Miami-Dade County Health Department
Office of Epidemiology and Disease Control

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Epi Monthly Report

Salmonellosis Trends in Miami-Dade County, 2000-2006

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Background

Salmonellosis is a bacterial disease characterized by fever, abdominal pain, headache, nausea, and diarrhea. Transmission of *Salmonella* often occurs through ingestion of undercooked or improperly handled meat, poultry, or dairy products. Recent outbreaks of Salmonellosis in the U.S. have also provided evidence for fecal-oral transmission of the bacteria through contact with infected animals, or via consumption of contaminated fruits, vegetables, and water. Approximately 5 million cases of Salmonellosis occur in the U.S. each year, with the majority of cases often occurring in infants and young children.

Methods

Data was extracted from Merlin, the State of Florida's disease reporting system, between the years 2000-2006. Population data estimates were obtained from Florida's Community Health Assessment Resource Tool Set (CHARTS). The date analyzed in this report was based on disease onset between January 1, 2000 and December 31, 2006. All cases included in this report were laboratory confirmed. The collected information was analyzed using SAS (version 9.1.3, SAS Institute Inc., NC, and USA).

Results

Between 2000 and 2006, there has been an increase in the number and rate of Salmonellosis cases in Miami-Dade County. In 2006, there were 628 cases at a rate of 25.4 per 100,000 population and in 2000 there were 325 cases at a rate of 14.4 per 100,000 population. This is a 76.4% increase in the rate throughout the 7-year period. This change is consistent with findings in that there was a 52% increase statewide. On average, the proportion of the state's Salmonellosis cases from Miami-Dade County is 11.4% from 2000 to 2006. The cases in Florida increased from 2,831 in 2000 to 4,928 in 2006 at rates of 17.6 per 100,000 population to 26.7 per 100,000 population, respectively. Miami-Dade comprised 11.5% the state of Florida's Salmonellosis cases during 2000 and 12.7% of the state's cases in 2006. Both within the state of Florida and Miami-Dade County there was a decrease in the rate during 2004 (Figure 1). In Miami-Dade County during 2000, 3% of Salmonellosis cases were imported compared to 7% in 2006. Throughout this seven-year period, about one quarter of the imported cases was from Cuba.

Between 2000 and 2006, Salmonellosis rates varied by age group, with the highest rate occurring in children less than 1 year of age. During this period, the average rate in that age group was 150 per 100,000 population, which is over 19 times higher than the rates of the 20-64 age group, which had an av-

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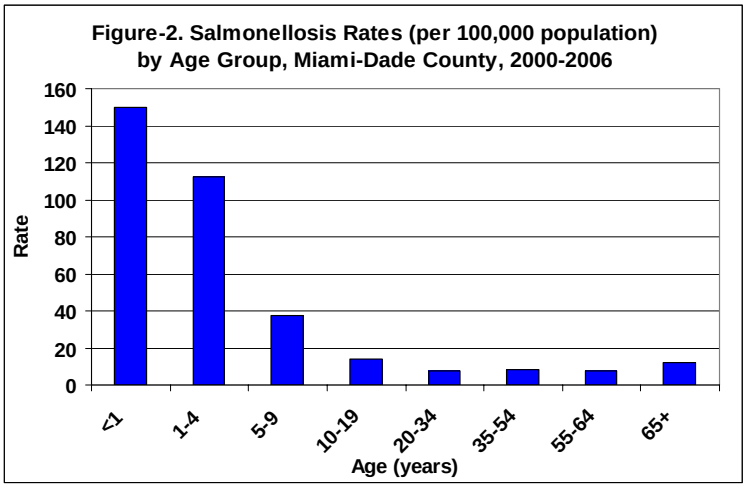
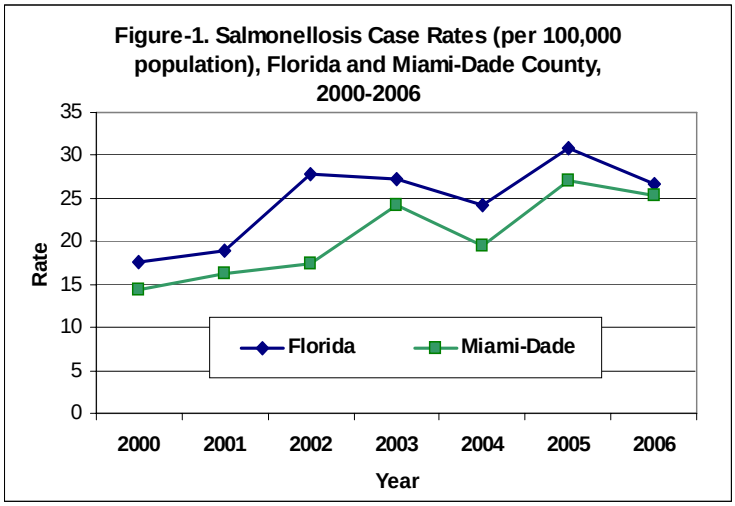
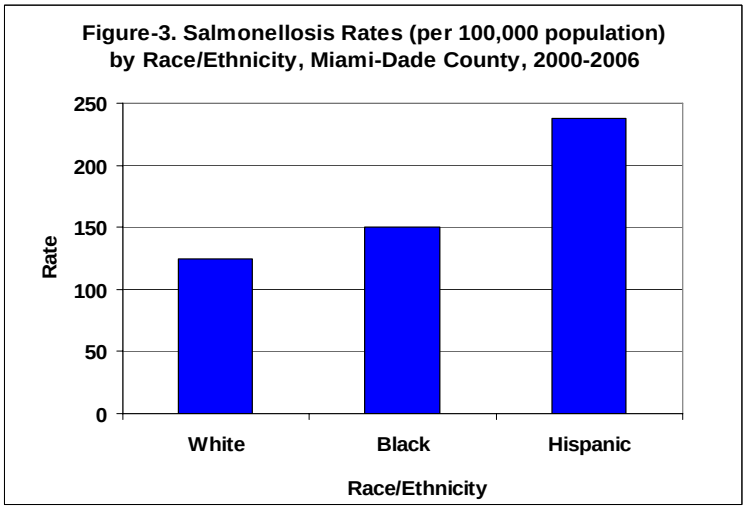
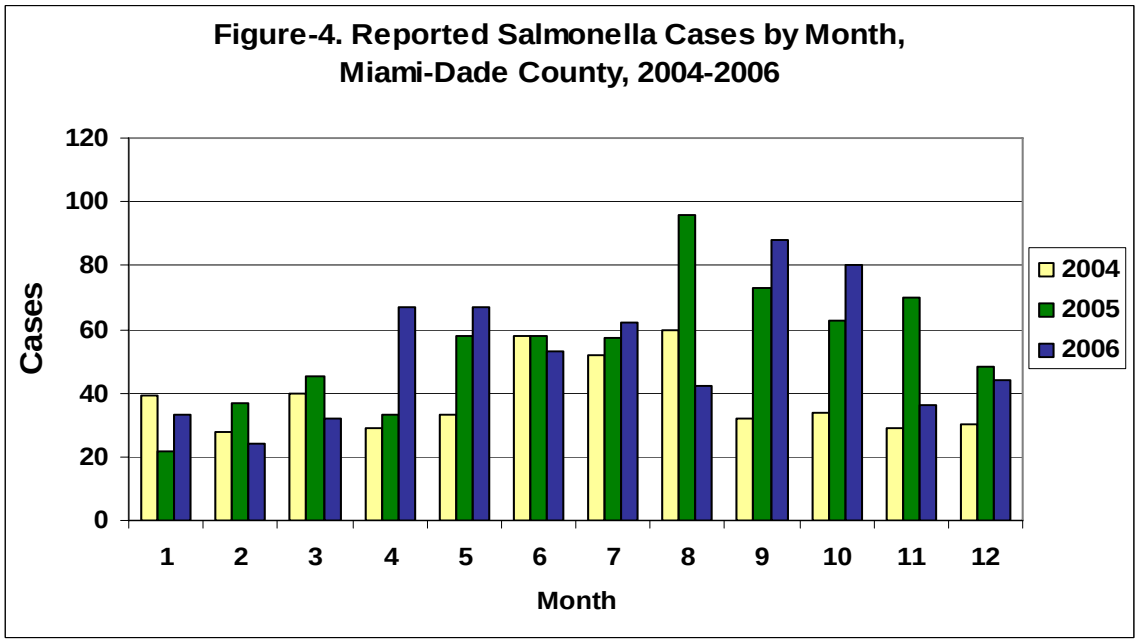
erage rate of 7.7 per 100,000 population. Salmonellosis rates were also high in the remainder of the pediatric population between 1 and 4 years at 112.4 per 100,000 population and from 5 to 9 years at 37.5 per 100,000 population. The 0 to 4 age group accounted for 48.6% (1667 of 3427) of the total cases during that period. Of the 1,667 reported cases among children aged 0-4 years, 264 (15.8%) were from daycare child centers, 208 (12.5%) were associated with outbreaks. Adults 65 years of age and older experienced slightly higher rates of Salmonellosis at 11.9 per 100,000 population than the rest of the adult population between 20 and 64 years (Figure 2).

Ninety-three percent (3180 of 3427) of the reported Salmonellosis cases had race and ethnicity data avail-









able. The Salmonellosis case rate was highest among Hispanics at 238.0 per 100,000 population and rates were lowest among Whites at 124.9 per 100,000 population (Figure 3).

Between 2004 and 2006, the peak months of reported salmonellosis were from July to October in most years (Figure-4).

Discussion

Salmonellosis is an increasing public health problem in Miami-Dade County. Salmonellosis rates are higher among Hispanics and vary according to age groups. During 2000 to 2006, children under 5 years of age had the highest rate of Salmonellosis among all age groups. This data is consistent with national trends, which demonstrate that children are more likely to become infected with *Salmonella*. This may be due to young children's tendency to put objects into their mouths. Additionally, reptiles, such as turtles, have been strongly associated with the transmission of *Salmonella* to young children. The Centers for Disease Control and Prevention recommends that reptiles should not be kept in households that have infants and/or young children[1]. Although Salmonellosis most often affects young children, prevention methods are universal to all age groups. One of the most important ways to prevent Salmonellosis is by practicing good handwashing techniques, such as thoroughly washing your hands with soap and water after using the restroom, before preparing food, and after handling animals. Proper cooking and storage of food, specifically meat and dairy products, may also help reduce the risk of Salmonellosis.

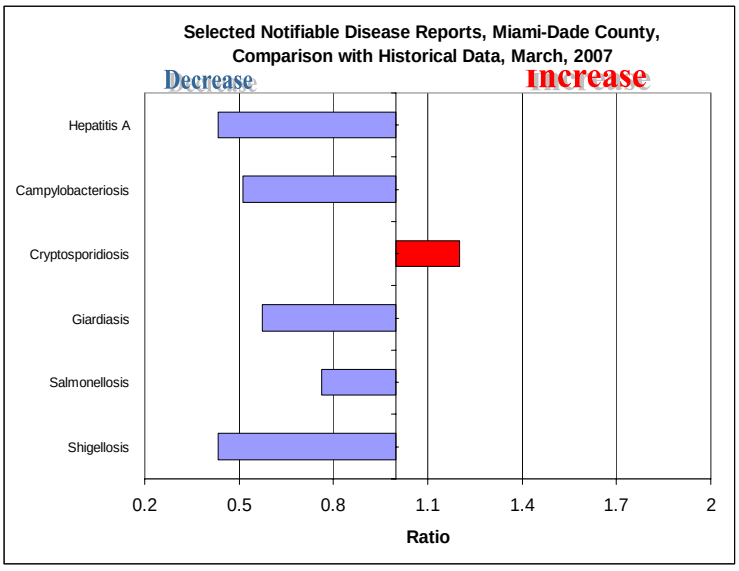
References

1. Centers for Disease Control and Prevention (CDC), Coordinating Center for Infectious Diseases, Division of Bacterial and Mycotic Diseases. http://www.cdc.gov/ncidod/dbmd/diseaseinfo/salmonellosis_g.htm

TO REPORT ANY DISEASE AND FOR INFORMATION CALL:

Office of Epidemiology and Disease Control

Childhood Lead Poisoning Prevention Program	(305) 470-6877
Hepatitis	(305) 470-5536
Other diseases and outbreaks	(305) 470-5660
HIV/AIDS Program	(305) 470-6999
STD Program	*(305) 325-3242*
Tuberculosis Program	*(305) 324-2470*
Special Immunization Program	(786) 845-0550



AVIAN FLU WATCH

Unless indicated, information is current as of April 11, 2007



- **Since 2003, 291 human cases of avian influenza (H5N1) have been confirmed** by the World Health Organization (WHO). Of these, 172 have been fatal.
- **Countries with confirmed *human* cases** include Cambodia, China, Djibouti, Indonesia, Thailand, Vietnam, Iraq, Azerbaijan, Egypt and Turkey.
- **No human cases of avian influenza (H5N1) have been reported in the United States.**
- **The most recent confirmed human cases of infection with H5N1 have occurred in Egypt.** To date Egypt has had 34 confirmed H5N1 human cases, 14 have been fatal. Two cases of human infection with H5N1 were reported April 10th. A 15 year old female became symptomatic March 30th and was hospitalized April 5th; she died April 10th. The second case, a 2 year old female was hospitalized April 4th where she remains stable, after becoming symptomatic April 3rd. April 2nd there were 3 confirmed human cases of infection with H5N1. One case was a 4 year old girl that developed symptoms March 29th and was hospitalized March 30th. The other 2 cases were 4 and 7 year old boys that developed symptoms March 26th; both were hospitalized March 29th. Also from Egypt, a 4 year old boy was hospitalized March 8th after developing symptoms March 7th. Preliminary investigations indicate these cases had contact with backyard or dead poultry; the condition of all except the deceased case, remains stable. Close contacts of these cases are being monitored. Cambodia has reported its first case for 2007; this is the country's 7th case of which 7 have been fatal. This case, reported April 10th, was a 13 year old female who died April 5th; she was hospitalized April 3rd after having developed symptoms April 2nd. Preliminary investigations suggest this case consumed sick chickens; sick and dead poultry were also found in her village.
- **H5N1 has been confirmed in *birds* in several other countries since 2003.** H5N1 has been documented in birds in more than 30 countries in Europe & Eurasia, South Asia, Africa, East Asia and the Pacific, and the Near East. For a list of these countries, visit the World Organisation for Animal Health Web Site at http://www.oie.int/downld/AVIAN%20INFLUENZA/A_AI-Asia.htm.
- **No restrictions on travel to affected countries have been imposed.** Travelers should avoid contact with live poultry and monitor their health for ten days after returning from an affected country.

SOURCES: World Health Organization; World Organisation for Animal Health; Centers for Disease Control and Prevention

About the Epi Monthly Report

The Epi Monthly Report is a publication of the Miami-Dade County Health Department, Office of Epidemiology and Disease Control, The publication serves a primary audience of physicians, nurses, and public health professionals. Articles published in the Epi Monthly Report may focus on quantitative research and analysis, program updates, field investigations, or provider education. For more information or to submit an article, contact Diana Rodriguez, Managing Editor at 305-470-5660.

PARTICIPATE IN INFLUENZA SENTINEL PROVIDER SURVEILLANCE

The Miami-Dade County Health Department NEEDS Influenza Sentinel Providers!!

Sentinel providers are key to the success of the Florida Department of Health's Influenza Surveillance System. Data reported by sentinel providers gives a picture of the influenza virus and ILI activity in the U.S. and Florida which can be used to guide prevention and control activities, vaccine strain selection, and patient care.

- Providers of any specialty, in any type of practice, are eligible to be sentinel providers.
- Most providers report that it takes **less than 30 minutes a week** to compile and report data on the total number of patients seen and the number of patients seen with influenza-like illness.
- Sentinel providers can submit specimens from a subset of patients to the state laboratory for virus isolation **free of charge**.

For more information, please contact **Erin O'Connell** at 305-470-5660.

Hospitalizations and Emergency Department Visits Due to Burns to Children Aged 0-17 Years, Miami-Dade County, 2005

In 2005, there were 531 emergency department visits and 31 hospitalizations due to burns to county residents aged 0-17 years. No burn-related deaths occurred to this age group during 2005.

- Children aged 1-4 years had a rate of medically-treated burn injuries that was nearly 3 times greater than any other age group.
- The rate of medically-treated burn injury for African-American children was more than 4 times greater than White children.
- Wounds to the hand, wrist or fingers were the most common site of burn injuries.
- Most young children suffer scald burns from hot liquids or steam. Among the 249 injuries that documented the agent causing the burn, 89% of burns were due to boiling or scalding liquids and the remaining 11% due to caustic substances.

For Information About Reducing the Risk of Burns in Children go to:
http://www.aap.org/healthtopics/safety.cfm

Monthly Report
Selected Reportable Diseases/Conditions in Miami-Dade County, March 2007

Diseases/Conditions	2007 this Month	2007 Year to Date	2006 Year to Date	2005 Year to Date	2004 Year to Date	2003 Year to Date
AIDS *Provisional	120	243	359	372	397	290
Campylobacteriosis	6	28	29	19	27	28
Chlamydia trachomatis	N/A	N/A	1026	937	930	975
Ciguatera Poisoning	0	0	0	0	0	0
Cryptosporidiosis	2	7	4	5	2	3
Cyclosporosis	0	0	0	0	0	0
Dengue Fever	0	1	0	0	1	0
E. coli , O157:H7	0	0	0	0	0	0
E. coli , Non-O157	0	0	0	0	0	0
Encephalitis (except WNV)	0	0	0	0	0	0
Encephalitis, West Nile Virus	0	0	0	0	0	0
West Nile Fever	0	0	0	0	0	0
Giardiasis, Acute	12	33	40	33	68	29
Gonorrhea	N/A	N/A	346	378	345	470
Hepatitis A	3	8	10	15	6	7
Hepatitis B	0	3	4	7	12	6
HIV *Provisional	141	356	305	366	439	408
Influenza A (H5)	0	0	0	0	0	0
Influenza Isolates	0	0	0	0	0	0
Influenza Novel Strain	0	0	0	0	0	0
Influenza, Pediatric Death	0	0	0	0	0	0
Lead Poisoning	16	33	32	23	45	42
Legionnaire's Disease	1	1	0	1	0	0
Leptospirosis	0	0	0	0	0	0
Lyme disease	0	0	0	0	0	0
Malaria	0	0	3	0	3	0
Measles	0	0	0	0	0	0
Meningitis (except aseptic)	1	1	1	3	0	0
Meningococcal Disease	0	2	6	3	7	2
Mumps	1	1	0	0	0	0
Pertussis	3	10	3	1	0	0
Rubella	0	0	0	0	0	0
Rubella, Congenital	0	0	0	0	0	0
Salmonellosis	27	72	65	66	56	61
Shigellosis	10	30	23	52	56	56
Streptococcus pneumoniae, Drug Resistant	17	22	28	3	8	29
Syphilis, Infectious	N/A	N/A	63	43	56	45
Syphilis, Other	N/A	N/A	129	143	224	282
Tetanus	0	0	0	0	0	0
Toxoplasmosis	0	1	0	0	1	3
Tuberculosis *Provisional	11	41	61	43	38	58
Typhoid Fever	0	0	2	2	1	1
Vibrio cholera Type O1	0	0	0	0	0	0
Vibrio cholera Non-O1	0	0	0	0	0	0

* Data on AIDS are provisional at the county level and are subject to edit checks by state and federal agencies.
** Data on tuberculosis are provisional at the county level.