

PENNSYLVANIA RAPID RESPONSE TEAM

Pennsylvania Department of Agriculture, Pennsylvania Department of Health & FDA
Salmonella linked to Pet Supplies Plus – Wilkes Barre & Scranton, PA.



Abstract

Salmonella Outbreak related to Pig Ears

After conducting an epidemiological investigation into 2 cases of Salmonellosis (multiple illnesses), linked to Pig Ears dog chews, and as part of a multi-state CDC investigation; on June 18, 2019 Pennsylvania Dept of Health (PA DOH) contacted Pennsylvania Dept of Agriculture (PDA) and requested further follow-up. ears. PDA partially activated the RRT, planned and proceeded to conduct an inspection and sample collection at two retail shops in Wilkes Barre and Scranton, identified by PA DOH. Trace back activities found the pig ears were supplied to the retail stores by Pet Supply Plus. PDA Inspectors collected receiving documents, aseptically collected unpackaged pig ears held for sale and aseptically swabbed the sales floor holding bins for the pig ears. Samples were sent to PA DOH laboratory and analyzed. Positive isolates were further analyzed for PFGE and WGS typing. Of the three positive isolates from product and the 12 positive isolates from swabbing, analysis found the outbreak strain of Salmonella serotype I 4,[5],12:i:-, as well as S. infantis, S. rissen and S. typhimurium.

Introduction

On Tuesday, June 18th, 12:30pm, the PA DOH shared that CDC had been investigating a multistate *Salmonella* I 4,[5],12:i:- outbreak with a suspect vehicle of pigs ears. There were 2 linked PA cases located in the Northeast.

DOH reported that from their epi investigation, both PA cases indicated purchasing pigs ears from two different, but geographically close, Pet Supplies Plus stores (Wilkes Barre & Scranton) in April. The pig ears were loose and available in bins for purchase (not pre-packaged). DOH requested PDA to conduct a traceback and determine supplier & brand name at these two stores and what product would have been there in April? Inquiry also made as to feasibility of product testing, or environmental swabbing.

On Wednesday, June 19th, 8am an Initial RRT meeting with the ‘core group’ was convened to discuss next steps. Discussion determined that the Department would institute a partial activation of the RRT and Plant Industry would be the lead as the product is pet food. An ICS structure was established, and ICS forms 201 and 202 for situation awareness and establishing incident objectives were completed.

A detailed sample project plan and an ICS 209 Planning form was prepared to support operations. On June 24th & 25th a Plant Industry Inspector visited the two stores in question to conduct a traceback investigation. The Inspector was accompanied by two Food Inspectors who aseptically sampled product and performed environmental swabs of bins/containers.

All pig ear product samples and environmental swabs were delivered to the PDA Laboratory for sample analysis, on June 24th & June 25th. On June 28th, lab results showed all positive Salmonella results for samples and swabs received on June 24th. On July 1st, the lab results indicated positive Salmonella on swabs, but negative product results for samples received on June 25th. Isolates were supplied to PA DOH for PFGE and WGS.

PDA Plant Industry issued a stop sale order to both Pet Supplies Plus locations, and on July 3rd, the compalny recalled all pig ear product they had sold. On July 3rd CDC and FDA issued a consumer advisory regarding Salmonella in Pig Ears.

In August, a Hotwash and After Action Report occurred.

Materials and Methods

PA Food Emergency Response Plan (FERP) to include CONOPS (Concept of Operations) and SOPs for Traceback and Product and Environmental Sampling

Aseptic Product & Environmental Sampling Supplies

FDA BAM Methodology for Salmonella testing (VIDAS)

PFGE and WGS testing of Isolates



Site of inspection Pet Supplies Plus, Scranton, PA



Picture showing bulk bin of pig ears located on retail shelf – bin 1

Results and Discussion

There were 8 cases from Pennsylvania infected with outbreak strains of *Salmonella*, including *Salmonella* serotypes I 4,[5],12:i:-, Infantis, Rissen, and Typhimurium.

There were 3 *Salmonella* isolates from pig ears and 12 isolates from environmental swabs. These samples yielded *Salmonella* I 4,[5],12:i:-, London, and Infantis.

A key finding from this testing was the isolation of the original human outbreak strain from a pig ear isolate from the retail store in Pennsylvania.

The Multistate investigation resulted in:

- Pet Supplies Plus recalling all pig ear pet treats they had sold.
- FDA & CDC issuing a consumer advisory regarding Salmonella in Pig Ears
- An import alert being issued for Pig Ear pet treats.



Sara Paiva placing pig ear into whirl pac bag



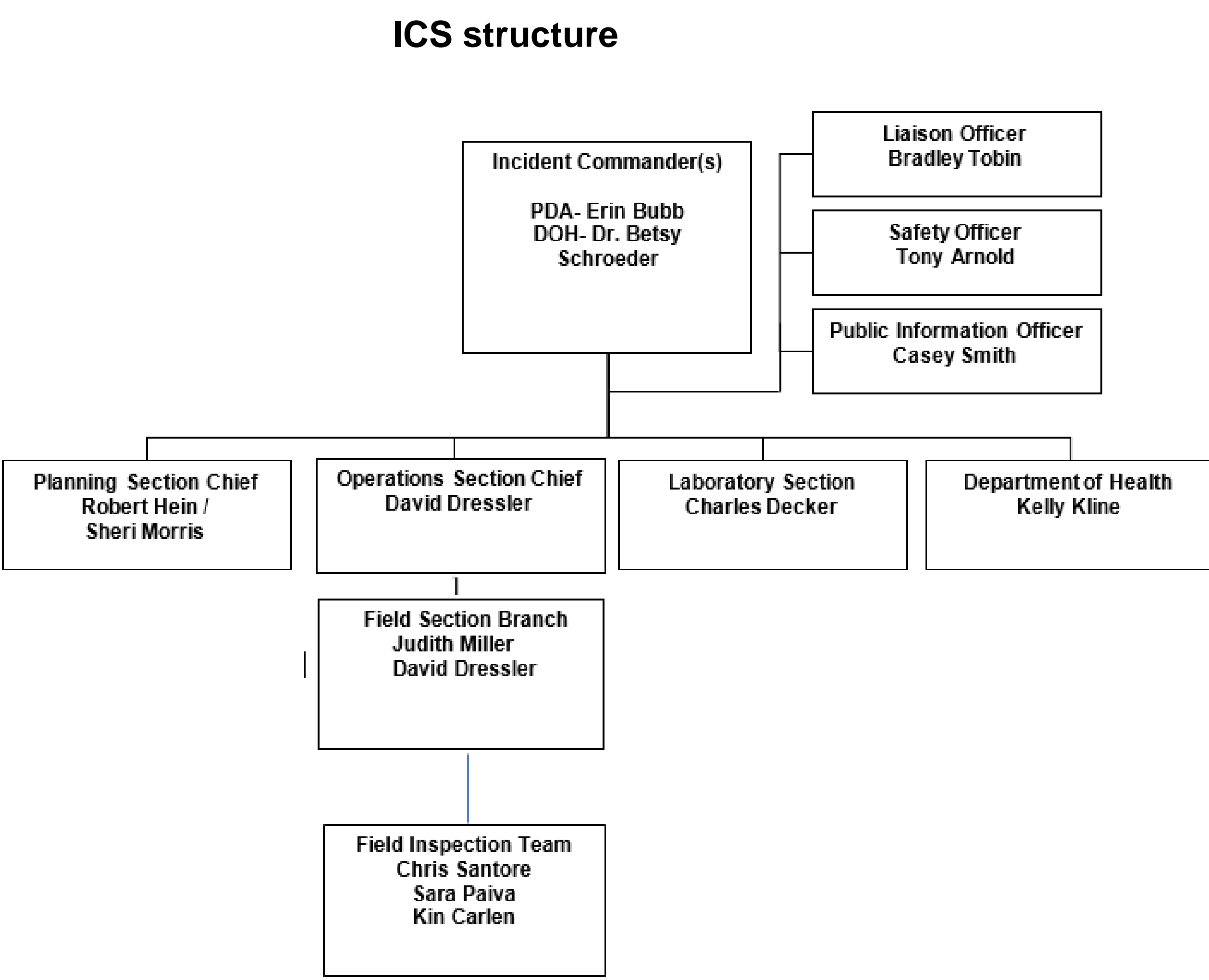
Sara Paiva obtaining environmental sample from bulk bin 1

There were several unique challenges in this PA investigation.

-This outbreak started prior to the national transition to whole genome sequencing and ended after the transition, so isolates were subtyped by pulsed-field gel electrophoresis (PFGE), whole genome sequencing (WGS), or both.

-Like many zoonotic enteric outbreaks, there were multiple outbreak strains identified over the course of the investigation, making epidemiologic information even more important than usual.

- The outbreak required multiple Bureaus to work together within Agriculture to have the needed expertise - Plant Industry with regulatory authority of Pet Food, and Food Safety & Laboratory Services for Sampling expertise and Laboratory testing capacity. While not difficult, it was not routine.



Conclusion

Our first activation with new leadership was a complete success. The PA Department of Agriculture and the Department of Health worked together in a unified command to overcome a multi-agency outbreak.

There were many lessons learned from this activation.

*The importance of a strong connection and open communication with other state and federal agencies

* Sharing department resources- blended inspection and sampling team from different Bureaus was important to success.

* Understanding at Agriculture who is the incident commander. Despite being a RRT, housed in our Food Safety Bureau, human food is not always the focus, or the appropriate IC. Recognizing that early makes response times faster.