

Possible MDR Salmonella Newport Outbreak in Oklahoma

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Background

- Initially 4 cases with indistinguishable Xbal and Blnl patterns
- Onsets 6-10-03 to 7-17-03
- Total of 11 by end of July
- First time seen in Oklahoma
- Posted on PulseNet WebBoard 7-14-04

WebBoard Response

- 10 of 21 State or CHD responses indicated a match to the posted Xbal pattern
- MI had 2 recent matches that were also the R-type ACSSuT
- JJPX01.0238 and JJPA26.0022 were assigned to the patterns
- Period between 4-1-03 and 8-31-03 over 50 patterns initially appear to match by Xbal

WebBoard Response conti.

- At CDC's request BlnI patterns were submitted for most of the isolates

Pattern Assignments

- Due to very subtle differences in Xbal patterns 6 new pattern numbers were assigned:

JJPX01.0238

JJPX01.0250

JJPX01.0247

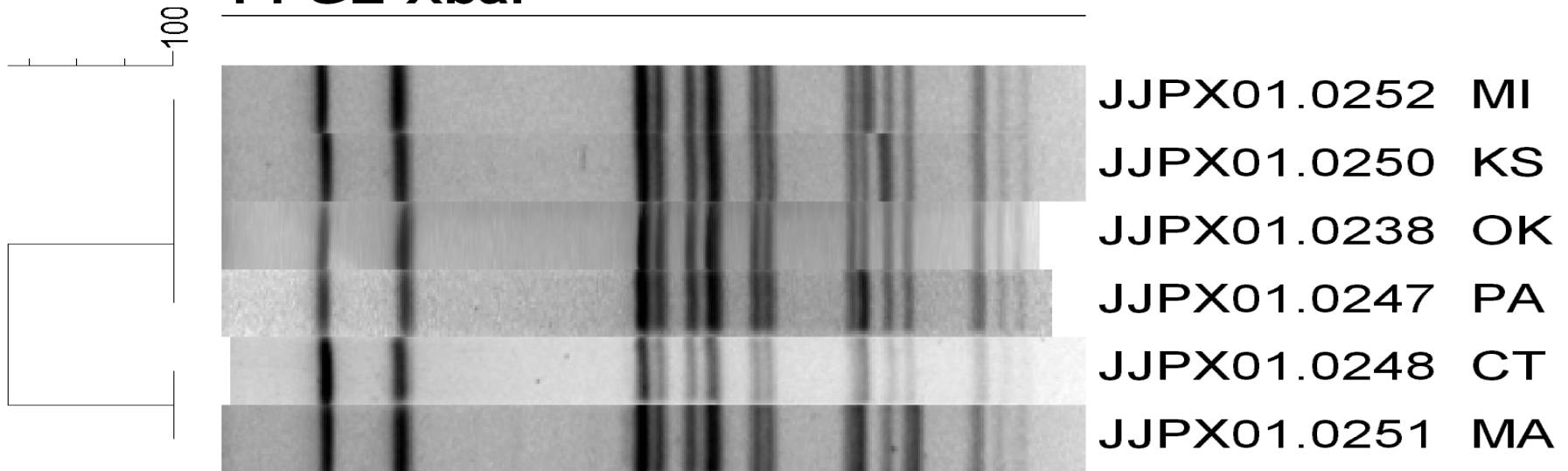
JJPX01.0251

JJPX01.0248

JJPX01.0252

Pattern Assignments conti.

PFGE-XbaI: PFGE-XbaI



Pattern Assignments conti.

- Additional unique BlnI pattern submissions confirmed multiple Xbal patterns
- Houston, Massachusetts, Michigan, Minnesota, and Virginia had indistinguishable Xbal and BlnI patterns
- 46 isolates were assigned JJPX01.0238 during the given time period
- 24 isolates were assigned JJPA26.0022

Epi Investigation

- Included 2 weeks prior to and after first and last onset dates
- 8 of 11 consumed foods from restaurants affiliated with national cafeteria chain
- 5 of 8 vs. 4 of 17 controls had eaten chicken
- Chicken tested from 3 sites no Salmonella was isolated
- Contacted other state epidemiologists
- Case definition included anyone traveling to Oklahoma or anyone having eaten at the national cafeteria chain in the defined time period

Epi Investigation conti.

- Excluded isolates with no travel history or cafeteria exposure
- Case-control study did not identify a specific food item with an increased odds of exposure among cases compared to controls
- No common factor was found to link the multi-state isolates
- No resistant strains found at hospital labs
- Three isolates were sent to NARMS
- Pan-susceptible

Salmonella Newport Investigation

Case-Control Study

Case Demographics (n=11)

Demographics	Number (%)
<u>Age (years)</u>	
Range	9 – 86
Median	54
<u>Gender</u>	
Female	8 (73%)
Male	3 (27%)
<u>Race</u>	
White	11 (100%)
<u>County of residence</u>	
Tulsa	9 (82%)
Mayes	1 (9%)
Osage	1 (9%)

Conclusions

- Without primary and secondary enzyme testing outbreak would have appeared much larger
- Secondary enzyme assisted to define outbreak
- Reduced epidemiology investigation time
- Antimicrobial sensitivities helped define outbreak
- The assumption that a PFGE pattern clustered within a known MDR cluster can no longer be made

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