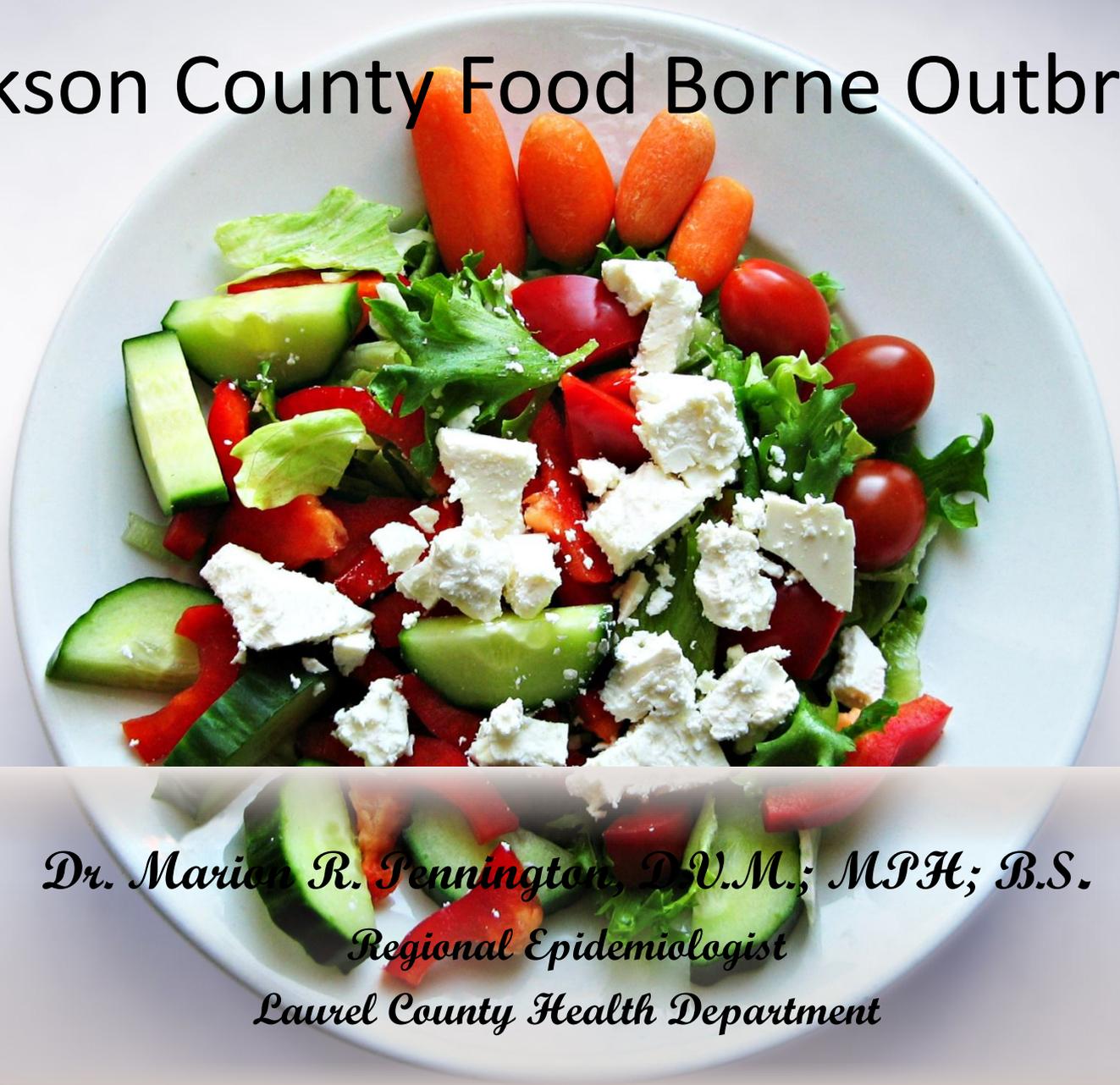


Jackson County Food Borne Outbreak



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Laurel County Health Department

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Background:



- Jackson County Spanish Club
- Catered Awards Dinner
- Approximately 60 people in attendance
- Buffet style Mexican theme
- Dinner began 6:00pm March 6th 2012
- Onset symptoms began between 9:00pm 03/06/2012 and 9:00am 03/07/2012

Symptoms:

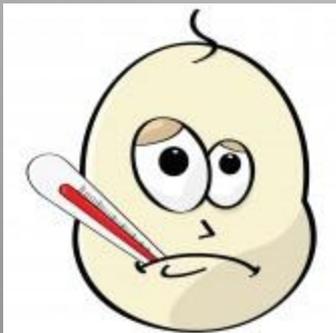
- Fever
- Nausea
- Vomiting
- Diarrhea
- Abdominal Cramps



Case Definition:

Any individual attending Spanish Awards Dinner
@ Jackson County High School on March 6th
2012 with any symptoms of:

Fever, Nausea, Vomiting, Diarrhea, Abdominal
cramps with onset between hours of 9:00 pm
March 6th 2012 and 9:00 am March 7th 2012



What Happened Next?



- Regional Epidemiologist notified 03/07/2012
- Frankfort Notified – Doug Thoroughman
- His suggestion “do case control study along with other individuals showing symptoms”
- KDPH Enteric Disease Investigation Form used
- Interviewed all individuals attended dinner
- Collection of food samples from dinner

Menu:

- Catered dinner with:
- Beef enchiladas
- Spanish rice
- Chicken fajitas
- Black bean soup
- Fried plantain
- Pineapple cake
- Brownies





Next Step:

- Shawn Reynolds – Jackson Co. HD Environmentalist collected food samples left over from dinner
- Submitted to DLS for analysis
- Food samples tested for *Staphylococcus aureus*, *B. cereus* & *C. perfringens*
- Stool samples requested from individuals showing symptoms



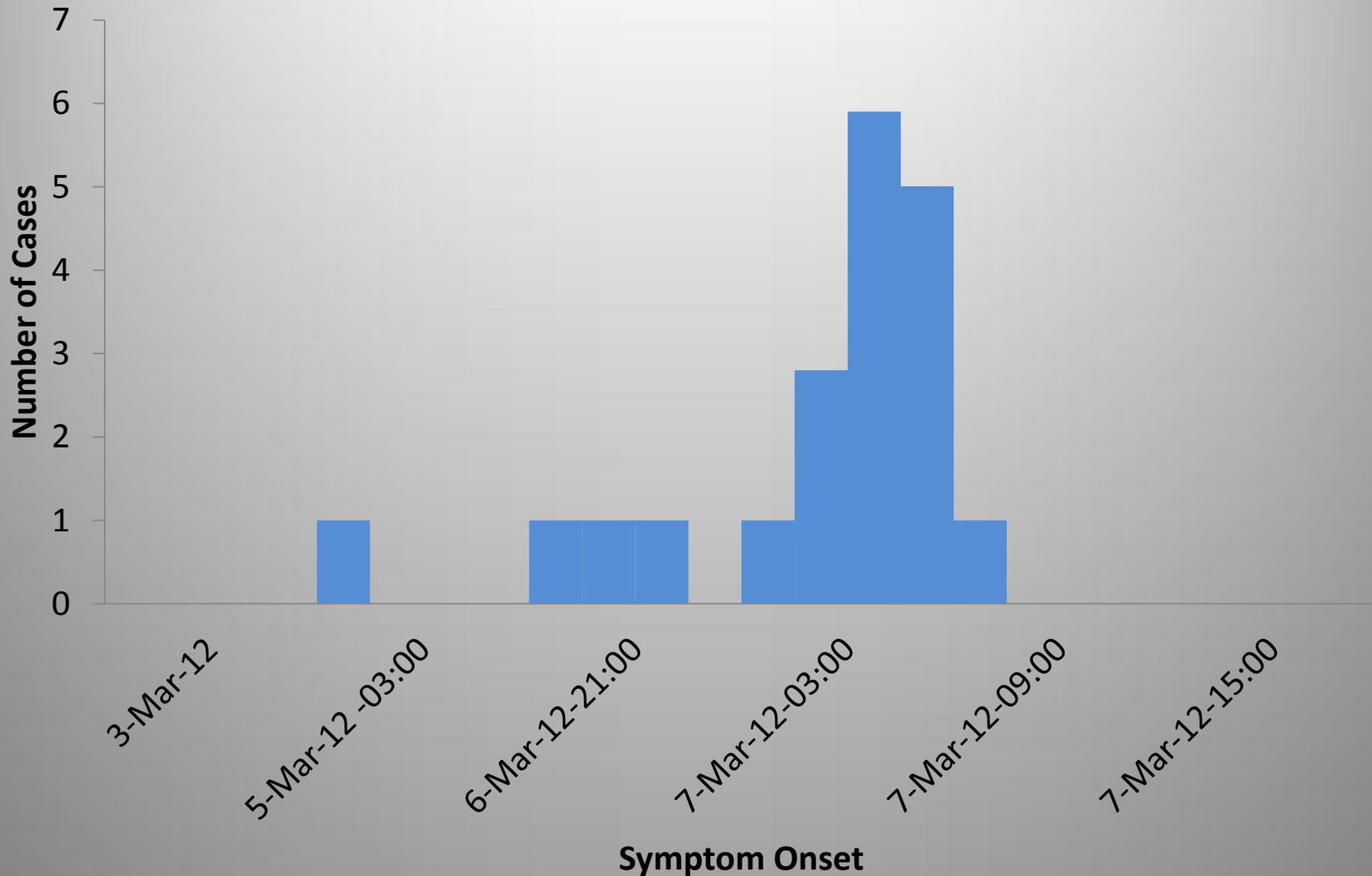


Results:

- Some individuals began showing symptoms early as 11:00 pm on March 6th, 2012
- Majority individuals showed symptoms between 12:00 pm March 6th 2012 & 6:00 am March 7th 2012.
- Beef enchiladas was food item most individuals consumed
- Primary complaint: beef was not even warm when served.

Epidemic Curve

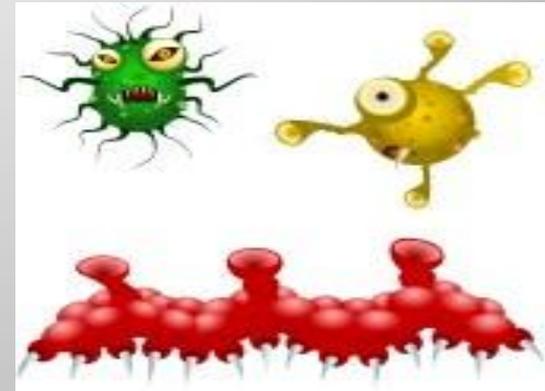
Jackson County Foodborne Illness Outbreak





Results Cont:

- Usual enteric bacteria tested for:
- Salmonella
- Shigella
- E- coli
- C. perfringens -all negative from private lab specific test was not requested
- DLS – C. perfringens positive. Isolate sent to DLS PFGE lab for analysis



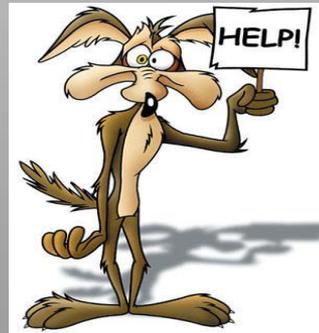


Lab and Clinical Results:

- DLS – examined & found isolates from enchilada food sample contained 2,000,000 *C. perfringens* per gram.
- *S. aureus* – tested 14,000 per gram but enterotoxin test negative
- *B. Cereus* – toxin found after enrichment not considered confirmatory test
- None of three requested pathogens/enterotoxins found in other food

Road Blocks:

- March 2nd tornado – man power spread thin both locally & KDPH
- Food borne outbreak followed recent Norovirus outbreak KBA – JCHD still thinking “virus” (Norovirus) instead of bacterial pathogens –
- Individuals reluctant to collect & submit stool samples for testing





Final Report:

- Jackson Co. Food borne outbreak (KY12-047) – March 6th 2012 – C. Perfringens – bacterial pathogen found in food item
- Beef enchiladas – main course was culprit!
- 4 stool samples – submitted to DLS – all positive & 100% match C. Perfringens found in food items

PFGE IMAGES:

- PFGE Pattern *C. perfringens* isolates
- Food isolate Lane 2
- Patient isolate Lane 3
- Lane 1 & 4 = Standard markers
- All isolates had same matching pattern



PFGE IMAGES:



Acknowledgements:

- Doug Thoroughman – guidance during outbreak
- Vinay Chiguluri – analysis data submitted KDPH
- Shawn Reynolds – collection food samples
- Division Lab Services – especially Shawn Benton, Lucinda Mitchell, and the DLS PFGE lab staff.



Questions:?

