

Timeline: Nationwide Outbreak of *Salmonella* Enteritidis (SE) Infections Associated with Shell Eggs, United States, 2010

May 1 – September 9

Twenty-nine restaurant/event clusters are reported from 11 states; 15 of 29 clusters with likely egg source as Wright County Eggs (WCE); 1 cluster of 29 with likely source as Hillandale Farms.

May – Early June

Several local outbreaks of SE infections with pulsed-field gel electrophoresis (PFGE) pattern 4 are reported to CDC by state public health authorities, with some evidence that infections are related to egg-containing foods. In none of these clusters are shell eggs specifically implicated. Two clusters appear to have a common source of a pasteurized liquid egg product, but 2 others are distinctly different from each other and do not support a link. FDA and FSIS participate in assessment of these 4 clusters. An intense investigation of the liquid egg manufacturer is completed; advanced laboratory methods determine outbreaks are not related to each other.

Outbreak Identification and Source Implication

May 21
MN reports to CDC restaurant cluster of SE infections.

May 24
MN statistically implicates consumption of chile rellenos (stuffed chili peppers) prepared with shell eggs. MN traceback identifies shell eggs supplied by Hillandale Farms in New Hampton, IA. No unexpected nation-wide increase in SE infections was apparent in PulseNet.

June 27
CA reports to CDC state increase of SE infections and identification of two local clusters catered by common bakery.

June 27 – Mid July

CA reports 4 additional clusters associated with breakfast-style restaurants

July 21
CDC notes general sustained nationwide increase in SE pattern 4 infections; preliminary investigation results are shared with FDA & USDA/FSIS.

July 28
CA reports to CDC bakery clusters associated with custard-filled pastries containing eggs.

August – September

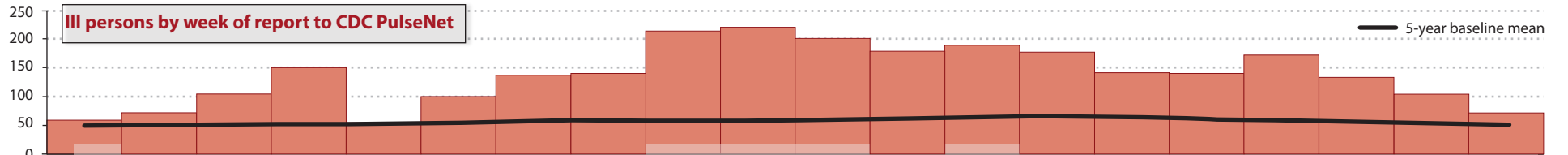
CDC continues surveillance for SE PFGE pattern 4 infections and restaurant clusters

July 29
Preliminary data from 6 CA clusters identify a common egg supplier: WCE in Galt, IA. CO notifies CDC of restaurant cluster of SE infections; raw egg-containing food implicated and preliminary lab results of food testing suggest *Salmonella* positive.

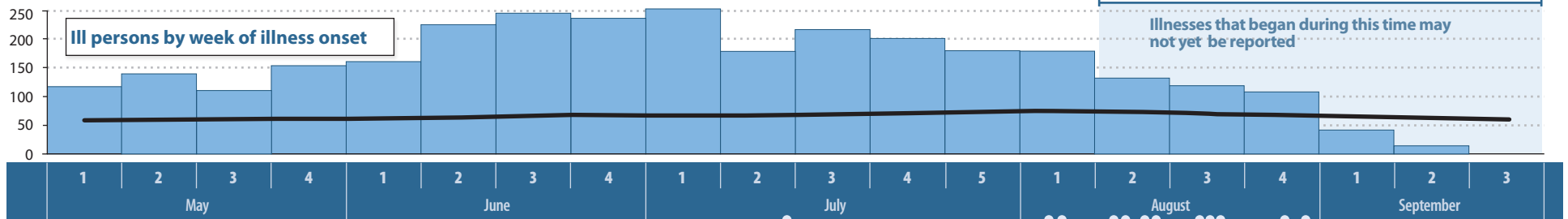
August 4
MN reports 4 clusters to CDC, including the one in May; 3 associated with eggs from Iowa farms, including same farm as source of 6 CA clusters. States are notified of preliminary CA egg source results. CDC requests epidemiologic and any egg source information on all identified clusters of SE infections in the United States.

July 30
CDC, FDA and USDA/FSIS conference call to discuss investigation updates.

August 6
CO identifies WCE as egg source for restaurant outbreak.



From May 1 to September 14, 2010, a total of 2,752 illnesses were reported. However, some ill persons from this period have not been reported yet, and some of these ill persons may not be related to this outbreak. Based on the previous 5 years of reports to PulseNet, 1,144 total SE illnesses would be expected during this same period. This means there are approximately 1,608 reported illnesses that are likely to be associated with this outbreak.



Regulatory Actions, Recalls, and Results of Product testing

July 9
FDA Egg Rule implemented.

August 4
FDA reviews preliminary records from multiple states and assigns investigators to collect complete traceback records from restaurants and distributors in CA & CO.

August 6
FDA selects 3 geographically distinct clusters (MN, CO, CA) of illness to focus complete documented tracebacks. FDA had previously been collecting and analyzing traceback records for some of these clusters.

August 9
FDA contacts and begins daily dialogue with WCE.

August 10
FDA SE Incident Management Group activated.

August 12
FDA starts inspection at WCE in Galt, IA.

August 13
WCE issued a nationwide voluntary recall of shell eggs from 3 farms. Recall notice posted on FDA's website.

August 18
Based on additional traceback information and concerns discovered during FDA investigation, WCE expanded recall to include 2 additional farms. Recall notice posted on FDA's website.

August 19
FDA starts inspection at Hillandale Farms.

Late July – Early August

FDA closely monitors state and CDC investigations to identify food vehicle associated with increase in SE infections. FDA requests traceback records from certain states.

August 20
Hillandale Farms issued nationwide voluntary recall of shell eggs. Recall notice posted on FDA's website.

August 26
Form FDA-483, Inspectional Observations, issued to Hillandale Farms of Iowa.

August 30
Form FDA-483, Inspectional Observations, issued to WCE.

USDA and FDA complete intensive investigation of pasteurized liquid egg manufacturer as result of CDC and state epidemiological data. Preliminary traceback of shell eggs show no common source.