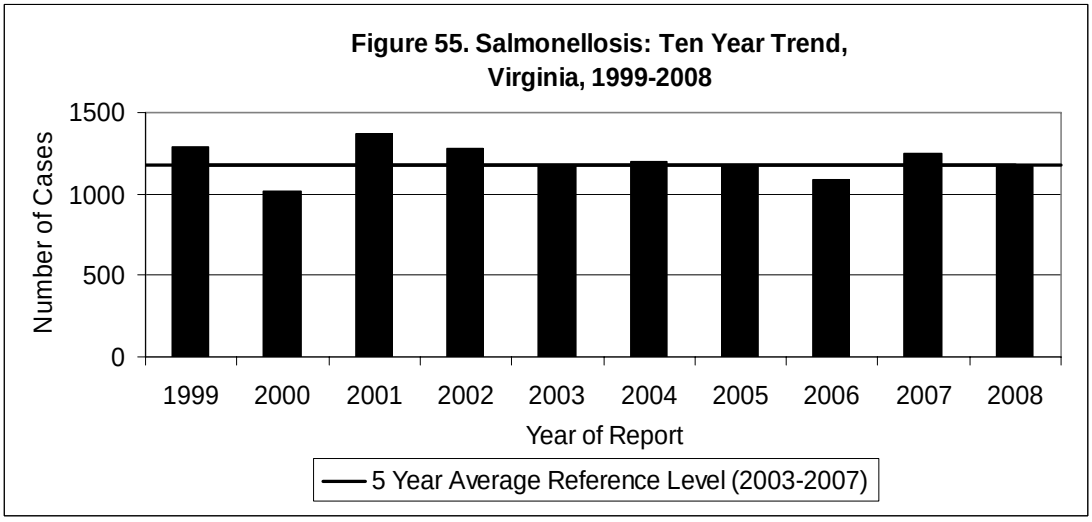
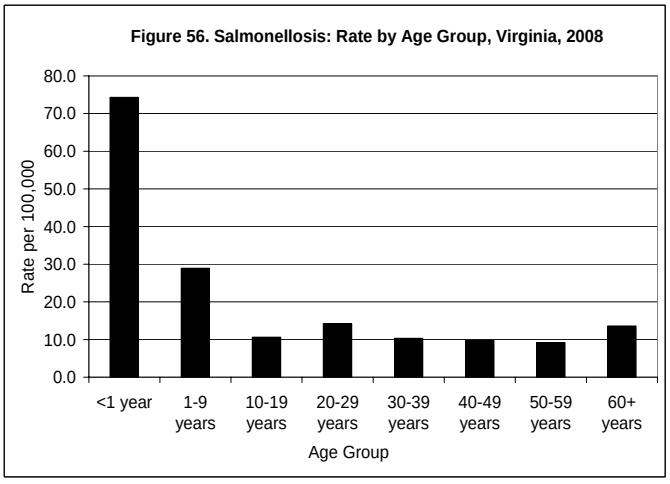
## Salmonellosis

Agent: *Salmonella* (bacteria)
Mode of Transmission: Eating contaminated food or drinking contaminated water. Infected persons can spread the bacteria 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 transferring the bacteria to the mouth from the 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, sanitary sewage disposal, exclusion of infected people from handling food or providing healthcare, prohibiting the sale of pet turtles and restricting the sale of other reptiles for pets. Eggs and other foods of animal origin should be cooked thoroughly.
Other Important Information: The incidence rate is highest among infants and young children. Mortality rates are higher in infants, older adults and people with immunosuppressive conditions.

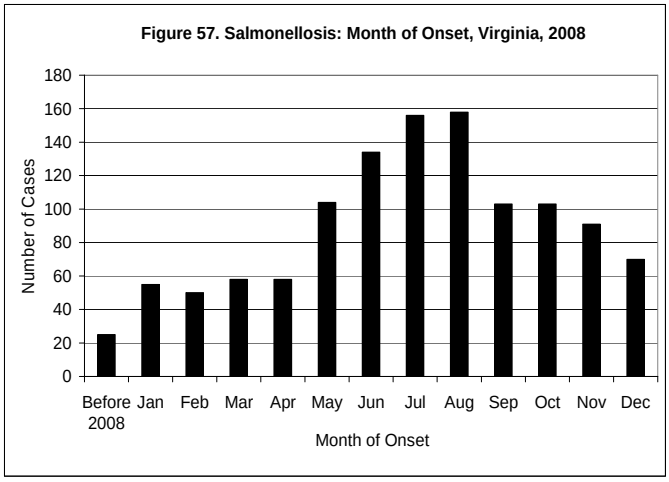



The 1,165 cases of salmonellosis reported in 2008 represent a 7% decrease from the 1,249 cases reported in 2007, and are very similar to the five year average of 1,176.2 cases per year (Figure 55).

By far, the highest incidence rate was observed in the <1 year age group (74.3 per 100,000), followed by the 1-9 year age group (28.9 per 100,000) (Figure 56). Other age groups all showed similar rates of



infection (between 9.1 and 14.2 per 100,000). Although information on race was missing for 45% of the cases, where race was known incidence was slightly higher in the white population (8.9 per 100,000) than the black and "other" populations (7.0 and 6.2 per 100,000, respectively). Rates were slightly higher among females than males (15.8 and 14.0 per 100,000, respectively).




The northwest region had the highest incidence rate with 18.9 cases per 100,000. However, the rates in all other regions were only slightly lower, ranging from 12.9 to 16.1 per 100,000. While salmonellosis occurred throughout the year, there was a notable increase (61% of the cases) in the second and third quarters, with increases in June, July, and August (Figure 57). Fourteen salmonellosis outbreaks were reported during 2008. Eleven of these outbreaks were foodborne and the number of cases per outbreak ranged from one to ninety-nine. One outbreak involved two cases and was associated with an environmental exposure in a college laboratory. Another outbreak was a statewide exposure attributed to contact with reptiles and involved 14 cases. An additional outbreak involved person-to-person exposure at a nursing home among 3 residents. Of all the outbreaks, four were multi-state in which Virginians were involved. Serogroups identified in the outbreaks included Typhimurium, Enteritidis, Heidelberg, Hartford, Saintpaul, Senftenberg, and Ealing. Among reported cases from 2008, one death in an adult female was attributed to salmonellosis. For Virginia salmonellosis cases reported in 2008, the most commonly identified serotype was *Salmonella* ser. Typhimurium (Table 9).

**Table 9. Number and Percent of *Salmonella* Infections by Serotype, Virginia, 2008**

| Serotype Causing Infection | Number | Percent | | Serotype Causing Infection | Number | Percent |
|---|---|---|---|---|---|---|
| *S.* ser. Typhimurium | 262 | 22.4 | | *S.* ser. Saintpaul | 35 | 3.0 |
| *S.* ser. Enteritidis | 207 | 17.7 | | *S.* ser. Hartford | 19 | 1.6 |
| *S.* ser. Newport | 88 | 7.5 | | *S.* ser. Braenderup | 16 | 1.4 |
| *S.* ser. Heidelberg | 50 | 4.3 | | All Others | 219 | 18.7 |
| *S.* ser. Javiana | 38 | 3.2 | | Unspecified | 234 | 20.0 |
| | | | | TOTAL* | 1,168 | |

*The total number of serotypes (1,168) is larger than the total number of *Salmonella* infections (1,165) because a person may be infected with more than one serotype.