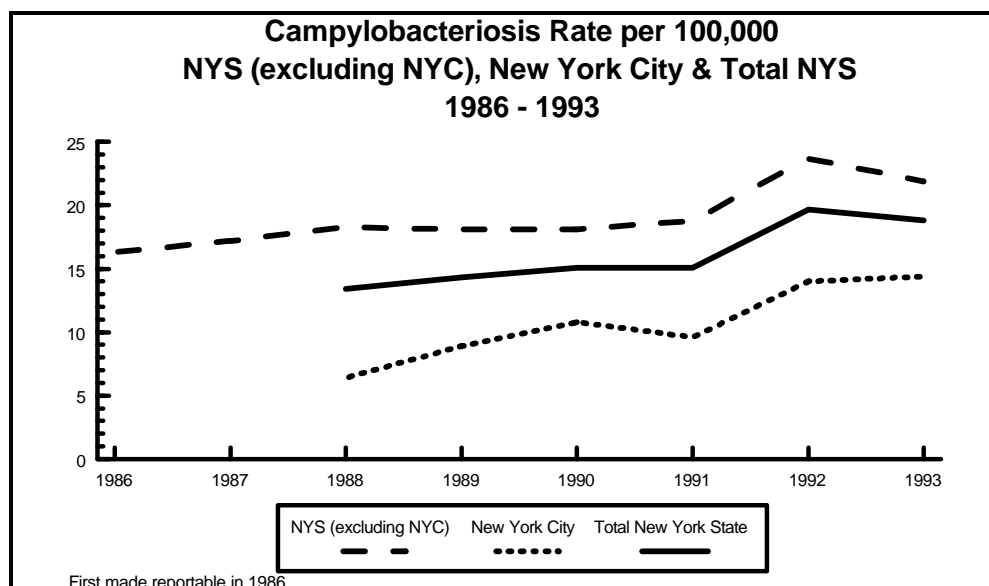
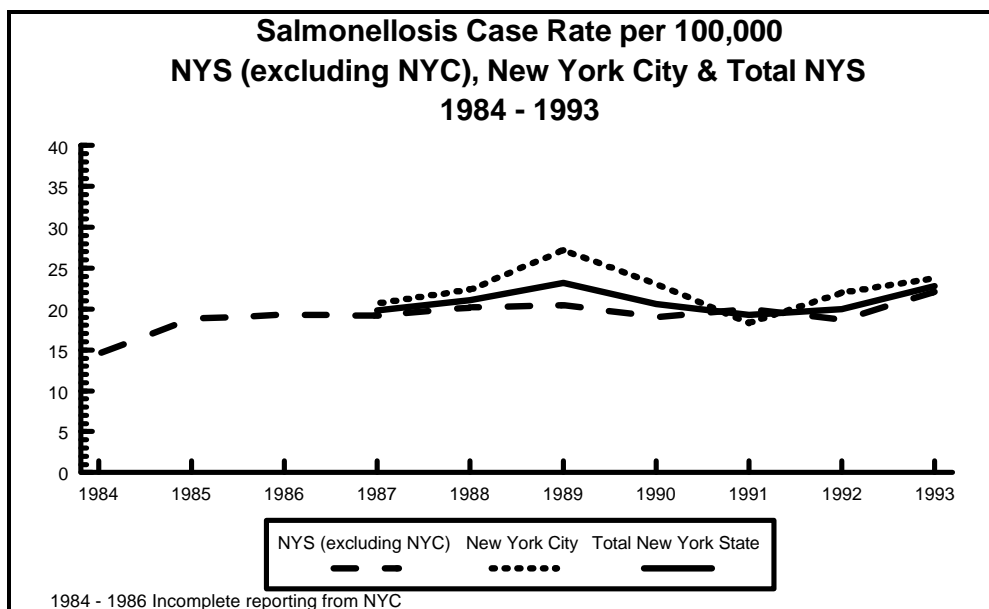


# ENTERIC DISEASES

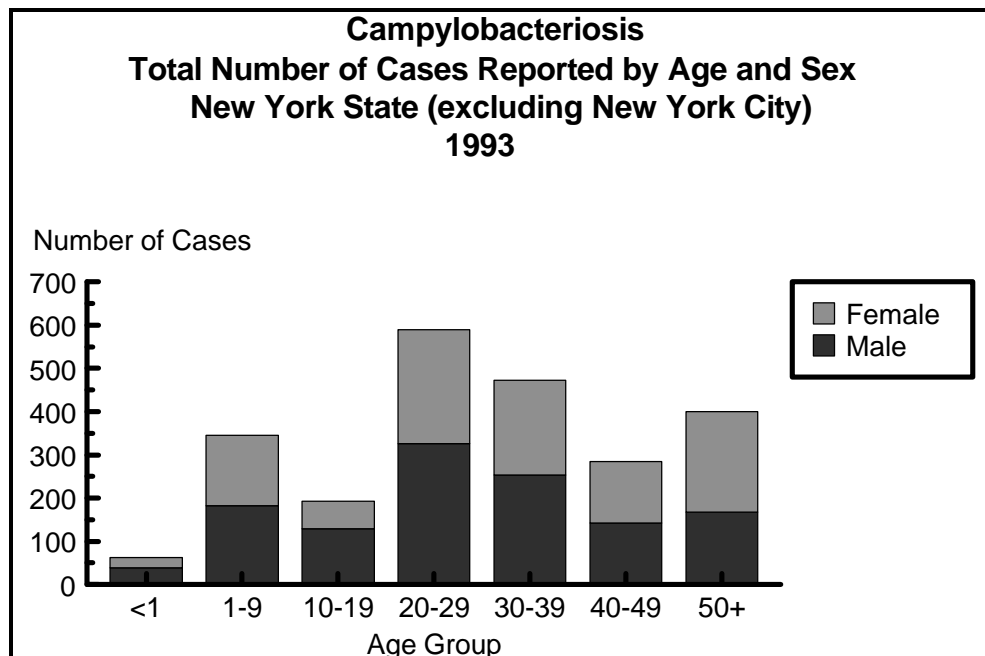
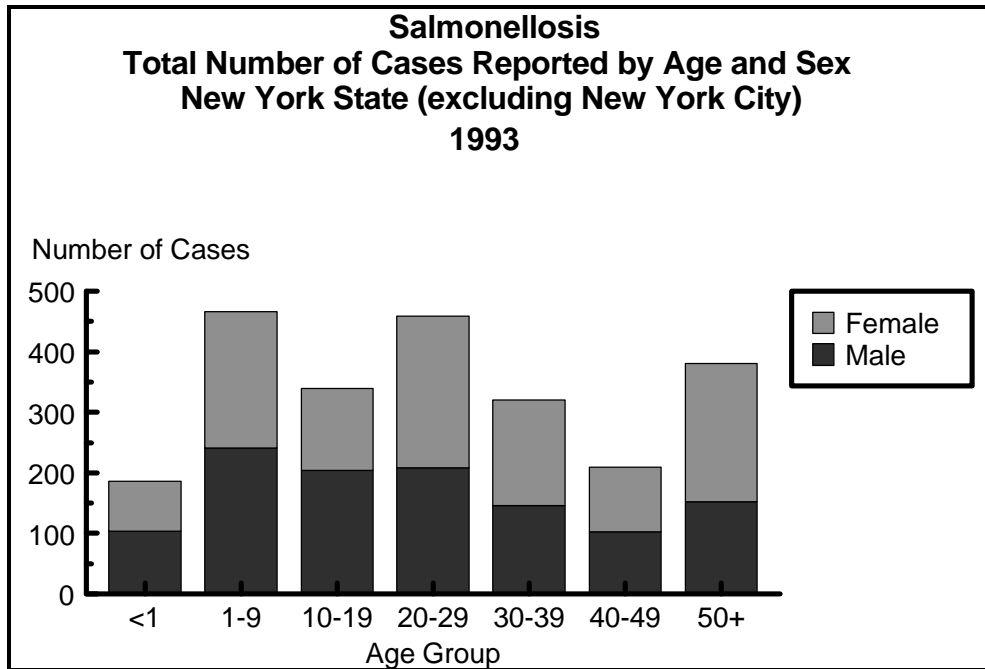
Enteric disease can be caused by a variety of bacterial, viral and protozoan agents. Many of these agents are spread through fecal-oral routes by vehicles of contaminated food or water or through direct person-to-person exposures. Of the numerous enteric disease agents reportable in New York State, campylobacteriosis, salmonellosis and giardiasis are the most prevalent.

## SALMONELLOSIS AND CAMPYLOBACTERIOSIS

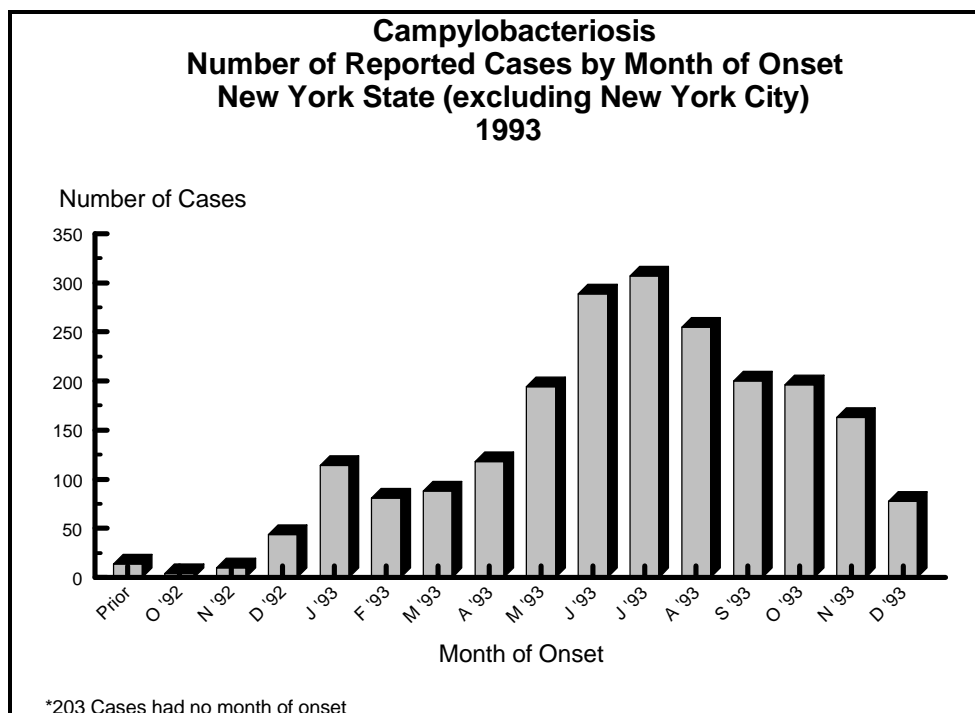
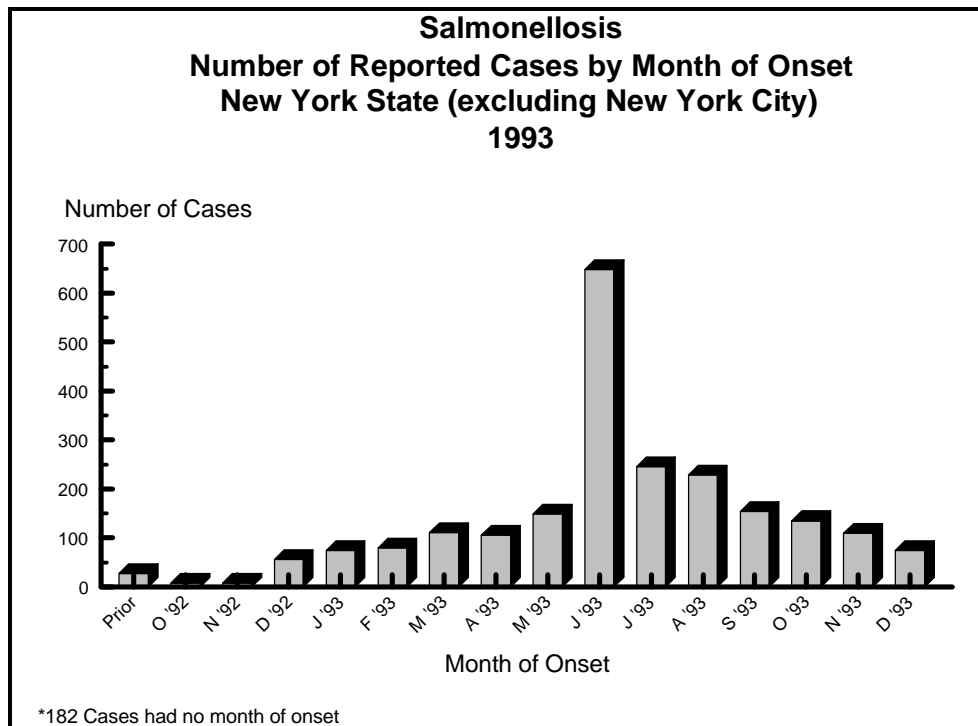
Although salmonellosis has been the most common form of a bacterial gastroenteritis in New York State since 1981, campylobacteriosis has been a close second. In 1993, 3,799 and 3,230 cases of salmonellosis and campylobacteriosis were reported respectively. Case rates have remained approximately 22 and 18 per 100,000 over 1992 and 1993 for each disease.



When case rates are stratified by age, markedly different patterns emerge for both diseases. Campylobacteriosis occurs with the greatest frequency between ages 20-29, unlike salmonellosis, where rates are highest in children under age 10.



Both diseases display similar seasonal trends with increases observed in the summer months.



Thirty-four outbreaks of salmonellosis occurred in 1992-93 (18 in 1992, 16 in 1993) affecting several hundred people. The outbreaks involved eggs, beef and chicken products. Undercooking and cross contamination were contributing factors. The settings in which the outbreaks occurred included prisons, restaurants, colleges and private homes.

Campylobacteriosis occurs primarily as a sporadic disease. Only five outbreaks were reported in 1992-93.

While both salmonella and campylobacter are common bacterial organisms in the food chain, epidemiologic study has implicated aspects of the host reservoir as well as commercial and consumer food handling practices which account for transmission. Salmonella serotype enteritidis (SE), a type often associated with eggs, continues to account for a large number of sporadic cases of salmonellosis. Ongoing outbreaks due to shell eggs have led to interagency meetings with the New York State Department of Agriculture and Markets, CDC and the U.S. Department of Agriculture (USDA) and have resulted in agreements to control the problem at both the producer and consumer level. Control measures imposed by USDA on a number of Pennsylvania farms and directives to commercial and institutional hatcheries to avoid serving undercooked eggs is expected to reduce the incidence of SE infections.

## **YERSINIOSIS AND SHIGELLOSIS**

Of the other bacterial diseases reported in New York State, yersiniosis and shigellosis are notable not by the frequency of reported cases, which is relatively low when compared to salmonella and campylobacter, but by the severity of symptoms caused by these agents. Both diseases can produce an acute gastroenteritis with fever, diarrhea and in some instances become invasive with accompanying complications. The ability of yersinia infection to mimic acute appendicitis and to occasionally be associated with blood transfusions has drawn attention to this uncommon disease. Cases of yersiniosis are typically foodborne; outbreaks have been associated with raw milk, tofu and pork chitterlings with some waterborne transmission also cited. Shigellosis, by contrast, is most often spread through person-to-person routes; foodborne transmission has also been reported. The highly infectious nature of shigella combined with its less apparent clinical presentation in children make shigellosis very difficult to control. Recognition of drug resistant strains have added to the problem of treatment and control.