

## Outbreak of Salmonella Newport Infections Linked to Cucumbers – United States, 2014

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**Location:** Ravinia Ballroom

**Summary:** What's going on with your salad? An outbreak of Salmonella Newport linked to cucumbers was reported on the Delmarva Peninsula. Could this be a sign of recurring outbreak potential?

### **Abstract:**

**Background:** Salmonella causes approximately 1 million foodborne infections and 400 deaths annually in the United States. In August 2014, PulseNet, the national molecular subtyping network for foodborne disease surveillance, detected a multistate cluster of Salmonella Newport (SN) infections with an indistinguishable pulse-field gel electrophoresis pattern. This strain has previously been linked to tomatoes from the Delmarva Peninsula of the Eastern US. We investigated to identify the source and prevent further illnesses.

**Methods:** A case was defined as an illness with the outbreak strain with onset from 5/20/2014- 9/30/2014. Information was collected on travel, restaurant, and food exposures in the 7 days before illness onset using a structured questionnaire. Reported food frequencies were compared to the 2006-2007 FoodNet Population Survey. A non-regulatory traceback was performed to identify the source of food items consumed in illness sub-clusters. Whole genome sequencing (WGS) was conducted to further characterize relatedness of Salmonella isolates.

**Results:** A total of 275 cases from 29 states and DC were identified; 34% (48/141) were hospitalized and 1 death was reported. A significantly higher percentage of ill persons consumed cucumbers in the week before illness onset than expected, (62% vs. 46.9%,  $p=0.002$ ). Traceback of 8 illness subclusters led to a common cucumber grower in the Delmarva region of Maryland. WGS analysis showed that genetic sequences of clinical isolates from MD and DE were highly related but distinct from a NY sub-cluster.

**Conclusions:** Epidemiologic and traceback evidence suggest cucumbers were a major source of illness in this outbreak. This is the first multistate outbreak of SN infections linked to a produce item from the Delmarva Peninsula other than tomatoes, suggesting an environmental reservoir may be responsible for recurring outbreaks.