

SALMONELLOSIS - USA (10): (ARKANSAS) PRISON, CHICKEN SALAD

A ProMED-mail post

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From: Dirk Haselow <dirk.haselow@arkansas.gov> [edited]

[Re: ProMED-mail Salmonellosis - USA (08): (Arkansas) prison, chicken salad susp 20120824.1261257]

I wanted to provide a brief update of our salmonellosis outbreak in an Arkansas prison and clarify some of the issues raised in your earlier post.

Environmental health investigations have determined that there were multiple opportunities for contamination and cross-contamination during food preparation and that whole frozen chickens may not have been cooked sufficiently to kill all salmonellae present. The peak of cases occurred 18 hours after consumption of a meal containing chicken salad.

Ongoing laboratory analyses have identified at least 6 *Salmonella* species (*S.* Anatum, *S.* Cerro, *S.* Newport, *S.* Mbandaka, *S.* Heidelberg, *S.* Braenderup). In addition, the *S.* Anatum, *S.* Newport, and *S.* Heidelberg serotypes each have 2 distinct PFGE patterns, so we are likely dealing with 9 different organisms. 4 of the resulting PFGE patterns were previously unknown to PulseNet.

Epidemiological investigation has also identified a few early reports of illness among food handlers at the prison. However among the 590 interviews conducted, 448 prisoners and staff ate the chicken salad. 354 of those were ill for an attack rate of 79 percent and an odds ratio of 9.0 (5.9-13.7 95 percent CI [confidence interval]).

At present, as multi-species contamination of raw chicken is common, our consensus opinion is that the dominant mode of transmission observed in this outbreak is related to undercooked chicken rather than person to person contamination or contamination of the food by a symptomatic food handler.

Laboratory analyses of both food items and stool specimens and epidemiologic analyses are ongoing with help from representatives from the CDC.

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