

Salmonellosis

Agent: *Salmonella* (bacteria)

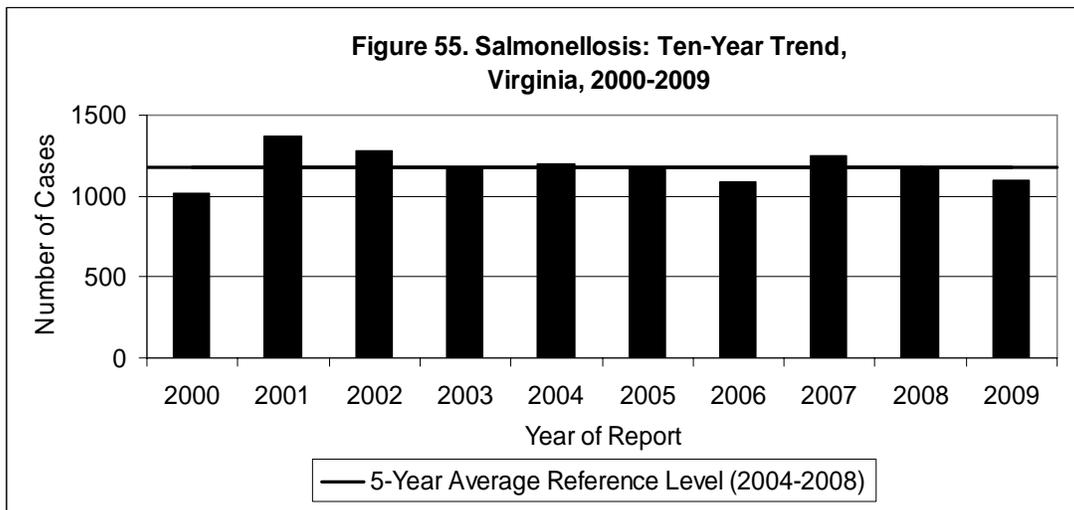
Mode of Transmission: Ingestion of contaminated food or drinking water. Infected persons can spread the bacteria to other persons by not washing their hands after going to the bathroom and then handling food that other people will eat. This disease may also be acquired by having direct contact with feces 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: 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 1,095 cases of salmonellosis reported in 2009 represent a 6% decrease from the 1,165 cases reported in 2008, and a 7% decrease from the five-year average of 1,174.2 cases per year (Figure 55).



The highest incidence rate was observed in the <1 year age group (67.9 per 100,000), followed by the 1-9 year age group (30.7 per 100,000) (Figure 56). Rates in the other age groups ranged from 8.7 to 14.1 per 100,000. Although information on race was missing for 45% of the cases, where race was known, incidence was higher in the white population (8.0 per 100,000) than the black and “other” populations (6.8 and 6.6 per

100,000, respectively). Rates were slightly higher among females than males (14.6 and 13.3 per 100,000, respectively).

By region, the northwest region had the highest incidence rate, with 16.7 cases per 100,000. Rates in all other regions ranged from 12.9 to 15.2 per 100,000. While salmonellosis occurred throughout the year, there was a notable increase in the second and third quarters (65% of the cases), with a peak in July and August (Figure 57). Among cases reported in 2009, 1 death was attributed to salmonellosis and occurred in an adult female from the northern region.

Nine salmonellosis outbreaks were reported during 2009. Four of these were foodborne outbreaks and the number of cases per outbreak ranged from eight to nineteen. The other five outbreaks were linked to environmental issues and the number of cases per outbreak ranged from two to seventeen. All the environmental outbreaks involved contact with animals, including baby chicks, puppies, snakes, and frogs. Of all the salmonellosis outbreaks, three involved multi-state jurisdictions in which Virginians were involved. Serotypes identified in the outbreaks included Enteritidis, Typhimurium, Newport, and Johannesburg. For Virginia salmonellosis cases reported in 2009, the most commonly identified serotype was *Salmonella* ser. Enteritidis (Table 9).

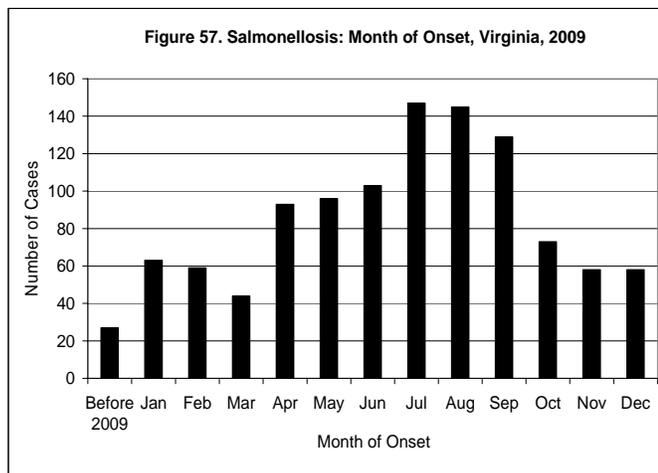
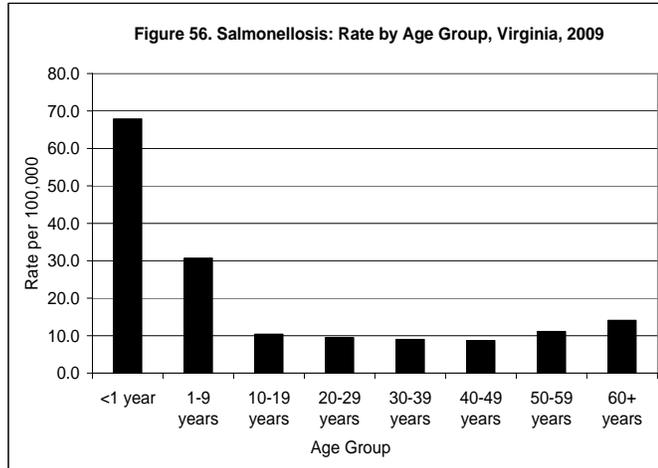


Table 9. Number and Percent of *Salmonella* Infections by Serotype, Virginia, 2009

Serotype Causing Infection	Number	Percent	Serotype Causing Infection	Number	Percent
<i>S. ser. Enteritidis</i>	217	19.7	<i>S. ser. Saintpaul</i>	21	1.9
<i>S. ser. Typhimurium</i>	213	19.4	<i>S. ser. Bareilly</i>	17	1.5
<i>S. ser. Newport</i>	99	9.0	<i>S. ser. Braenderup</i>	17	1.5
<i>S. ser. Javiana</i>	50	4.5	All Others	184	16.7
<i>S. ser. Heidelberg</i>	28	2.5	Unspecified	253	23.0
			Total*	1,099	

*The total number of serotypes (1,099) is larger than the total number of *Salmonella* infections (1,095) because a person may be infected with more than one serotype.