



Epi Watch

A Monthly Epidemiology Newsletter



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(727) 824-6932

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(other than HIV/AIDS) use:**
(727) 820-4270

Epi Watch is a monthly newsletter from the Pinellas County Health Department. For more information, or to add your e-mail address to the distribution list, please contact Andrea Dopico:
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“The reason for collecting, analyzing and disseminating information on a disease is to control that disease. Collection and analysis should not be allowed to consume resources if action does not follow.”

Foege, W.H. et al. (1976). *Int. J of Epidemiology*, 5:29-37.

Antibiotic resistance trends of Shigella infections in Pinellas County, 2006-2007

Andrea Dopico, MPH

In recent months, the city of Milwaukee, Wisconsin, has been experiencing a five-fold increase in the number of reported cases of shigellosis, particularly among young children. Approximately 70% of the cases reported to the City of Milwaukee Health Department are resistant to commonly prescribed antibiotics. This pattern of resistance is similar to other recent outbreaks of shigellosis that occurred nationally and internationally. The National Antimicrobial Resistance Monitoring System (NARMS) reports that in 2004, 79% of *Shigella sonnei* species were resistant to Ampicillin, 53.1% were resistant to Septra (Trimethoprim-Sulfamethoxazole), and <1% were resistant to Rocephin (Ceftriaxone). Although Pinellas County is not currently experiencing an outbreak of shigellosis, the Pinellas County Health Department initiated a surveillance study to analyze the patterns of antibiotic resistance in cases that were reported from January, 2006 until the end of August, 2007.

There were 18 laboratory-confirmed cases of shigellosis reported in 2006 and 33 reported from January to the end of August, 2007. All 51 cases were caused by serotype *Shigella sonnei*. Of the 51 cases, only 14 (27.5%) were young children aged 5 years and under. In 2006, 6 cases (33%) reported that year were aged 5 and under and in 2007, 8 cases (24%) were within this age range. Antibiotic susceptibility information was available for all 51 cases. Susceptibility information was analyzed for three commonly prescribed antibiotics: Septra, Ampicillin, and Ceftriaxone.

Of the 51 isolates, 49 had susceptibility information for Septra. Of these 49, only 9 isolates (18.4%) demonstrated resistance to this antibiotic. There were 50 isolates with susceptibility information available for Ampicillin. Of these isolates, 5 (9.8%) were resistant to Ampicillin and 1 (2%) was intermediate. Finally, there were 34 isolates with susceptibility information available for Ceftriaxone. Of these isolates, 2 (5.8%) were resistant to Ceftriaxone.

The table below presents susceptibility information by year.

Antibiotic	2006	2007	Total
Septra			
Resistant	4	5	9
Susceptible	12	28	40
Ampicillin			
Resistant	1	4	5
Susceptible	16	28	44
Intermediate	0	1	1
Ceftriaxone			
Resistant	2	0	2
Susceptible	15	17	32

The antibiotic susceptibility patterns of the *Shigella* strains that are from Pinellas County residents from 2006 to 2007 indicate that the majority of cases will respond to commonly prescribed antibiotics. At present, it appears that outbreaks caused by antibiotic resistant strains, such as the current outbreak in Milwaukee have not happened in Pinellas County. The timely reporting of cases to the Health Department allows for the continued surveillance of antibiotic resistance trends.

Shigellosis is readily spread in group settings such as childcare facilities, schools, and within large families. Good and thorough handwashing and cleaning of surfaces in childcare settings, identification of diarrheal illness and the exclusion of sick individuals from daycare settings and food handling responsibilities are essential for effective disease control.

For additional information about this study, please contact the author at:
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Selected Reportable Diseases in Pinellas County

Disease	2007 August	2007 Year-to-Date	2006 Year-to-Date	2006 Total
AIDS	11	110	148	220
Animal Bite, PEP Recommended	1	24	29	38
Animal Rabies		1		
Arboviral Illness (Human):				
Dengue		2	2	2
EEE				
SLE				
WNV	1	1		
CA/LaCrosse				
Campylobacteriosis	2	34	18	28
Chlamydia	414	2286	1913	2961
Creutzfeldt-Jakob disease (CJD)		1		1
Cryptosporidiosis	7	9	6	9
Cyclosporiasis	1	1		
<i>E. coli</i> O157:H7		1	1	2
<i>E. coli</i> Shiga toxin (+)	1	12	1	3
Giardiasis	3	16	24	37
Gonorrhea	192	1019	1106	1646
<i>H. influenzae</i> :				
Meningitis				
Pneumonia		2	2	3
Primary bacteremia		2	4	5
Epiglottitis				
Hansen's Disease		2		
Hemolytic Uremic Syndrome (HUS)			1	
Hepatitis, Acute Viral:				
A	1	5	4	5
B	3	16	14	24
C	4	5	6	9
Hepatitis B: Pregnant woman +HBsAg	2	24	17	27
Hepatitis, Chronic Viral				
B	21	167	107	186
C	128	1116	934	1581
HIV	13	180	116	173
Lead Poisoning:				
Total:	2	12	9	22
Children < 6 years:	2	4	4	6
Legionellosis	1	7	9	13
Listeriosis			2	2
Lyme Disease	2	3	1	3
Malaria	1	1	1	3
Meningitis:				
<i>Group B Strep</i>				
<i>S. pneumoniae</i>		2	2	2
Other bacterial		3	6	10
Meningococcal Disease		1	5	7
Mercury Poisoning			2	5
Mumps				
Pertussis		5	2	5
Rocky Mountain Spotted Fever		1	2	3
Salmonellosis	28	120	86	175
Shigellosis	5	33	14	19
<i>Streptococcal</i> disease, Inv. Group A		8	9	16
<i>S. pneumoniae</i> , Inv. disease (DR)		31	10	18
<i>S. pneumoniae</i> , Inv. disease (Suscept)		15	18	25
Syphilis:				
Total	9	62	102	140
Infectious (P and S)	3	28	27	38
Early Latent	3	21	47	59
Congenital				
Late Syphilis (Late Latent; Neurosyphilis)	3	13	28	43
Tuberculosis	4	28	21	30
<i>Vibrio</i> infections	3	8	6	6

Provisional cases reported by the Pinellas County Health Department. Blank cells indicate no cases reported.
 For a complete list of reportable diseases and guidelines for reporting, please visit: http://www.doh.state.fl.us/disease_ctrl/epi/index.html