

Salmonellosis

Agent: *Salmonella* (bacteria)

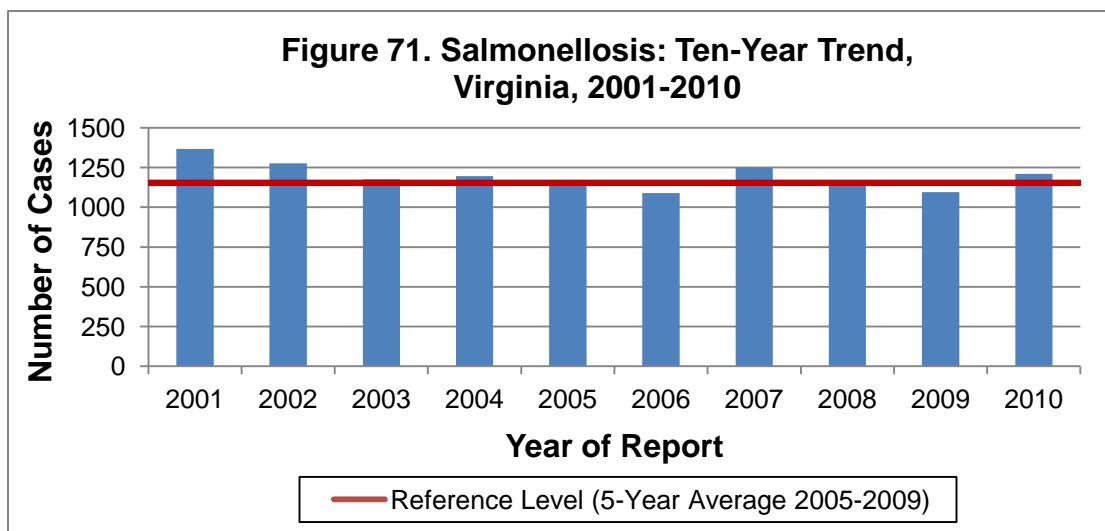
Mode of Transmission: Ingestion of contaminated food or drinking water. Infected persons can spread the bacteria to other persons by not washing their hands properly after going to the bathroom and then handling food that other people will eat. This disease may also be acquired by having direct contact with feces from an infected person or animal and then ingesting the bacteria from contaminated hands.

Signs/Symptoms: Sudden onset of headache, fever, abdominal pain, diarrhea and sometimes vomiting. Dehydration, especially in older adults and young children, can be a severe complication.

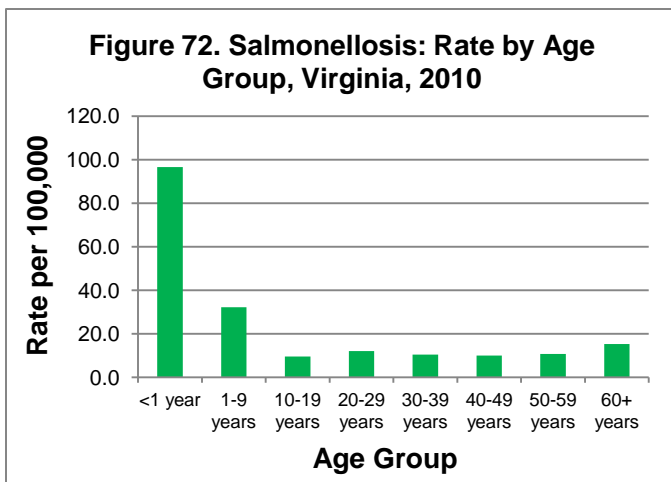
Prevention: Preventive measures should include proper sanitation methods for food preparation including preventing cross-contamination of food preparation surfaces, sanitation of water supplies, proper hand hygiene, including after handling animals or their feces, sanitary sewage disposal, exclusion of infected people from handling food or providing healthcare, prohibiting the sale of small turtles and restricting the sale of other reptiles for pets. Eggs and other animal food products should be cooked thoroughly.

Other Important Information: With approximately 40,000 salmonellosis cases reported each year in the United States, *Salmonella* is one of the leading pathogens that cause foodborne illnesses and result in hospital admissions. The incidence rate is highest among infants and young children. Mortality rates are higher in infants, older adults and people with immunosuppressive conditions.

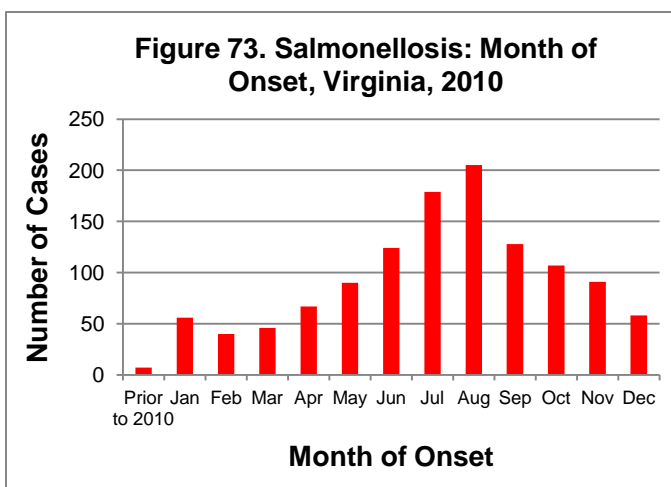
The 1,210 cases of salmonellosis reported in 2010 represent an 11% increase from the 1,095 cases reported in 2009, and a 5% increase from the five-year average of 1,154 cases per year (Figure 71).



The highest incidence rate was observed in the <1 year age group (96.6 per 100,000), followed by the 1-9 year age group (32.1 per 100,000) (Figure 72). Rates in the other age groups ranged from 9.5 to 15.3 per 100,000. Although information on race was missing for 43% of the cases, where race was known, incidence was higher in the white population (9.2 per 100,000) than the black and “other” race populations (8.7 and 5.2 per 100,000, respectively). Rates were slightly higher among females than males (15.3 and 14.8 per 100,000, respectively).



By region, the eastern and central regions had the highest incidence rates (17.9 and 17.3 per 100,000, respectively). Rates in all other regions ranged from 12.0 to 15.4 per 100,000. While salmonellosis occurred throughout the year, the largest proportion of cases (42%) occurred in the third quarter, peaking in July and August (Figure 73). Among cases reported in 2010, one death in an adult female was attributed to salmonellosis.



Eleven salmonellosis outbreaks were reported during 2010. Six were foodborne outbreaks and the number of Virginia cases per outbreak ranged from one to eight. Three additional outbreaks were considered person-to-person, with six cases involved in each of the outbreaks. The other two outbreaks were linked to zoonotic exposures and the number of Virginia cases ranged from one to three; the associated animal exposures included water frogs and frozen rodents used for reptile feed. Five of the 11 *Salmonella* outbreaks that involved Virginia residents in 2010 were multi-state outbreaks. See the Outbreaks section of this report for more information.

Serotypes involved in the 2010 outbreaks included Montevideo, Chester, Newport, Enteritidis, I 4,[5],12:i:-, and Typhimurium. For Virginia salmonellosis cases reported in 2010, the most commonly identified serotype was *Salmonella* ser. Typhimurium (Table 11).

Table 11. Number and Percent of *Salmonella* Infections by Serotype, Virginia, 2010

Serotype Causing Infection	Number	Percent	Serotype Causing Infection	Number	Percent
S. ser Typhimurium	252	20.7%	S. ser Heidelberg	26	2.1%
S. ser Enteritidis	220	18.1%	S. ser Bareilly	22	1.8%
S. ser Newport	177	14.5%	S. ser Saintpaul	22	1.8%
S. ser Javiana	81	6.7%	All Others	281	23.1%
S. ser I 4,[5],12:i:-	44	3.6%	Unspecified	92	7.6%
			Total*	1,217	100%
*The total number of serotypes (1,217) is larger than the total number of <i>Salmonella</i> infections (1,210) because a person may be infected with more than one serotype.					