



EPIDEMIOLOGY SURVEILLANCE REPORT

Central Region



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10/27/2015

Note:

This report is for use by Public Health Officials only and not for public distribution.

All data are provisional and are subject to change.

10/27/2015

Purpose/Objectives

Purpose

- To provide regional information and updates to public health partners on communicable disease activity and trends within their region

Objectives

- Provide an overview of communicable disease activity
- Describe quarterly trends in select communicable diseases
- Highlight interesting and/or notable outbreaks/clusters and/or investigations


10/27/2015

State and Regional Highlights- Foodborne Illness

Distribution of S. Javiana Cases by County, NJ - 2015

Salmonella Javiana Cluster

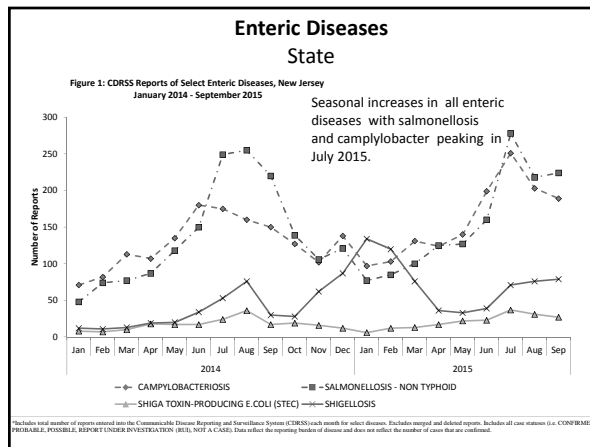
- 37 confirmed cases from 5 states: FL, KY, NJ (33), NYC, and PA.
- Onset dates range: July 9, 2015 to August 14, 2015
- Age range: 1-72 years (median 24 years)
- Majority of cases Monmouth and Ocean residents but six additional counties have at least one case associated with this cluster.

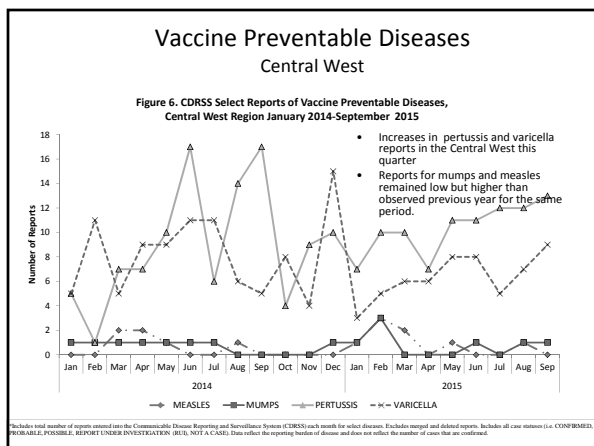
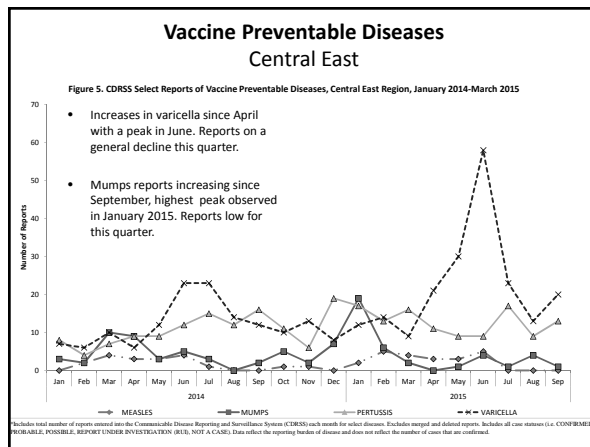
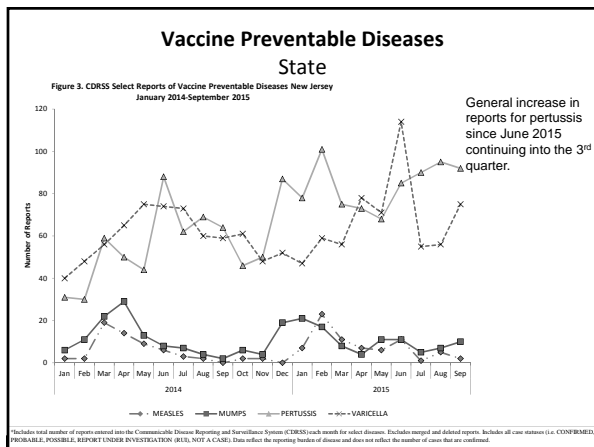
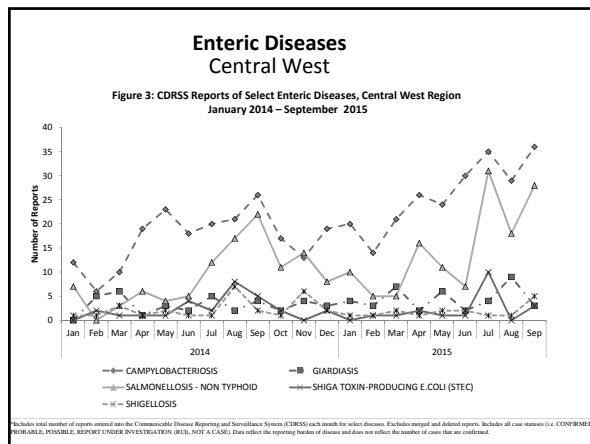
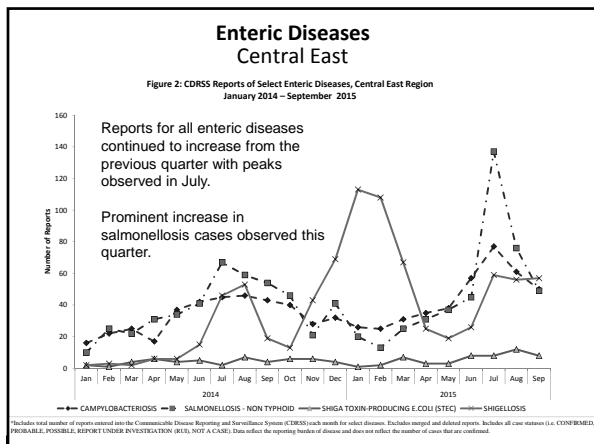


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SELECT DISEASE TRENDS AND ACTIVITY

10/27/2015





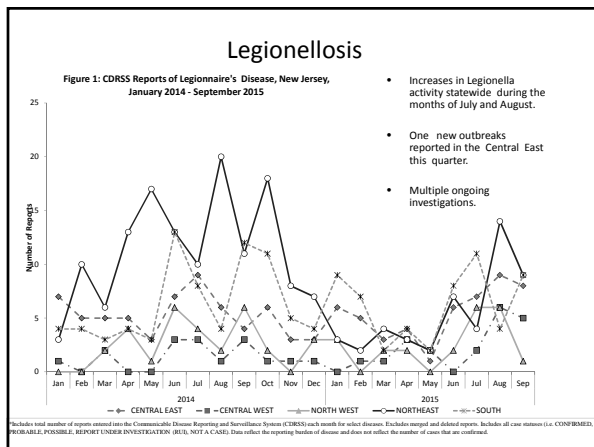
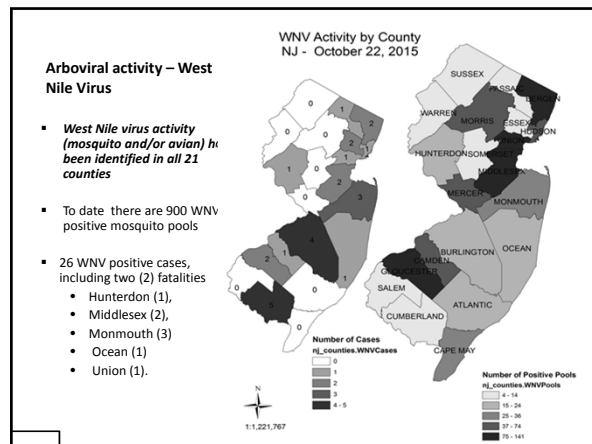
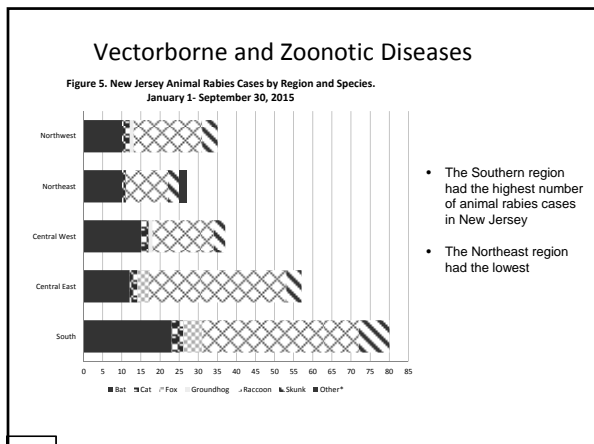
Vectorborne and Zoonotic Diseases

Table 1: New Jersey Animal Rabies Cases in the Southern Region by Species, January 1 – September 30, 2015

Region	County	Bat	Cat	Fox	Raccoon	Skunk	Total
Central West	Hunterdon	3	1	1	6		11
	Mercer	4	1		7	2	14
	Somerset	8			3	1	12
Total Central East Region		15	2	1	16	3	37
Central East	Middlesex	5	2		2		9
	Monmouth	4		2	14	2	22
	Ocean	1		1	14	1	17
	Union	2			6	1	9
Total Central East Region		12	2	3	36	4	57

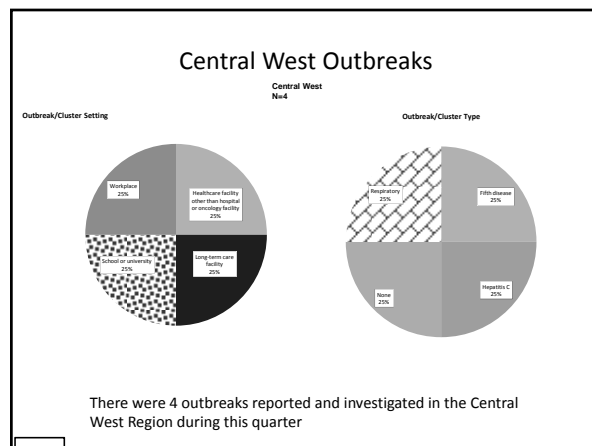
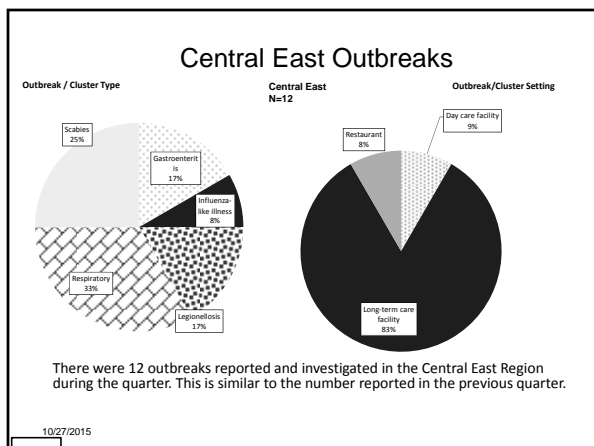
Monmouth County has the highest number of rabies cases in the Central East Region, followed by Ocean and Mercer.

Compared to the same time period in 2014 in the Central West region, there was an increase in rabies cases (37 vs. 33). In the Central East region there was an overall decline (57 vs. 81).



OUTBREAK/CLUSTER REPORTING

10/27/2015



Outbreak Highlight: *Salmonella javiana*

Fall 2015 Communicable Disease Forum

Julia Wells, MPH
Regional Epidemiologist
NJDOH Communicable Disease Service

Outline

- Early signs/surveillance cues
- Initial investigation of cases
- Identification of PFGE matches
- Background on *Salmonella javiana*
- Investigation strategies
- Investigation findings
- Lessons learned

Early Signs/Surveillance

July 22nd – 23rd

- July 22nd – notification to CDS from LHD of rise in *Salmonella* Group D cases
 - Concern for continuous source
 - Notification to surrounding LHDs & hospitals
- REP investigation of reported increase
 - No statistically significant difference from previous 3 years
 - Investigations in progress; no links noted
- Specimens for this group of cases at NJPHEL awaiting serotyping

Identification of PFGE Matches

August 5th

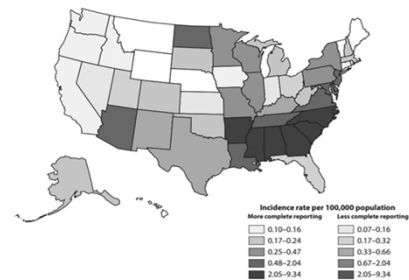
- PFGE = Pulsed-field Gel Electrophoresis
- CDS notified of 12 cases statewide with matching PFGE pattern Xba1 JGGX01.0094
- 8 of 12 cases reside within the original “cluster zone” in Monmouth and Ocean counties
- Specimen collection range: July 14th – July 18th
- Age range: 5 – 39 years

A little background on *S. javiana*...

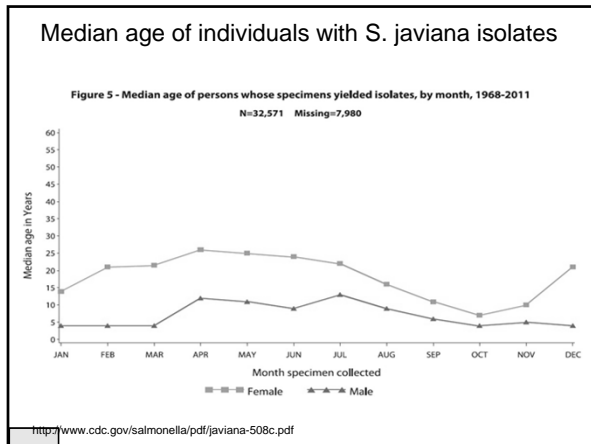
- Typically one of the 5 most commonly-isolated serotypes in the United States
- PFGE pattern Xba1 JGGX01.0094 is 3rd most common *S. javiana* pattern
- First found in southern Florida, then moved up the coast
- Likely amphibious reservoir
- Typically associated with produce
 - Past outbreaks have implicated: lettuce, tomato, watermelon, mozzarella, poultry

Incidence of *S. javiana*, United States, 2012

Figure 2e. Incidence rate of laboratory-confirmed human *Salmonella* serotype *Javiana* infection reported to CDC, by reporting jurisdiction, United States, 2012*



* Reporting jurisdictions are colored in shades of gray if the number of laboratory-confirmed human *Salmonella* isolates reported to LEIS was less than 80% of the number of *Salmonella* cases reported to the National Notifiable Diseases Surveillance System (NNDSS), or if the number of fully serotyped laboratory-confirmed human *Salmonella* isolates reported to LEIS was less than 80% of all *Salmonella* isolates reported to LEIS. Unshaded jurisdictions are those that reported all laboratory-confirmed human *Salmonella* serotype *Javiana* isolates (District of Columbia, Maine, Montana, Nebraska, Rhode Island, Vermont, and Wyoming).



Identification of PFGE Matches

A bit later in the day on August 5th...

- PFGE-matched Pennsylvania case reports Central East exposure during their incubation period
- Concurrently, two CE residents report exposure at same restaurant chain (Restaurant A)
- By close of business on August 5th: 23 PFGE-matched *Salmonella javiana* cases across NJ
 - 19/23 in Central East (remainder in Somerset, Hunterdon & Hudson)
 - Onset range 7/9 – 7/18
 - Age range 5 – 60 years (median 22 years)
- Outbreak # E-266-15 designated for tracking purposes

Investigation Strategies

August 6th – 7th

- CDS develops enhanced questionnaire for use on any new cases and re-interview of previously-identified cases
- Outbreak notification sent to impacted counties
- CDS held conference call for Health Officers in impacted counties
- NJDOH Food and Drug Safety Program notified; made contact w/ REHS in impacted areas
 - LHD REHS staff to local restaurants for interview and invoice pull
 - FDA notified due to out-of-state product distributor
- NJLINCS Public Health Advisory sent 8/7/15

Ongoing Investigation – Big Picture

- On **8/11**, CDS inquiry to CDC revealed that this PFGE pattern was not flagging above threshold nationally
 - CDC kept on alert for reports of clustering in other states
 - Neighboring states notified and on alert for NJ exposures
- On **8/13**, nationwide surveillance produced a flag for this pattern; CDC issued cluster code
- By **8/21**, CDC had identified 86 cases nationally (FL, NC, SC, GA, AL, NY, OH, PA, VA, TX, KY also implicated)
- NJ identified **33 PFGE-matched cases** in total

Ongoing Investigation – New Jersey

33 PFGE-matched cases

- Monmouth (18)
- Ocean (7)
- Somerset* (3)
- Union (1)
- Middlesex (1)
- Mercer (1)
- Hudson (1)
- Hunterdon (1)

*One is secondary case

Case characteristics

- *S. javiana* questionnaire completed: 25/33 (76%)
- Onset range: 7/9 – 8/14
- Age range (n=33): 1 – 74 years (median 24 years)
- Sex (n=33): 17 male, 16 female

Snapshot of enhanced *S. javiana* questionnaire

E-266-15

Seafood salad	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Cole slaw	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Prepackaged	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
or pre-bagged salad	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Cesar salad	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Lettuce	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
<i>(non-bagged, whole heads or loose leaf)</i>			
Iceberg	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Green leaf	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Romaine	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Red leaf	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Miscellaneous	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Other	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Alfalfa sprouts	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Other sprouts	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Spinach	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Cabbage	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Tomatoes	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Carrots	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Broccoli	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Cucumbers	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Celery	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Mushrooms	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Peppers	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Onions	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Scallions	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Parsley	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Cilantro	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Basil	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns
Other vngs	<input type="checkbox"/> yes	<input type="checkbox"/> no	<input type="checkbox"/> dt/ns

Specify type of mix/brand _____

Specify type (cherry, plum, etc.) _____

Investigation Findings

- Food item frequency stats run on all questionnaire items
- NJ frequencies compared to frequency of consumption in general population (FoodNet Population Survey)
 - Consumption rates by cases not significantly higher than in general population
 - Does NJ have an inherent produce bias?

Investigation Findings – All Interviewed

PFGE Matched cases n=33		
Interview complete n=24 (73%)		
Food	Percent	N
Eggs	79.17	18
Yogurt	58.33	14variety of brands
Chicken	75	18
Lettuce (non-bagged)	52.38	11
Lettuce (ANY - calculated)	75	18
Tomato	69.57	16N=23 ONE MISSING
Broccoli	52.17	12N=23 ONE MISSING
Peppers	56.52	13N=23 ONE MISSING
Onion	63.64	14N=23 ONE MISSING
Strawberries	50	11N=22 ONE MISSING

Investigation Findings

- More than half of NJ cases report exposure to Restaurant A, a popular chain restaurant with several locations in the Monmouth/Ocean area
 - Four locations of Restaurant A implicated
 - Employee wellness/health coordinator notes no employee illness reports or schedule changes due to illness
- Cases cite a number of other local restaurants with consumption dates in the 7 days prior to onset

Investigation Findings – Restaurant A Exposures

Ingredient Level Analysis N=15		
Ingredient	Percent	N
Any Oregano	93.33	14
Fresh Oregano	13.33	2
Dried Oregano	100	15
Cilantro	80	12
Tomato	73.33	11
Lettuce	53.33	8
Cheese	53.33	8
Chicken	80	12

Any lessons learned?

- Establish your case definition, but understand that it may change
- Maintaining a 30,000 ft view
 - Nationally vs. locally-distributed food product
 - Safe foodhandling practices at receiving food establishments
 - Environmental factors
 - Person-to-person spread vs. common risk factors
- Investigation strategies for "routine" cases
 - Any case could wind up being part of a cluster
- Get detailed but pertinent information from initial interview

Thank you!

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