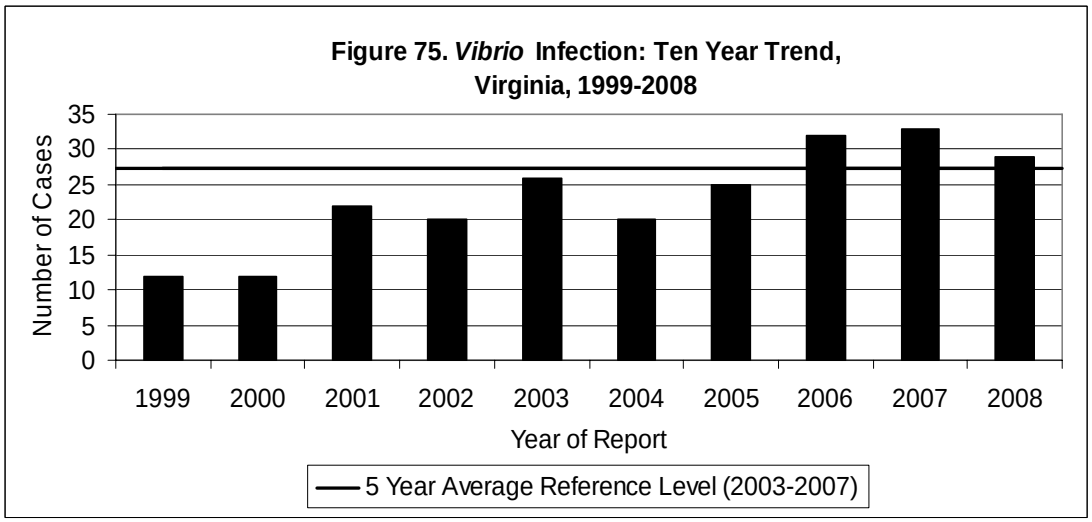
***Vibrio* Infection**

Agent: *Vibrio* (bacteria)
Mode of Transmission: Gastroenteritis is usually related to the consumption of raw or undercooked seafood, particularly shellfish. Wound infections arise from environmental exposures, usually from brackish waters or from occupational injuries (e.g., among fishermen).
Signs/Symptoms: Syndromes associated with *Vibrio* infection include diarrhea, wound infection, and septicemia. Diarrheal illness is most common and includes watery stools, cramping, and abdominal pain. Low-grade fever, headache and chills are seen in half of those ill with diarrheal illness, while 30% of those with diarrheal illness will experience vomiting. Wound infection is usually severe in those who have liver disease or are immunosuppressed.
Prevention: Seafood should be cooked adequately and should be refrigerated. Abrasions suffered by ocean bathers should be rinsed with clean, fresh water. Children, immunosuppressed persons and those with chronic liver disease should not eat raw oysters or clams.
Other Important Information: Most *Vibrio* infections occur during summer and fall months, when levels of bacteria in brackish waters and estuaries are highest.



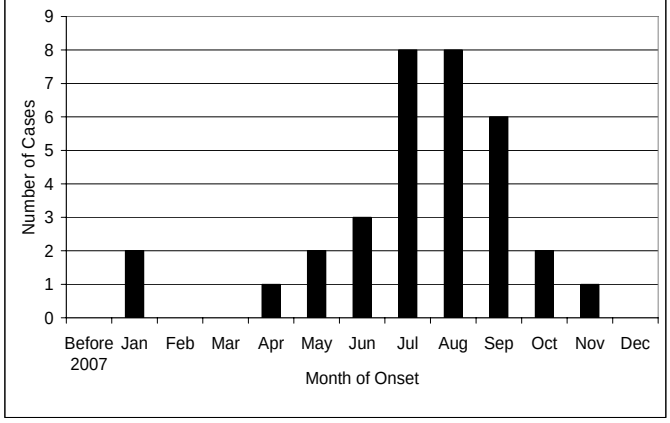
During 2008, 29 cases of *Vibrio* infection were reported in Virginia. This is similar to the 33 cases reported in 2007 and a 7% increase over the five year average of 27.2 cases per year (Figure 75). The species breakdown among the 29 *Vibrio* infections included 12 (41%) infections caused by *V. parahaemolyticus*, four (14%) caused by *V. alginolyticus*, three (10%) caused by *V. vulnificus*, three (10%) caused by *V. mimicus*, three (10%) caused by other various species of *Vibrio (cholera* non 01, non 0139 and *fluvialis)* and six (21%) cases with no species identified. Two cases were infected with multiple species of *Vibrio*. Illnesses included 12 gastrointestinal infections, 10 wound infections, three septicemic infections, three other types of infections (i.e., specimen collected from ear, urine and tonsil) and one case with multiple infection sites (i.e., wound and septicemic). *V. parahaemolyticus* was associated with causing gastrointestinal (7/12 cases) and wound

infections (5/12 cases). *V. alginolyticus* was associated with wound (3/4 cases) and other infections (1/4 cases). *V. vulnificus* was associated with wound (2/3 cases) and septicemic infections (2/3 cases). *V. mimicus* was associated with septicemic (2/3 cases) and gastrointestinal (1/3 cases) infections.

Twenty-eight percent of reported cases occurred in the 60 year and older age group and the incidence rate was the second highest in this age group (0.6 per 100,000). The highest incidence rate was in the infant age group (1.0 per 100,000), which represented three percent of all cases. Incidence was the same (0.2 per 100,000) among whites (13 cases reported) and blacks (3 cases reported).

Among the 29 cases reported in Virginia in 2008, *Vibrio* infection predominantly affected males. Sixty-six percent of infections occurred among males and the incidence rate was almost double the rate for females (0.5 and 0.3 per 100,000). Geographically, the eastern region had the largest proportion of cases and the highest incidence rate (48%, 0.8 per 100,000), followed by the northern region (28%, 0.4 per 100,000) and central region (17%, 0.4 per 100,000). Fifty-nine percent of cases occurred during the third quarter, and onset peaked during the summer months of July and August (Figure 76). Among cases reported in 2008, no deaths were attributed to *Vibrio* infections.

Figure 76. *Vibrio* Infection: Month of Onset, Virginia, 2008



Cholera

No cases of cholera were reported in Virginia in 2008. The last case of cholera in Virginia occurred in 1994.