



Pat Quinn, Governor
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MEMORANDUM

TO: Local Health Departments, Regional Offices of the Illinois Department of Public Health (IDPH), Infection Control Professionals, Infectious Disease Physicians, Hospital Laboratory Professionals

FROM: Communicable Disease Control Section

DATE: February 10, 2011

SUBJECT: **Communicable Diseases in Illinois October - December 2010**

Infectious Disease in Review

Auld Lang Syne, Should Old Open Cases Be Forgotten? No!

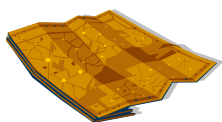
2010 Cases in the Process of Being Finalized



Cases for 2010 should be reported, investigated, and closed in I-NEDSS as soon as possible. The Centers for Disease Control and Prevention (CDC) usually has a late April deadline for reporting infectious disease cases from the previous year. The timely completion of investigations allows time for the resolution of questionable cases and the opportunity to verify totals to ensure the most accurate reporting possible.

A Map of Foodborne Illness in the USA

Foodborne Illness Outbreak Reporting Analyzed



The Center for Science in the Public Interest (CSPI) recently released a ten-year analysis (1998-2007) of foodborne illness outbreak reporting called *All Over the Map*. Using data compiled by CDC, the report analyzed foodborne illness outbreak reporting for each state and assigned grades based on the number of outbreaks reported per one million

population. Those states reporting the highest number of outbreaks received the best grades. The number of solved outbreaks for each state was also analyzed in the report.

For the ten-year period, Illinois reported 727 outbreaks to CDC with a median number of reported outbreaks of 6 per 1 million population, which earned Illinois a “B” grade in the analysis. While the number of outbreaks reported in Illinois was fairly high, an analysis of outbreaks only affecting Illinois residents (multi-state outbreaks excluded), showed only 18 percent of outbreaks were considered “Solved”, meaning both a pathogen and a food source were identified.

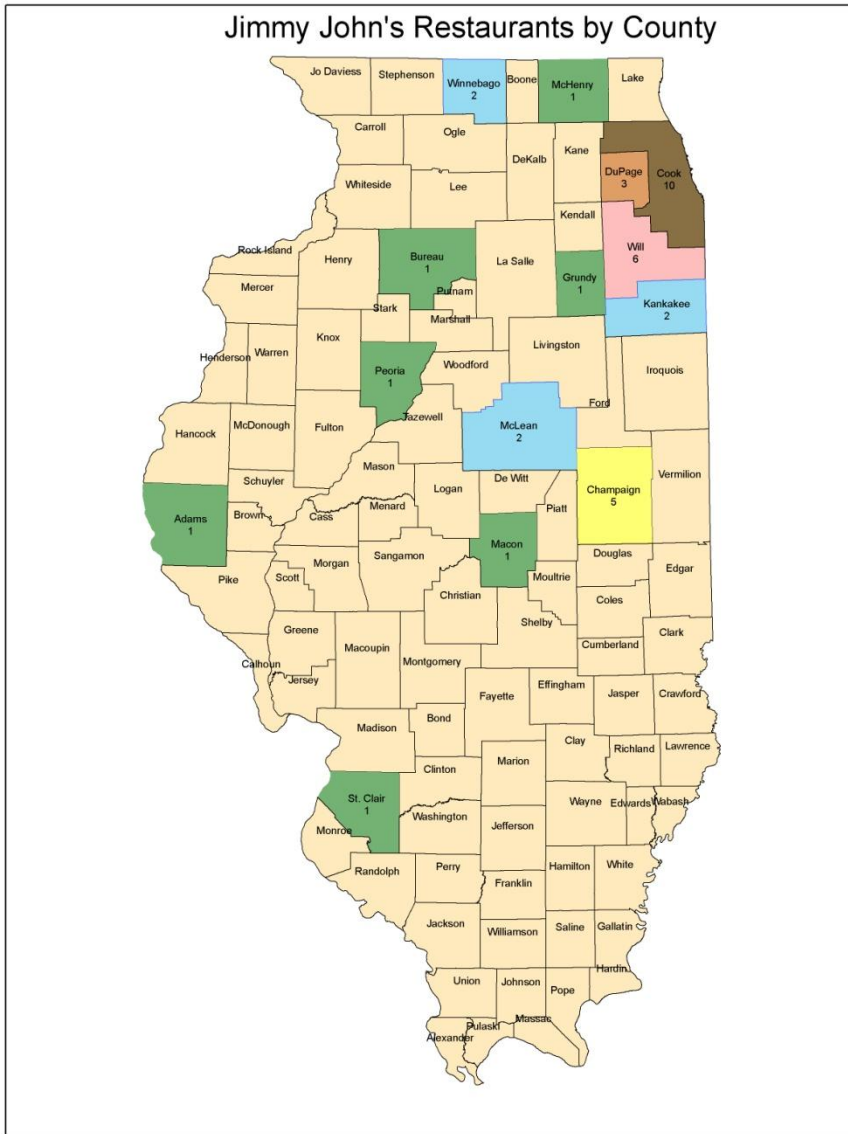
One of the purposes of the report is for health departments and policymakers to assess their own state’s performance. The state and local health departments in Illinois have demonstrated a commitment to foodborne illness reporting, but more work is to be done to increase the number of “Solved” outbreaks. The full report can be found at <http://cspinet.org/new/pdf/alloverthemap.pdf>.

Alfalfa Sprouts: Yum! Yum!

Salmonella ser. I 4,5,12,i:- Outbreak

IDPH and multiple local health departments are wrapping up work on a multi-state investigation of a *Salmonella ser. I 4,5,12,i:-* (variant of *S. Typhimurium*) outbreak linked to alfalfa sprouts. In Illinois, 67 cases have so far been identified with a matching PFGE pattern with onsets of illness ranging from November 6, 2010 to December 26, 2010. Cases are predominantly female (73 percent) and range in age from one to 63 years with a median of 25 years. Cases reside in 21 counties (Adams, Bureau, Champaign, Christian, Cook (including Chicago), Du Page, Grundy, Kane, Kankakee, Lake, LaSalle, Macon, McHenry, McLean, Monroe, Peoria, St. Clair, Will and Winnebago). The pulsed field-gel electrophoresis pattern for this outbreak is a common pattern, so not all cases may be linked to the outbreak.

Initial cases were interviewed using a hypothesis generating questionnaire, which identified a higher than expected number of cases who ate at a Jimmy John’s restaurant and consumed alfalfa sprouts as part of their meal prior to their illness. Thus far 56 cases have reported eating at a Jimmy John’s restaurant in 15 counties (Adams, Bureau, Champaign, Cook (including Chicago), Du Page, Grundy, Kankakee, Macon, McHenry, McLean, Peoria, St. Clair, Will and Winnebago) as shown on the map on the following page. Multiple cases in surrounding states also reported eating at Jimmy John’s prior to their illness. A case-control study using well-meal companions implicated alfalfa sprouts from Jimmy Johns. Interviews and testing of food handlers in restaurants where case ate was initiated, with the testing protocol based on the number of cases linked to a particular restaurant. One food handler was found to be positive for the same strain of *Salmonella*. Additional information on the investigation can be found on the CDC website at <http://www.cdc.gov/salmonella/i4512i-/011411/index.html>.



Alfalfa sprouts served in restaurants linked to the cases were traced back to a common supplier, Tiny Greens Organic Farm in Urbana, Illinois. Cases in Missouri and Indiana also reported eating sprouts at Jimmy John's that traced back to the supplier. An environmental sample (water runoff) taken at the supplier was identified as the same strain of bacteria and a two enzyme PFGE match to the strain found in cases. Tiny Greens issued a recall of their alfalfa sprouts and spicy sprouts on December 29, 2010. Tiny Greens Organic Farm is working with FDA and IDPH in addressing the issue. The recall

notice can be found on the FDA website at <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm238188.htm>.

“I’ll Bring a Cake to the Staph Meeting!”

S. aureus Outbreak

Desserts prepared at the same bakery were implicated in four recent outbreaks of gastrointestinal illness consistent with *Staphylococcus aureus* intoxication. In early November, an outbreak occurred in persons who ate a catered lunch at a convention in Chicago. Cake prepared by Rolf’s Patisserie in Lincolnwood, IL, was statistically associated with illness but no cake was available for testing. A second outbreak occurred in mid-December when persons who attended a party at a private home in

Skokie became ill after consuming cake from the same bakery. A sample of cake was available for testing at the IDPH laboratory, and icing from the cake was found to contain more than 2×10^8 colony forming units (CFU) of coagulase positive *Staphylococcus*/gram making this a confirmed outbreak, additionally consumption of frosting was associated with illness. A third outbreak occurred in patrons of a restaurant in Barrington, Illinois a week after the second outbreak. Consumption of cake from the bakery was statistically associated with illness, and a sample of cake was positive for 6.5×10^7 CFU coagulase positive *staphylococcus*/gram. Isolates from the positive food samples from the Illinois outbreaks were sent to CDC for toxin analysis and both samples revealed the presence of toxins.

Finally, an outbreak was reported to IDPH in persons who attended a party in Wisconsin in mid-December where desserts from the same bakery were served. An epidemiologic investigation was not completed in this outbreak and no food from the event was available for testing, but desserts later delivered to the venue from the same bakery were tested and one item was found to contain 5.3×10^5 *Staphylococcus aureus* CFU/gram.

The bakery ceased production and distribution and on December 24, 2010 issued a recall of all desserts made after November 1. Inspections of the bakery were conducted by the local health department, IDPH and FDA. During interviews, direct hand contact with fillings and frostings was reported by some food handlers and likely contributed to the contamination. Education was provided to employees about proper hand hygiene and food handling practices and monitoring of these practices is on-going. Additional information on the recall can be found at <http://www.fda.gov/NewsEvents/Newsroom/PressAnnouncements/ucm238103.htm>.

Epidemiology of Infectious Diseases

	2009					2010*						
	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Year	Jan-Mar	Apr-Jun	Jul-Sep	Oct-Dec	Qtr % diff.#	Year	Year % diff.**
Brucellosis	0	1	1	2	4	0	0	1	0	---	1	-75%
Cryptosporidiosis	27	37	61	29	154	46	48	189	47	62%	330	114%
Ehrlichiosis / Anaplasmosis	0	25	11	0	36	0	13	13	5	---	31	-14%
Giardiasis	122	144	211	136	613	158	142	214	104	-24%	618	1%
<i>H. Influenzae</i> Invasive	40	58	32	52	182	37	55	37	46	-12%	175	-4%
Hepatitis A	25	27	56	18	126	13	14	17	7	-61%	51	-60%
Hep C Acute	3	0	1	2	6	3	3	1	1	-50%	8	33%
Histoplasmosis	29	27	20	26	102	31	26	12	21	-19%	90	-12%
Legionellosis	9	19	67	40	135	14	49	69	19	-53%	151	12%
Listeriosis	9	11	11	7	38	5	3	11	7	0%	26	-32%
Lyme Disease	3	51	76	6	136	10	64	62	13	117%	149	10%
Malaria	9	24	26	11	70	8	14	37	8	-27%	67	-4%
<i>Neisseria meningitidis</i> , Invasive	12	14	7	14	47	7	10	2	4	-71%	23	-51%
Q Fever	0	0	0	0	0	2	2	1	1	---	6	---
Rabies- positive animals	3	25	51	4	83	1	31	77	6	50%	115	39%
Rocky Mountain Spotted Fever	5	28	15	1	49	2	23	22	4	300%	51	4%
Salmonellosis	298	375	506	305	1484	277	627	673	377	24%	1954	32%
STEC O157:H7	37	35	30	20	122	8	19	31	18	-10%	76	-38%
Shigellosis	166	186	144	124	620	472	121	146	95	-23%	834	35%
<i>Streptococcus</i> , Group A, invasive	104	83	46	49	282	93	78	47	73	49%	291	3%
Typhoid Fever	7	2	5	1	15	8	0	11	1	0%	20	33%
<i>Vibrio spp.</i> Non-cholera	3	2	6	2	13	0	2	9	1	-50%	12	-8%
Yersiniosis	9	2	7	11	29	7	6	2	6	-45%	21	-28%
West Nile Virus Infection (WNV)	0	0	5	0	5	0	0	58	3	---	61	1120%

OUTBREAKS[^]	120	40	37	25	222	84	31	45	155	520%	315	42%
Foodborne Outbreaks	27	17	10	7	61	18	19	11	18	157%	66	8%
Waterborne Outbreaks	0	1	0	0	1	0	0	5	0	---	5	400%
Person-to-person Outbreaks	89	16	22	12	139	58	10	23	128	967%	219	58%

Not all reportable diseases are contained in this table.

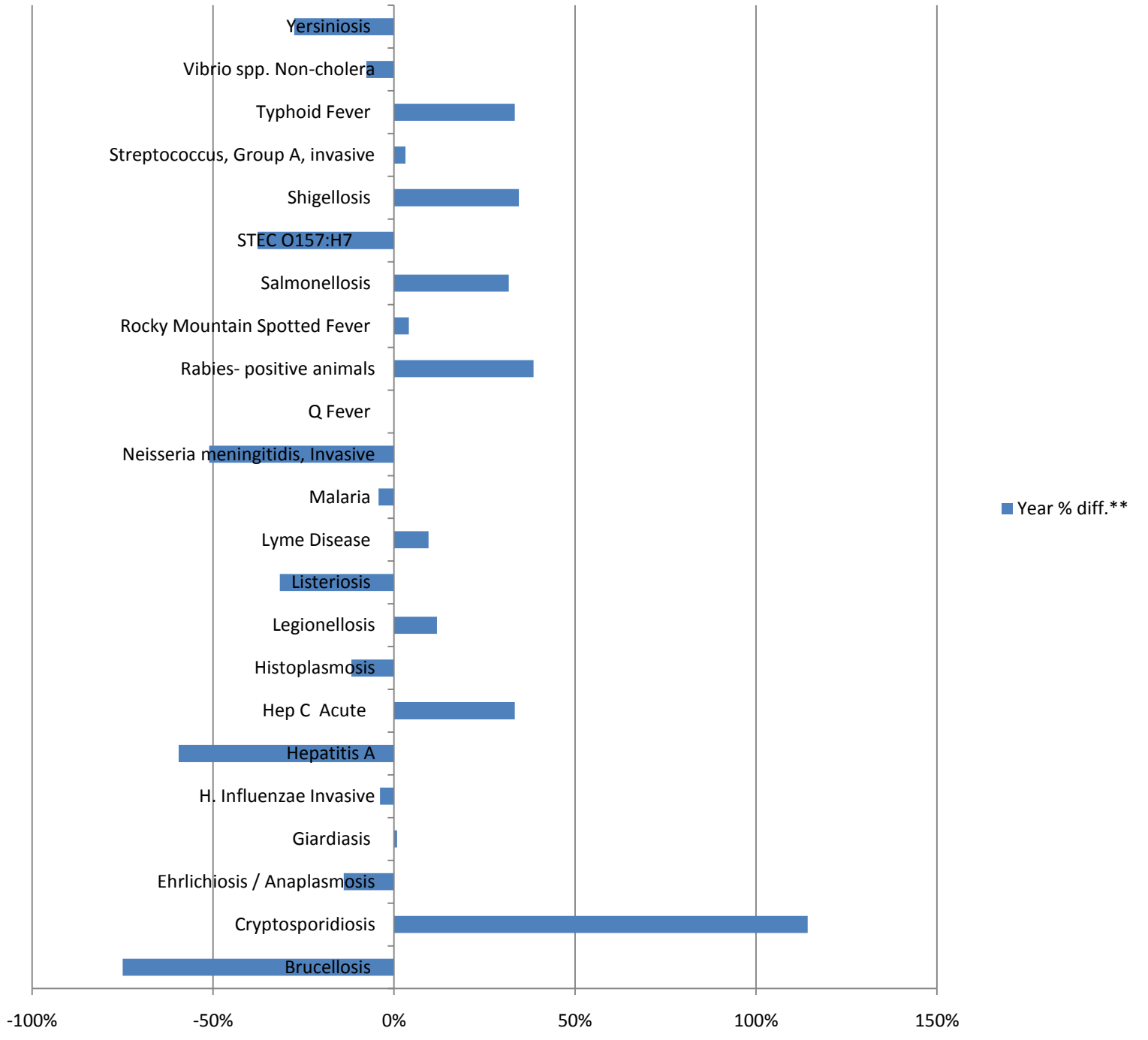
*2010 data are provisional and subject to change.

#Change from the same quarter of the previous year.

**Change from previous year total.

[^]Total number of outbreaks includes those with unknown mode of transmission.

Percentage Change in Cases 2009 - 2010



Highlights October to December 2010

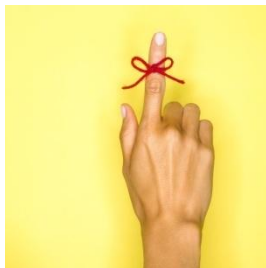
- **Brucellosis** - There were no cases reported during the fourth quarter.
- **Cryptosporidiosis** – Forty-seven cryptosporidiosis cases were reported from 20 counties in the state in the fourth quarter. Onsets of illness were in October (23), November (11) and December (13). Fifty percent of cases were in males. Ages ranged from less than one year to 85 years (mean=37). Three cases were associated with one outbreak.
- **Ehrlichia/Anaplasma** – There were five provisional case count of Ehrlichiosis/Anaplasmosis for the last quarter of 2010. Each case resided in different counties which include Cass County, Cook County, Jersey County, Marion County, and Winnebago County. The cases range from 47 - 76 years of age, with a median age of 58. Males comprise 80% of cases. There were three cases with onsets in October, two in November, and one in December.
- **H. influenzae** – The 46 cases reported in the fourth quarter had onsets in October (12), November (19) and December (15). Cases were reported from 21 counties. Ages ranged from less than one year to 96 years (mean = 57 years). Fifty-four percent of cases were female. Eighty-six percent of cases were hospitalized. Two cases were fatal. Thirty-one cases were typed. The types identified were not typable (16 cases), f (10), e (two), d (two), and b (one).
- **Hepatitis A** – In the fourth quarter, seven cases of acute hepatitis A were reported. Four were female and three were male. Ages ranged from 11 to 55 years. Onsets of illness were in October (three) and November (four). Counties of residence were Cook (three), Will (two) and Madison (one) and Ogle (one).
- **Histoplasmosis** – Twenty-one histoplasmosis cases were reported from eight counties. Counties reporting more than two cases included Cook (seven) and Sangamon (four). Onsets of cases were in October (nine), November (five) and December (six). Sixty percent were female. Ages ranged from 15 to 85 (mean = 46). Sixty-eight percent were hospitalized. No outbreaks were reported in this quarter.
- **Legionellosis** - Nineteen *Legionella* cases were reported in the last quarter of 2010.
- **Listeriosis** – Seven cases of listeriosis were reported in the final quarter of 2010 from 3 counties (Cook (3), Du Page (3) and Lake (1)). Two cases were female and five were male. Ages ranged from less than one year to 83 years. Onsets of cases were in October (3) and November (4). No outbreaks were reported in the fourth quarter.
- **Lyme** - Thirteen cases of Lyme disease had onsets in the last quarter of 2010. Five of the cases are male and eight are female. Age range was 6-85 with a median age of 45. Counties that reported cases of Lyme disease include: Cook (5), Du Page (2), Henry (1), Peoria (1), Tazewell (1), Vermilion (1), Will (1), and Winnebago (1). Eleven cases had onsets in October and two in November.
- **Malaria** – In the fourth quarter, four cases were reported in residents or visitors to Cook County. All had acquired infections outside the U.S. (India-2, Ghana, Pakistan, Nigeria, Guatemala, and Africa, not further specified). Six were male and two were female. Ages ranged from 22 to 63. All eight cases were hospitalized. Onsets of illness were in October (two), November (three) and December (three). The species identified were falciparum (three), vivax (four) and unknown (one).
- **N. meningitidis** – The four cases reported in the fourth quarter had onsets in October (one), November (one) and December (one). Seventy-five percent were

female. Cases ranged in age from 19 to 98 years of age. Three cases were reported from Cook County and one from Lake County. Serogroups identified were Y (two cases), B (one) and C (one). All cases were hospitalized. No fatalities were reported.

- **Q Fever** - One case of chronic Q fever was reported in a Marion County resident with endocarditis. No specific source of exposure could be identified.
- **Rocky Mountain Spotted Fever** – Provisional count for RMSF cases with onsets in the last quarter of 2010 is four. These cases resided in Jersey County, Pope County, and Union county. The cases' age range from 16 to 61 with a median age of 56. There were two male and two female cases in Illinois. Three of the cases had onsets in November and one in December.
- **Salmonellosis** – Of the 377 cases reported in the fourth quarter; 139 had onsets in October, 126 in November and 112 in December. Nine cases were probable cases and the rest were confirmed. Fifty-seven percent of cases were female. Ages ranged from one month to 100 years of age (mean=33). Thirty-seven percent of cases were hospitalized. Cases resided in 64 counties in Illinois, with the majority of cases reported from Cook (113), Du Page (25), Will (24), Lake (18), Champaign (17), and Winnebago (17). There were 55 serotypes reported. The five most common serotypes identified were I 4,5,12,i:- (90), Enteritidis (52), Typhimurium (39), Newport (24) and Saintpaul (12). Seventy-eight cases were linked to two outbreaks in this quarter.
- **Shiga toxin-producing *E. coli* O157:H7** – Eighteen cases of Shiga toxin-producing *E. coli* O157:H7 were reported in the final quarter of 2010 from 12 counties (Clark, Cook (2), Du Page (3), Fayette, Logan (3), Marshall, McHenry, Ogle, Sangamon, St. Clair, Will (2) and Winnebago). Twelve cases were female and six were male. Ages ranged from less than one year to 74 years. Onsets of cases were in October (6), November (6) and December (6). One outbreak associated with a restaurant in Logan County was reported. Four cases of non-O157 Shiga toxin-producing *E. coli* were reported in the fourth quarter. Serotypes for these cases were O103:H2, O26:H11, O111, and unknown.
- **Group A *Streptococcus*** – Seventy-three cases were reported during the fourth quarter, which brought the provisional total for 2010 to 291.
- **Shigellosis** – There were 95 cases reported during the fourth quarter, which brought the provisional total for 2010 to 834. For the quarter, the overwhelming majority were *S. sonnei* (79 of 95, or 83% of reported cases).
- **Typhoid fever** – One case of typhoid fever was reported in Cook County in October. This case was exposed in India.
- **Vibrio** – One non O1 non O139 *Vibrio* case was reported in a Chicago resident in the fourth quarter. This case consumed raw oysters while traveling in Alabama.
- **West Nile Virus** – Three cases of WNV had onsets in the fourth quarter of 2010. The cases resided in Cook (2) and Kane (1) Counties. Minimum age of cases is 33 and the maximum age is 68 with a median age of 35. Two of the three cases are males. All three cases had onsets in October.
- ***Yersinia*** - Six cases of yersiniosis were reported in the fourth quarter from Cook (three), Henry (one), Kane (one) and Tazewell (one). Three cases were female and three were male. Ages ranged from less than one year to 82 years. Onsets of cases were in October (one), November (four) and December (one). No outbreaks were reported.
- **Reported Outbreaks** - The provisional count of outbreaks in Illinois for the fourth quarter of 2010 is 155.

- **Foodborne Outbreaks** - Of the eighteen foodborne outbreaks reported for the fourth quarter, eight of them were believed to be caused by norovirus, three by *Staphylococcus aureus*, two by *Shigella*, one by *Salmonella* ser. I 4,5,12,I:-, one by Shiga toxin-producing *E. coli* O157:H7, one by a chemical, and three by unknown etiologies.
- **Person-to-person Outbreaks** - Of the 128 person-to-person outbreaks reported for the fourth quarter, 116 of them were either confirmed or suspected as being caused by norovirus. Another six were either confirmed or suspected as being caused by MRSA.
- **Waterborne Outbreaks** – There were no waterborne outbreaks reported during the fourth quarter, and only five for the year.
- **Outbreaks with other transmission mode** – Of the nine outbreaks with other transmission mode, five of them were either confirmed or suspected as being caused by norovirus.

Please remember!



In the epidemiologic data section in I-NEDSS, some diseases have questions about travel in Illinois, other parts of the USA, and travel outside of the USA. The dates of travel, in comparison to the onset date, are used to determine where the case acquired the pathogen. Therefore, it is important that the location and dates of travel are provided in the I-NEDSS case record, so the location of acquisition of disease can be reported to CDC. If a case is an adoptee or refugee, a comment to that effect and the date of arrival will help to determine this information. When complete travel information is provided it allows the straightforward determination of where disease was acquired. Thank you for your cooperation.