



Enteric Diseases Reported in North Carolina, 2018

There are currently more than 20 enteric pathogens that are reportable in North Carolina. Cases of these reportable diseases and conditions are investigated by the Local Health Department (LHD) staff and reported to the North Carolina Department of Health and Human Services Communicable Disease Branch (CBD), then subsequently to the Centers for Disease Control and Prevention (CDC) via the North Carolina Electronic Disease Surveillance System (NCEDSS).

The top four most commonly reported enteric pathogens are: Salmonellosis, Campylobacter infection, Shiga toxin-producing E.coli (STEC), and Shigellosis, are analyzed in detail. Other less prominent enteric pathogens are included in the summary table below.

Surveillance Highlights: Cases of Campylobacter infection increased significantly in 2018 when compared to the previous four-year average (2014-2017). In North Carolina, Shigellosis cases decreased significantly following a one-year upward trend in 2016. In 2016, 659 Shigellosis cases were reported, many of which are associated with outbreaks. Cases of Salmonella and Cyclosporiasis increased significantly in 2018 when compared to the previous four-year average. There has been a steady trend among Shiga toxin-producing E. coli-cases.

Report Specifications. Notable information about this report includes:

- Cases presented include those classified as confirmed, probable or suspect.
- Case counts are based on the earliest date of illness identification, typically the onset year. Therefore, case counts in this report may differ from those included in national summaries, which can be based either on the earliest date of illness identification or on the date when cases were closed and reported to the Centers for Disease Control and Prevention (CDC).
- Unless otherwise noted, ages are based on date when the case was entered in the North Carolina Electronic Disease Surveillance System.
- Incidence rates are based on data obtained from the CDC bridged-race population estimates.
- The four most common enteric diseases will be summarized in this report and are shown in the table below. Additionally, three more enteric diseases were added to the table below, but will not be summarized further in the overall report.

<i>Number of Cases of Enteric Diseases Reported in North Carolina, 2014-2018</i>							
<i>Disease</i>	<i>2014</i>	<i>2015</i>	<i>2016</i>	<i>2017</i>	<i>Four-year average</i>	<i>2018</i>	<i>Significant Change*</i>
Salmonellosis	2,184	2,593	2,439	2,445	2415	2,877	↑
Campylobacter Infection	1,084	1,375	1,467	1,835	1440	2,157	↑
E.coli shiga-toxin producing	106	147	333	325	228	402	--
Shigellosis	466	471	659	296	473	301	--
Cryptosporidiosis	224	295	210	266	249	285	--
Cyclosporiasis	2	3	3	37	11	75	↑
Vibrio infection (other than cholera and vulnificus)	14	27	57	88	47	70	--
Listeria	27	31	21	39	30	38	--
Vibrio vulnificus Infection	2	6	5	9	6	3	--

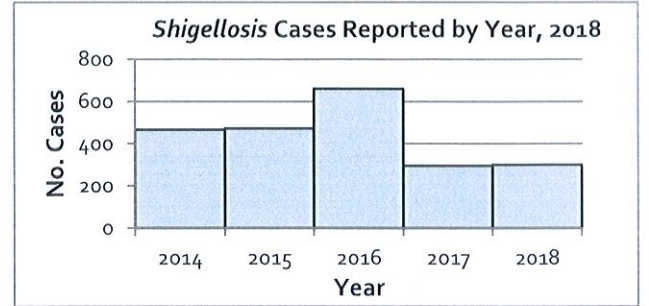
* ↑ = significant increase (≥ 2 standard deviations above average) ↓ = significant decrease (≥ 2 standard deviations below average) -- = no significant change

*Vibrio infection (other than cholera and vulnificus) case definition changed in 2017

Shigellosis, 2018

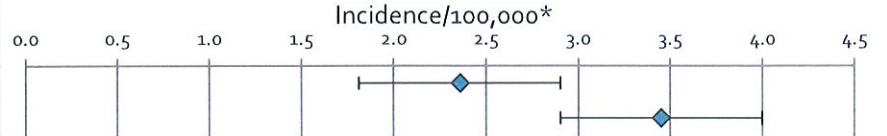
Annual Summary

	2014	2015	2016	2017	2018
Incidence / 100,000	4.7	4.7	6.6	2.9	3.0
No. cases	466	471	659	296	301
Confirmed	68%	65%	59%	51%	50%
Probable	17%	8%	20%	49%	50%
Suspect	15%	27%	21%	0%	0%

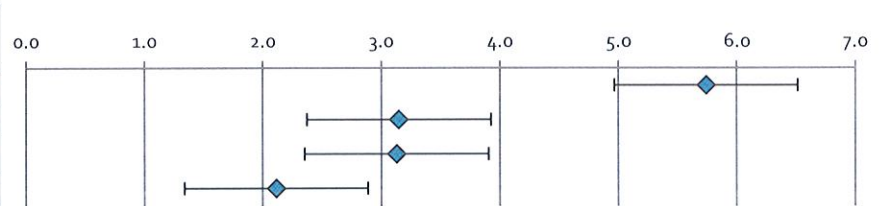


Case Demographics, 2018

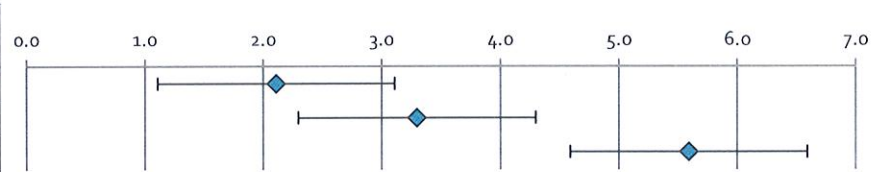
Sex	No. cases	% of total	Incidence/100,000
Male	118	39%	2.4
Female	182	60%	3.5
Unknown	1	0%	--



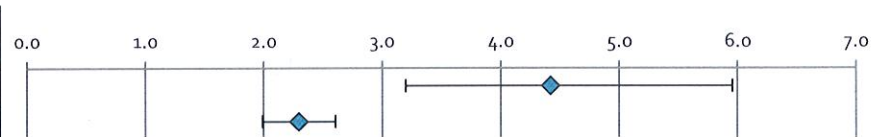
Age Group	No. cases	% of total	Incidence/100,000
Under 5 yrs.	35	12%	5.7
5-19 yrs.	62	21%	3.2
20-49 yrs.	127	42%	3.1
50+ yrs.	77	26%	2.1
Unknown	0	0%	--



Race	No. cases	% of total	Incidence/100,000
White	156	52%	2.1
Black	78	26%	3.3
Other	29	10%	5.6
Multiple or Unknown	38	13%	--

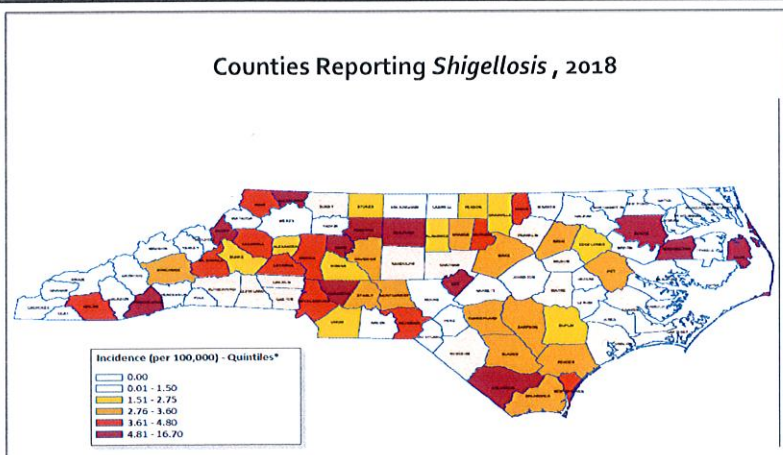


Hispanic Ethnicity	No. cases	% of total	Incidence/100,000
Yes	43	14%	4.4
No	214	71%	2.3
Unknown	44	15%	--

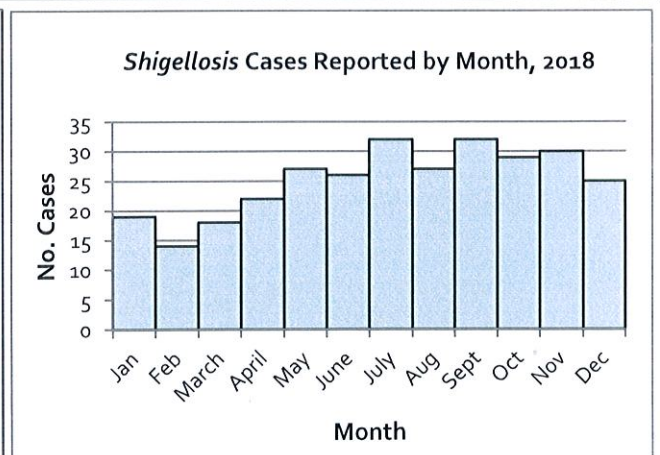


*Point estimates and 95% confidence intervals are shown

Geographic Distribution



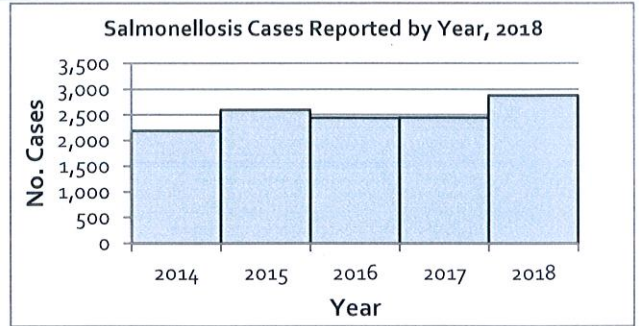
Cases By Month



Salmonellosis, 2018

Annual Summary

	2014	2015	2016	2017	2018
Incidence / 100,000	22.2	26.1	24.3	24.1	28.4
No. cases	2,184	2,593	2,439	2,445	2,877
<i>Confirmed</i>	89%	82%	87%	79%	76%
<i>Probable</i>	3%	8%	0%	21%	24%
<i>Suspect</i>	8%	9%	12%	0%	0%

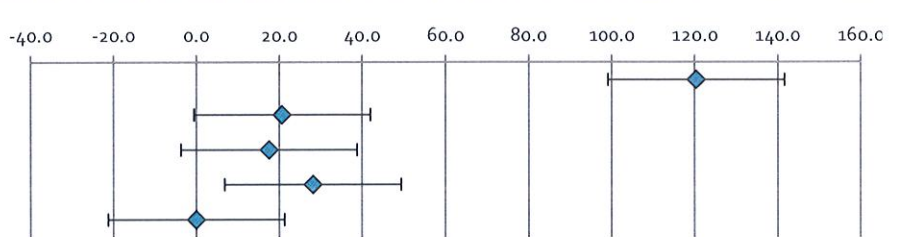


Case Demographics, 2018

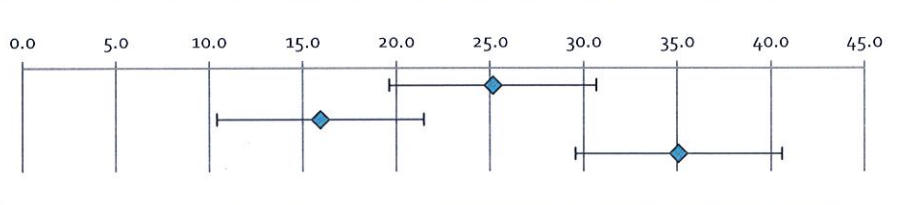
Sex	No. cases	% of total	Incidence/100,000
Male	1277	44%	25.5
Female	1578	55%	29.9
Unknown	22	1%	--



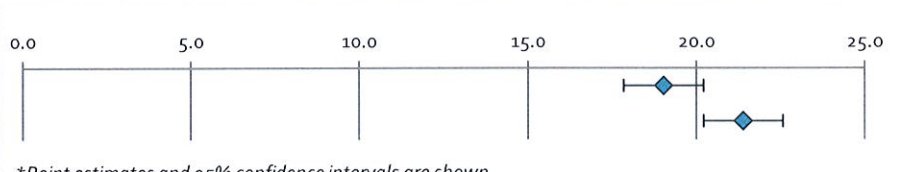
Age Group	No. cases	% of total	Incidence/100,000
Under 5 yrs.	734	26%	120.4
5-19 yrs.	407	14%	20.7
20-49 yrs.	712	25%	17.6
50+ yrs.	1024	36%	28.1
Unknown	0	0%	0.0



Race	No. cases	% of total	Incidence/100,000
White	1859	65%	25.2
Black	377	13%	15.9
Other	182	6%	35.1
Multiple or Unknow	459	16%	--

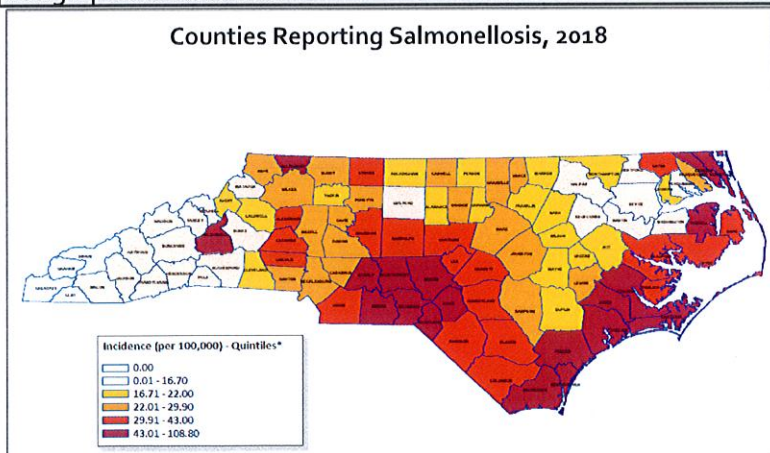


Hispanic Ethnicity	No. cases	% of total	Incidence/100,000
Yes	185	6%	19.0
No	1990	69%	21.4
Unknown	702	24%	--

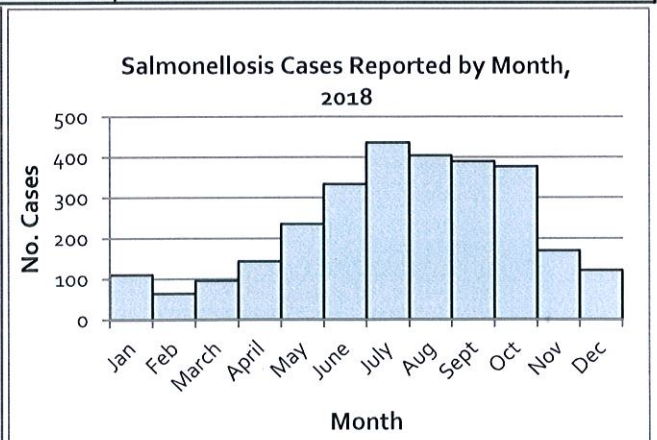


*Point estimates and 95% confidence intervals are shown

Geographic Distribution



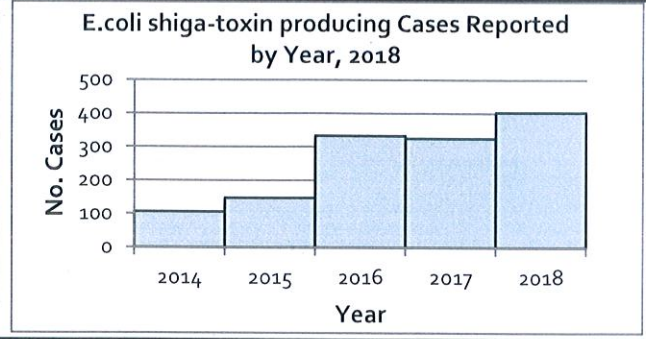
Cases By Month



E.coli shiga-toxin producing, 2018

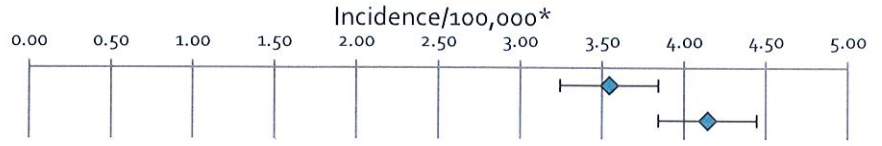
Annual Summary

	2014	2015	2016	2017	2018
Incidence / 100,000	1.08	1.48	3.32	3.20	3.97
No. cases	106	147	333	325	403
Confirmed	40%	47%	23%	19%	24%
Probable	9%	1%	1%	6%	75%
Suspect	51%	52%	76%	74%	1%

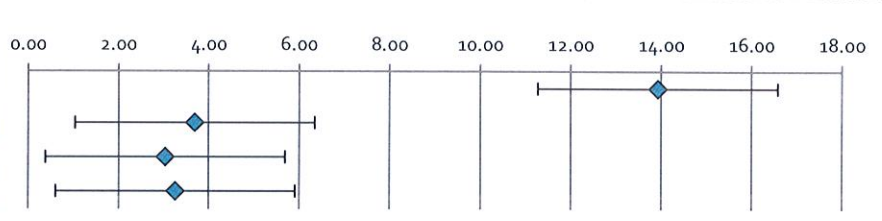


Case Demographics, 2018

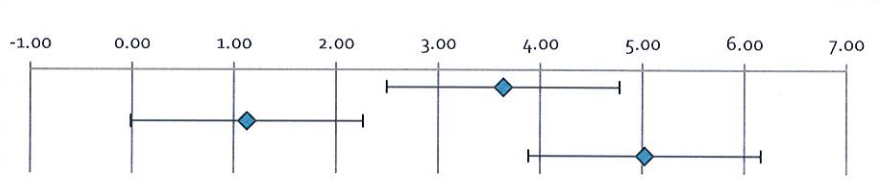
Sex	No. cases	% of total	Incidence/100,000
Male	179	44%	3.54
Female	221	55%	4.14
Unknown	3	1%	--



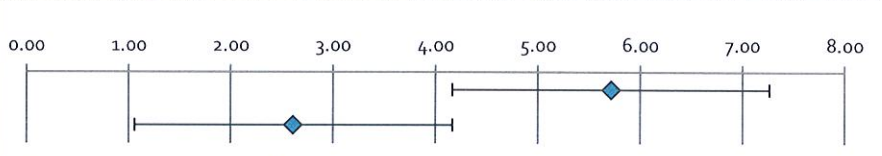
Age Group	No. cases	% of total	Incidence/100,000
Under 5 yrs.	85	21%	13.93
5-19 yrs.	73	18%	3.69
20-49 yrs.	124	31%	3.04
50+ yrs.	121	30%	3.26
Unknown	0	0%	--



Race	No. cases	% of total	Incidence/100,000
White	271	67%	3.64
Black	27	7%	1.13
Other	27	7%	5.02
Multiple or Unknown	78	19%	--

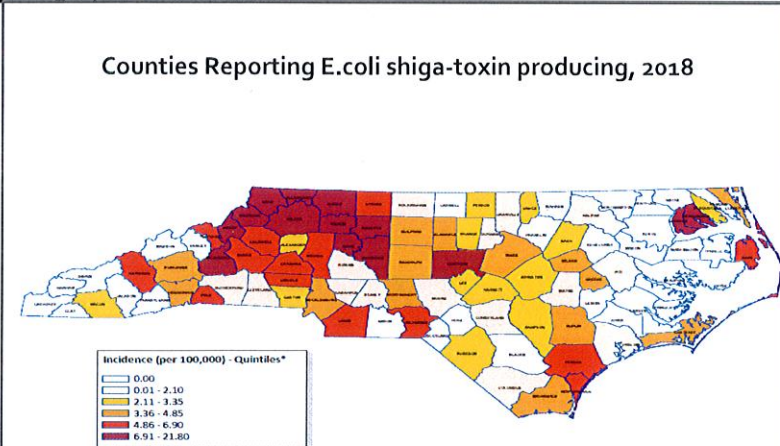


Hispanic Ethnicity	No. cases	% of total	Incidence/100,000
Yes	57	14%	5.72
No	245	61%	2.61
Unknown	101	25%	--

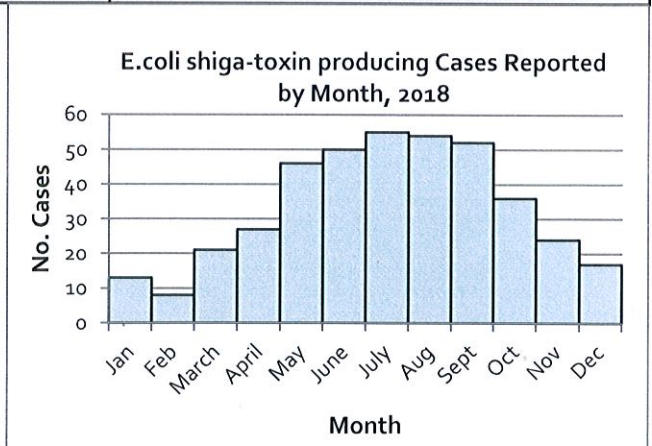


*Point estimates and 95% confidence intervals are shown

Geographic Distribution



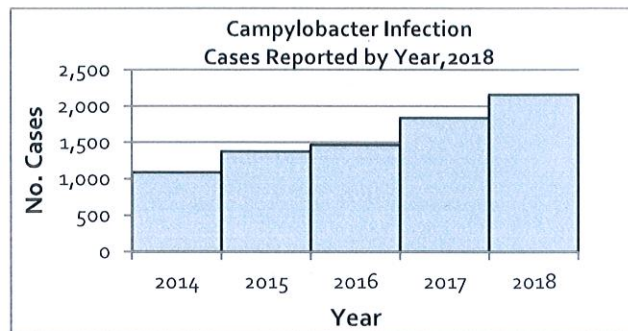
Cases By Month



Campylobacter Infection, 2018

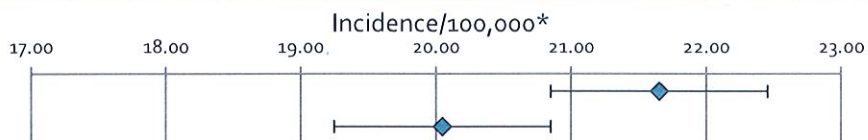
Annual Summary

	2014	2015	2016	2017	2018
Incidence / 100,000	11.01	13.84	14.62	18.08	21.26
No. of cases	1,084	1,375	1,467	1,835	2,157
Confirmed	67%	58%	53%	40%	37%
Probable	2%	42%	47%	60%	63%
Suspect	31%	0%	0%	0%	0%

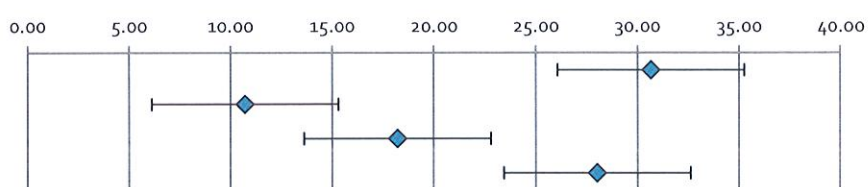


Case Demographics, 2018

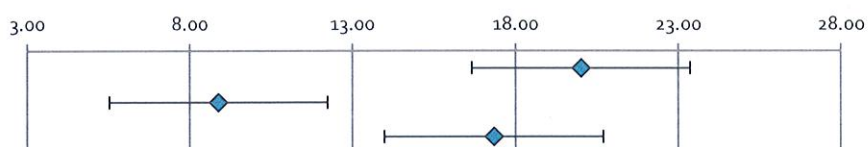
Sex	No. cases	% of total	Incidence/100,000
Male	1083	50%	21.65
Female	1057	49%	20.05
Unknown	17	1%	--



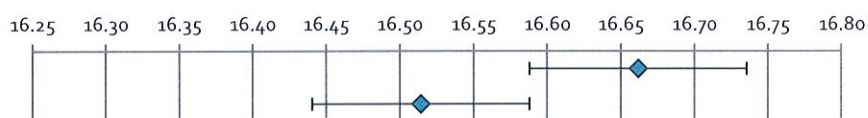
Age Group	No. cases	% of total	Incidence/100,000
Under 5 yrs.	187	9%	30.67
5-19 yrs.	211	10%	10.72
20-49 yrs.	739	34%	18.22
50+ yrs.	1020	47%	28.03
Unknown	0	0%	--



Race	No. cases	% of total	Incidence/100,000
White	1479	69%	20.01
Black	210	10%	8.88
Other	90	4%	17.35
Multiple or Unknown	378	18%	--

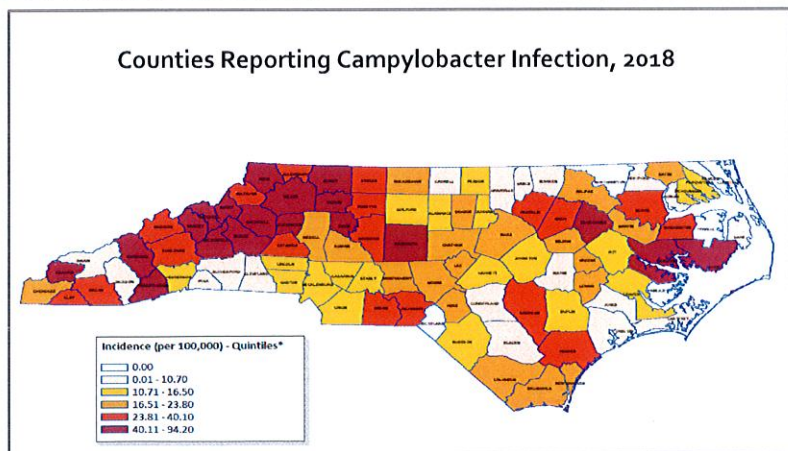


Hispanic Ethnicity	No. cases	% of total	Incidence/100,000
Yes	162	8%	16.66
No	1536	71%	16.51
Unknown	459	21%	--



*Point estimates and 95% confidence intervals are shown

Geographic Distribution



Cases By Month

