were removed from the daycare by their parents and only one was tested. Ages ranged from less than 1 year to 9 years of age (mean age = 3 years), and 89 percent of the cases were male. One staff member tested positive for *Cryptosporidium*, and two staff members who were released from employment by daycare management were not tested.

Figure 1. Epidemiologic Curve



*Dates of collection were used for the epidemiologic curve for the two asymptomatic cases (*Giardia* 12/21 and *Cryptosporidium* 12/27).

Environmental Assessment

On December 7, 2007, a BCHD Communicable Disease Health Educator and a BCHD Environmental Health Specialist visited the daycare to inspect the premises. The daycare was divided into seven classrooms: a nursery, an infant room, and rooms for one-year-olds, two-year-olds, three-year-olds, four- and five-year-olds, and school-age children. The nursery was not utilized. Attendees were not separated by gender within the rooms.
Disposable gloves and covered trash containers for soiled diapers were located next to changing tables in the infant and one-year-old rooms. The hot water heater did not provide water measuring 120ºF, the temperature recommended for hand washing. The four toilets provided for the attendees were slow to flush or did not work properly. Sinks were clogged in the bathrooms for two-year-olds and school-age children. There were no paper towels in the bathroom for four- and five-year-olds. The soap dispenser was inaccessible in the bathroom for two-year-olds. The BCHD discovered several sinks with no running water and subsequently turned on the water. The BCHD requested that the daycare director correct the problems and noted they were resolved upon subsequent visits in December 2007 and January 2008. Hydrogen peroxide cleaning of the facility was recommended, since *Cryptosporidium* and *Giardia* have heightened resistance to chlorine.

Two representatives from the Family and Social Services Administration (FSSA) Region 4 Division of Family Resources and a BCHD Environmental Health Specialist visited the daycare on December 14, 2007. The FSSA Division of Family Resources regulates unlicensed daycares in Indiana. The FSSA mandated that the daycare director have the hot water heater fixed or purchase a new unit by December 17, 2007. The daycare director purchased a new hot water heater that weekend.

The daycare facility receives its water from the local municipal water system. According to a BCHD Environmental Health Specialist, a water main break had occurred approximate in time to the outbreak during new building construction near the daycare facility. The BCHD subsequently collected water specimens near the site and submitted them to the Indiana Department of Environmental Management (IDEM) for analysis (see Laboratory Results).

Laboratory Results

Seventy-six stool specimens were submitted to the ISDH Laboratories for analysis from December 10, 2007, through January 10, 2008. Six attendees tested positive for *Cryptosporidium*, four attendees tested positive for *Giardia*, and one staff member tested positive for *Cryptosporidium*. Eight attendees who were tested through private health care providers tested positive for *Cryptosporidium*; one was co-infected with *Giardia.*

Three water specimens collected on December 26, 2007, near the new construction site were submitted to IDEM for analysis. All three specimens were negative for coliforms and *E. coli*.

Conclusions

This investigation confirmed that an outbreak of *Cryptosporidium* and *Giardia* occurred at a local daycare from December 3, 2007, through December 27, 2007. The epidemiologic curve suggests person-to-person transmission of *Cryptosporidium* and *Giardia* within the daycare facility after initial infection of the index case. The index case's exposure is unknown. Hygiene breaches at the facility likely contributed to the outbreak. There is no direct evidence that this outbreak was due to a water main break near the daycare. If the water main break was the original source of contamination, the water system was already repaired and cleared of contamination by the time

the water samples were collected. However, no individuals from neighboring residences or businesses were identified with the illnesses.

Cryptosporidium and *Giardia* are one-celled parasites that live in the intestines of many animals. *Cryptosporidium* and *Giardia* parasites are protected by a cyst, an outer shell, which enables them to survive in the environment for long periods. *Cryptosporidium* cysts are highly resistant to iodine and chlorine and can survive for days in swimming pools with sufficient chlorine levels. The recommended disinfecting agents for *Cryptosporidium* are ammonia or hydrogen peroxide. Hydrogen peroxide is preferred, especially in a child-care setting, due to ammonia's strong odor and production of hazardous gas when combined with chlorine.[3] The mode of transmission for both parasites is fecal-oral, and people become infected by ingesting contaminated food or water, through contact with infected feces from humans or animals, or contact with contaminated environmental surfaces and objects.

Symptoms of cryptosporidiosis include watery diarrhea (the most common symptom), stomach cramps, slight fever, weight loss, and vomiting. Symptoms usually last 1 to 2 weeks, however, relapse can occur for up to 30 days. The incubation period is 2-10 days with an average of 7 days.[3] *Giardia* symptoms include diarrhea, gas, greasy stools that tend to float, bloating, stomach cramps, and nausea.[2] Symptoms persist for 2 to 6 weeks, occasionally longer. The incubation period is 1-14 days with an average of 7 days.[3] Persons infected with *Cryptosporidium* or *Giardia* can continue to shed in their stool for weeks after symptoms cease. Some asymptomatic infected individuals carry *Cryptosporidium* or *Giardia* in their intestines for weeks or months and can unknowingly infect others.

Cryptosporidium and *Giardia*, both highly contagious, are two of the most common causes of waterborne disease (found in both drinking and recreational water) in humans in the United States.[3] Several community-wide outbreaks of *Cryptosporidium* and *Giardia* have been linked to drinking contaminated municipal water or contaminated recreational water. Potentially contaminated water includes water that has not been boiled, filtered, or disinfected with chemicals.[3] *Cryptosporidium* and *Giardia* are common causes of diarrhea in children, particularly in child-care settings. For the most part, smaller outbreaks occur from contaminated food and person-to-person transmission in child-care settings.[2]

Recommendations

In general, *Cryptosporidium* and *Giardia* can be prevented by strictly adhering to the following guidelines:

- Practice good hygiene:
    - Thoroughly wash hands with soap and water after using the restroom; after assisting someone with diarrhea and/or vomiting; after contact with animals and reptiles; after swimming; before, during, and after food preparation; and after exposure to raw meat products (please refer to Quick Facts about Hand Washing).

- Eat safe foods and drink safe water (Remember: Contaminated foods may look and smell normal):
    - Do not consume unpasteurized dairy products or juices.
    - Wash all produce before cooking or eating raw.
    - Use treated chlorinated water for washing, cooking, and drinking.
    - Avoid swallowing water when in recreational water.
    - Test your well if:

        - Members of your family or others who use the same water are becoming ill,
        - The well is located at the bottom of a hill or it is considered shallow, or
        - The well is in a rural area where animals graze.
- Protect others:
    - Persons with diarrhea and/or vomiting should not prepare food or provide health care services for others and should limit direct contact with others as much as possible.
    - Persons with diarrhea and/or vomiting should not attend a daycare facility or school.
    - Persons with diarrhea and/or vomiting shall be excluded from employment involving food handling (Indiana Retail Food Establishment Sanitation Requirements, 410 IAC 7-24-122).
    - Do not change diapers near recreational water.
    - Do not go swimming or use hot tubs if you have diarrhea and for at least 2 weeks after diarrhea stops.

The Indiana State Department of Health extends its appreciation to the Boone County Health Department for their quick response and professionalism. Their prompt and appropriate actions were instrumental in ending this outbreak.

References

1. Case Definitions for Infectious Conditions Under Public Health. 1997 and 1998. Centers for Disease Control and Prevention http://www.cdc.gov/ncphi/disss/nndss/casedef/case_definitions.htm
2. Communicable Disease Quick Facts, Indiana State Department of Health http://www.in.gov/isdh/healthinfo/quick_faqs.htm
3. CDC A-Z Index. Centers for Disease Control and Prevention http://www.cdc.gov/az/0.html

E^3 Easy Epidemiology for Everyone

E^3 is a new feature of the Indiana Epidemiology Newsletter dedicated to exploring the fundamentals of epidemiology. Each month, a different epidemiology concept will be explored to enhance understanding of basic epidemiology.

Case-Control Studies

Last month, we learned about cohort studies. Case-control studies are another method epidemiologists use to measure associations between exposure factors and disease/condition. Case-control studies compare two groups, one group with the condition of interest (cases) and a group similar to the first but without the disease or condition (controls). A detailed history of each group is collected to determine what exposures or factors might be associated with the disease being studied.

A case-control study is a great method to use when the disease of interest is rare, has a long development period, or if you want to study multiple causes for a single disease. Case-control studies typically are less expensive and faster than cohort studies. Disadvantages of using case-control studies are they are subject to recall bias, since most often the information regarding exposure history is taken after diagnosis; selection of proper controls can be difficult, leading to the possibility of selection bias; and they cannot directly provide absolute risk or rates. It is important to remember that when selecting controls for your study that you pick people as similar to your case population as possible. A good rule to apply is to ask, "If this person had become ill, would he be a case?" If the answer is yes, then he will make a good control for your study.

Case-control studies measure the frequency of exposures associated with the cases, those having the illness, and the controls, those without the illness. From the difference in frequency between the two groups, the Odds Ratio (OR) is calculated. An OR is the ratio of the odds of exposure in diseased subjects to the odds of exposure in the non-diseased. A 2x2 table illustrates the relationship:

Exposure	Disease	
	Yes (cases)	No (controls)
Yes	A	B
No	C	D
Odds of exposure	A/C	B/D

Odds Ratio = (A/C)/(B/D) or simply AD/BC

Example Odds Ratio:

	Ill	Not Ill	Total
Ate Ice Cream	22	16	38
Did Not Eat Ice Cream	7	24	31
Total	30	90	

$$\text{Odds ratio} = \frac{AD}{BC} = \frac{22\,(24)}{16\,(7)} = \frac{528}{112} = 4.71$$

The above example shows that those who ate ice cream were 4.71 times more likely to get ill than those people who did not eat ice cream.

An OR can sometimes be a good estimate of relative risk but only if the cases and controls you selected are close to the true target population at large. Keep in mind when interpreting an OR, it is only the odds that the exposure is associated with the condition, not the absolute risk associated with the exposure.

Reference

1. Friis, Robert. Sellers, Thomas. Epidemiology for Public Health Practice. 3rd Edition. 2004.

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

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

HIV/STD Quarterly Reports (1998-June 2006)	Indiana Mortality Report (1999, 2000, 2001, 2002, 2003, 2004, 2005)
Indiana Cancer Incidence Report (1990, 1995, 1996, 1997, 1998)	Indiana Infant Mortality Report (1999, 2002, 1990-2003)
Indiana Cancer Mortality Report (1990-1994, 1992-1996)	Indiana Natality Report (1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006)
Combined Cancer Mortality and Incidence in Indiana Report (1999, 2000, 2001, 2002, 2003, 2004)	Indiana Induced Termination of Pregnancy Report (1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005)
Indiana Health Behavior Risk Factors (1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006)	Indiana Marriage Report (1995, 1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004)
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, 12/2007)	Indiana Infectious Disease Report (1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005)
Indiana Hospital Consumer Guide (1996)	Indiana Maternal & Child Health Outcomes & Performance Measures (1990-1999, 1991-2000, 1992-2001, 1993-2002, 1994-2003, 1995-2004, 1996-2005)
Public Hospital Discharge Data (1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006)	Assessment of Statewide Health Needs – 2007

HIV Disease Summary

Information as of May 31, 2008 **(based on 2000 population of 6,080,485)**

HIV - without AIDS to date:

350	New HIV cases from June 2007 thru May 31, 2008	12-month incidence	6.08 cases/100,000
3,807	Total HIV-positive, alive and without AIDS on May 31, 2008	Point prevalence	66.18 cases/100,000

AIDS cases to date:

382	New AIDS cases from June 2007 thru May 31, 2008	12-month incidence	6.64 cases/100,000
4,075	Total AIDS cases, alive on May 31, 2008	Point prevalence	70.84 cases/100,000
8,651	Total AIDS cases, cumulative (alive and dead) on May 31, 2008		

REPORTED CASES of selected notifiable diseases

Disease	Cases Reported in May *MMWR* Weeks 19-22		Cumulative Cases Reported January – May *MMWR* Weeks 1-22	
	2007	2008	2007	2008
Aseptic Meningitis	11	9	66	73
Campylobacteriosis	32	37	128	192
Chlamydia	1,435	1,290	8,965	8,520
Cryptococcus	2	1	11	9
Cryptosporidiosis	4	22	18	56
E. coli, shiga toxin-producing	2	0	11	7
Haemophilus influenzae, invasive	3	4	20	39
Hemolytic Uremic Syndrome (HUS)	0	0	0	0
Hepatitis A	0	1	4	6
Hepatitis B	2	3	15	12
Histoplasmosis	3	3	38	24
Influenza Deaths (all ages)	Not Reportable	2	Not Reportable	15
Gonorrhea	569	521	3,588	3,481
Legionellosis	3	2	10	11
Listeriosis	2	0	6	2
Lyme Disease	6	0	8	2
Measles	0	0	0	0
Meningococcal, invasive	0	2	13	14
Mumps	0	0	0	0
Pertussis	2	5	14	20
Rocky Mountain Spotted Fever	0	0	1	0
Salmonellosis	40	32	185	131
Shigellosis	2	56	23	326

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	
	2007	2008	2007	2008
Group A Streptococcus, invasive	14	15	61	78
Group B Streptococcus, Newborn	4	0	11	13
Group B, Streptococcus, invasive	20	24	89	117
Streptococcus pneumoniae (invasive, all ages)	56	55	286	478
Streptococcus pneumoniae (invasive, drug resistant)	15	14	86	129
Streptococcus pneumoniae (invasive, <5 years of age)	2	3	16	35
Syphilis (Primary and Secondary)	5	9	17	63
Tuberculosis	15	12	60	50
Yersiniosis	2	0	5	5
Animal Rabies	4 (bat)	0	5 (bats)	1 (bat)

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

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