Food-Borne Illness Down Despite *Salmonella* Cases

BY MIRIAM E. TUCKER
Senior Writer

The incidence of several major food-borne infections declined markedly between 1996 and 2004, preliminary data from the Centers for Disease Control and Prevention suggest.

For the first time in 2004, the national incidence of Shiga-toxin–producing *Escherichia coli* (STEC) O157 infections fell below the Healthy People 2010 goal of 1 case per 100,000 population. In addition, rates of *Campylobacter* infection are approaching the target of less than 12.3 cases per 100,000, while the 2004 rate of *Listeria*, 2.7 per 1 million population, is nearly down to the goal of 2.5 cases per million, to be reached by the end of 2005.

But although most of the news from the CDC's 10-site Food-Borne Diseases Active Surveillance Network (FoodNet) was good, there were increases in the incidence of both *Vibrio* and two *Salmonella* serotypes from baseline in 1996-1998 to 2004, according to the CDC (MMWR 2005;54:352-6).

In 2004, a total of 15,806 laboratory-confirmed cases of infections were identified in the FoodNet surveillance area, which included 44.1 million individuals, or 15.2% of the U.S. population. The three most frequent were *Salmonella* (6,464 cases), *Campylobacter* (5,665), and *Shigella* (2,231), followed by *Cryptosporidium* (613), STEC O157 (401), *Yersinia* (173), *Vibrio* (124), *Listeria* (120), and *Cyclospora* (15).

FoodNet cases were part of 239 nationally reported food-borne disease outbreaks, of which 58% were associated with restaurants. Of the 152 outbreaks in which an etiology was reported, the most common were norovirus (57%) and *Salmonella* (18%).

In 2003, FoodNet collected data on 52 cases of hemolytic-uremic syndrome in children less than 15 years of age (rate 0.6 per 100,000). Of those, 36 (69%) were among those younger than 5 years, the CDC said.

In comparing the preliminary 2004 numbers with those from 1996 to 1998, the CDC adjusted for the difference in FoodNet's population, which was just 14.2 million during the earlier time period. The estimated incidence of infections with *Campylobacter* decreased by 31%, *Cryptosporidium* by 40%, STEC O157 by 42%, *Listeria* by 40%, *Yersinia* by 45%, and overall *Salmonella* infections by 8%. The estimated incidence of *Shigella* infections in 2004 wasn't significantly different from the baseline period, while overall *Vibrio* infections increased by 47%, to 2.8 per 100,000 population in 2004, the CDC reported.

The substantial increase in *S. javiana*, a 41% increase, was due in part to a multistate outbreak in 2004 that was associated with Roma tomatoes.

Although the incidence of *Salmonella* decreased overall, only one of the five most common serotypes, *S. typhimurium*, actually dropped significantly (by 41%). Two of the others—*S. enteritidis* and *S. heidelberg*—didn't change, while both *S. newport* and *S. javiana* rose by 41% and 167%, respectively. The substantial increase in *S. javiana* was due in part to a multistate outbreak in 2004 that was associated with Roma tomatoes, they noted.

The substantial decline in STEC O157, first seen in 2003, coincides with several important food safety initiatives and educational efforts, and is consistent with reports from the U.S. Department of Agriculture of declines in contamination of ground beef following industry responses to governmental food safety initiatives.

The drop in *Campylobacter*, on the other hand, likely reflects efforts to reduce contamination of poultry and to educate consumers about safe food handling, the CDC said.

Rises in some salmonella strains reflect a lack of understanding about the epidemiology of the organism and the methods by which it contaminates produce. Multidrug resistance is also a problem with *Salmonella*, particularly the *newport* strain.

The reasons for the increase in *Vibrio*, which is typically associated with seafood, are not clear. The Food and Drug Administration is currently conducting an assessment. ■