



***Vibrio parahaemolyticus* trends, 2007–2015**

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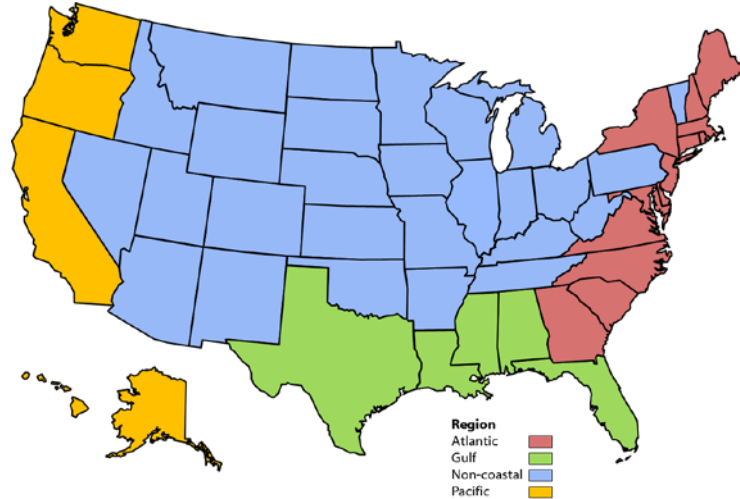
Surveillance Epidemiologist

Interstate Shellfish Sanitation Conference *Vibrio parahaemolyticus*
Workshop

September 6-7, 2017

The Cholera and Other Vibrio Illness Surveillance (COVIS) system

- National surveillance system for cholera and vibriosis
- Began 1989 with Gulf states
- Reporting requested for confirmed and probable* cases
- Demographics, clinical data, seafood and water exposures, traceback on seafood consumed
- Reports of vibriosis are received from all states and include more than a dozen different species



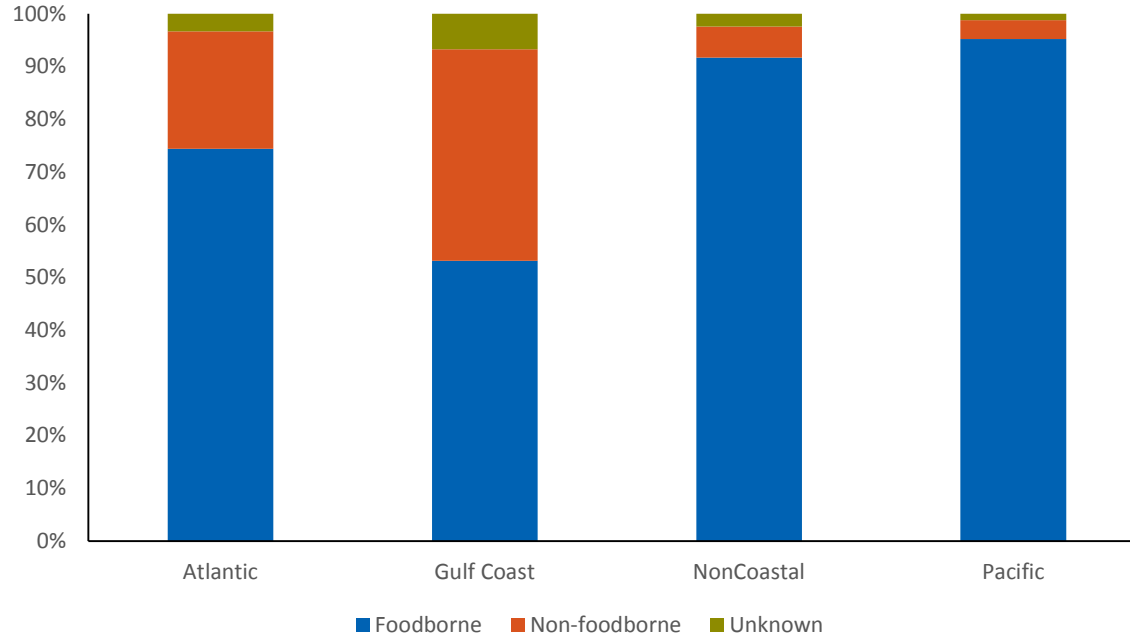
*Collection of case report forms associated with probable cases detected by culture-independent diagnostic tests began in 2017.

***Vibrio parahaemolyticus* accounts for 3,936 vibriosis cases, 2007–2015**

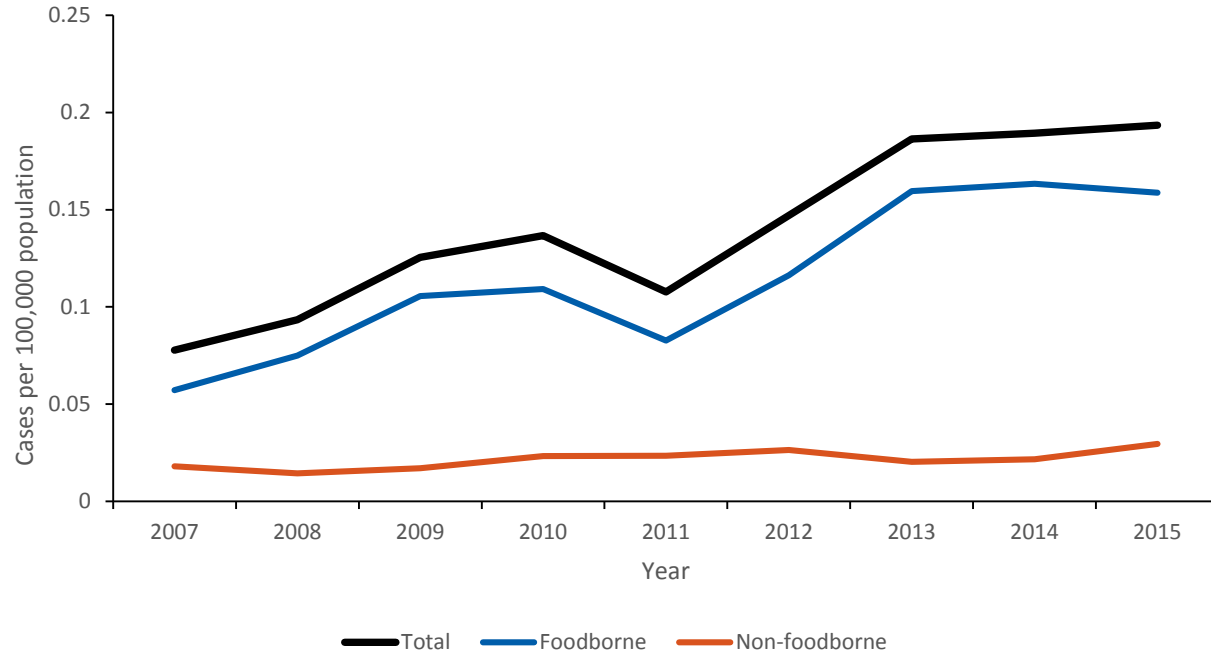
- 82% of these are classified as foodborne transmission

	<i>V.parahaemolyticus</i>	Other species
Median age (range)	47 (0-96)	51 (0-108)
Male (%)	67%	70%
Pre-existing conditions (%)	41%	59%
Use of PPI/Antacids (%)	10%	9%
Hospitalizations (%)	21%	45%
Deaths (%)	1%	9%

V. parahaemolyticus geographic distribution by transmission route, 2007–2015



V. parahaemolyticus incidence, 2007–2015



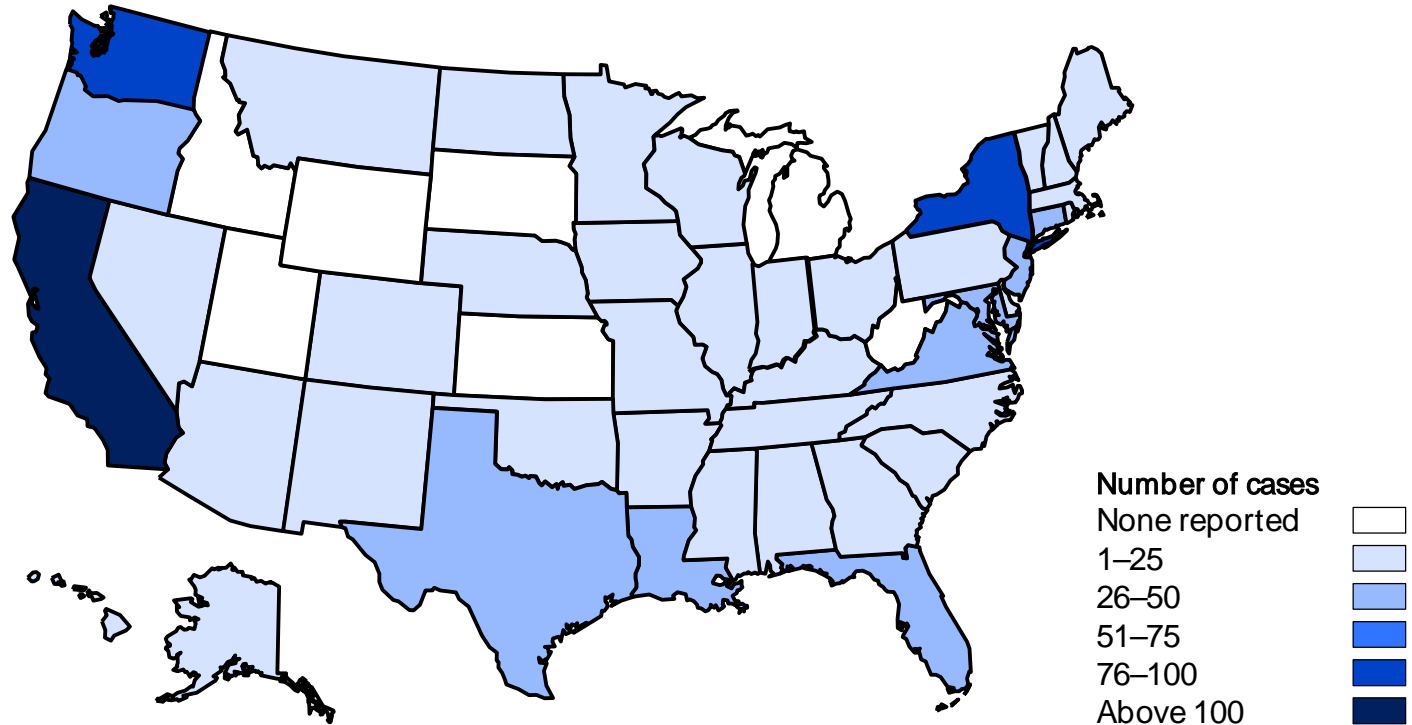
V. parahaemolyticus by year and shellfish consumed

Year	Reported oyster-associated Vp*	Reported clam-associated Vp*	Vp with seafood info available	Total Vp
2007	60%	20%	180	234
2008	62%	14%	234	280
2009	57%	22%	329	385
2010	62%	21%	338	423
2011	54%	19%	262	336
2012	60%	21%	376	462
2013	71%	21%	520	590
2014	70%	15%	537	605
2015	68%	12%	544	622
2016**	51%	13%	317	382
TOTAL	63%	17%	3,637	4,319

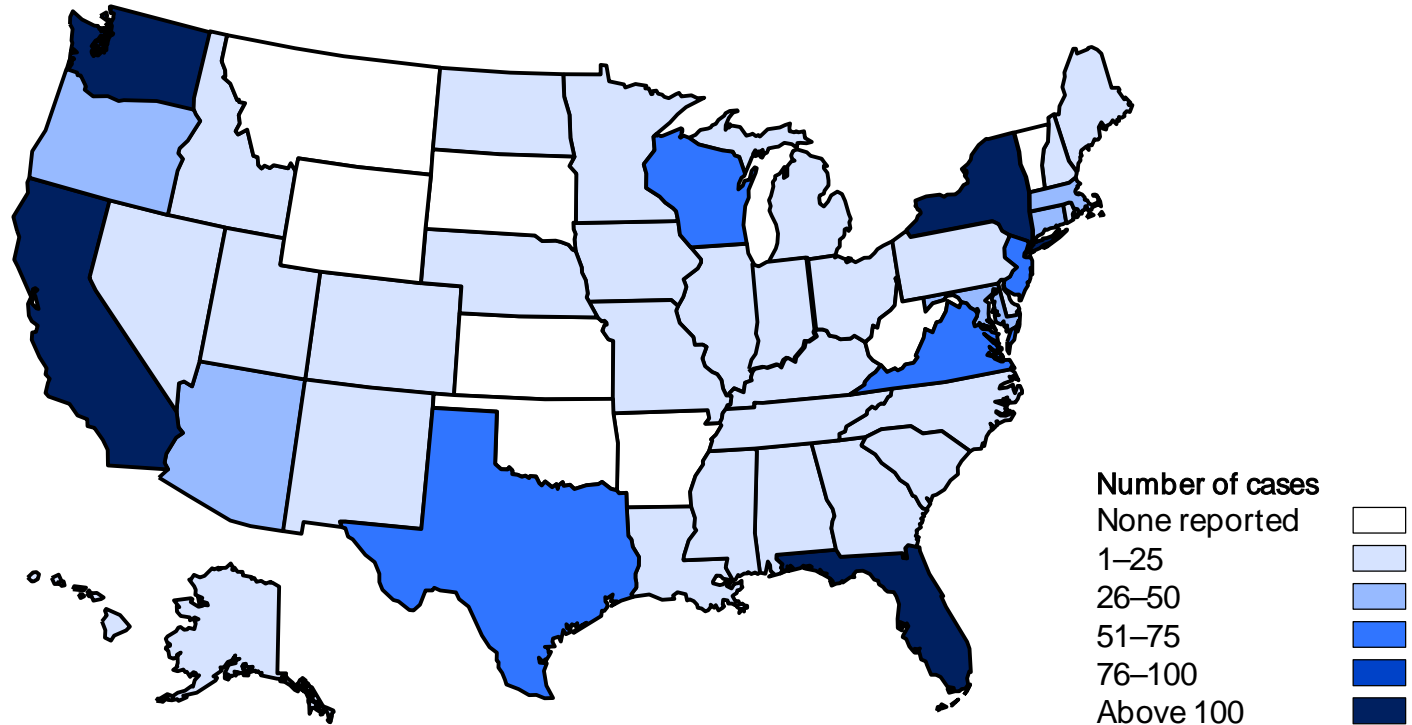
*Cases may have consumed more than one type of seafood

**2016 data is still under review and should be considered tentative

V. parahaemolyticus geography by reporting state, 2007–2009

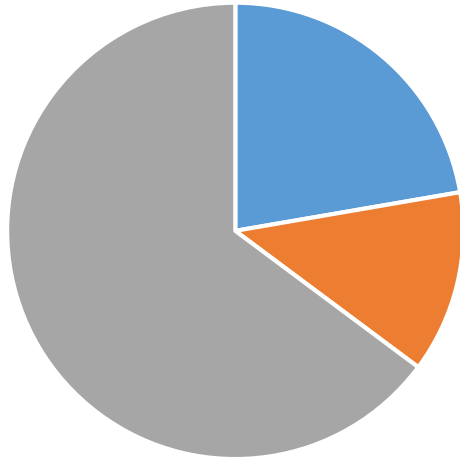


V. parahaemolyticus geography by reporting state, 2010–2012



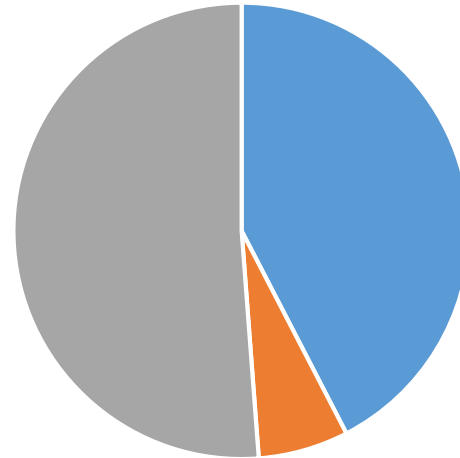
V. parahaemolyticus by harvest region

2007–2011 (n=341)



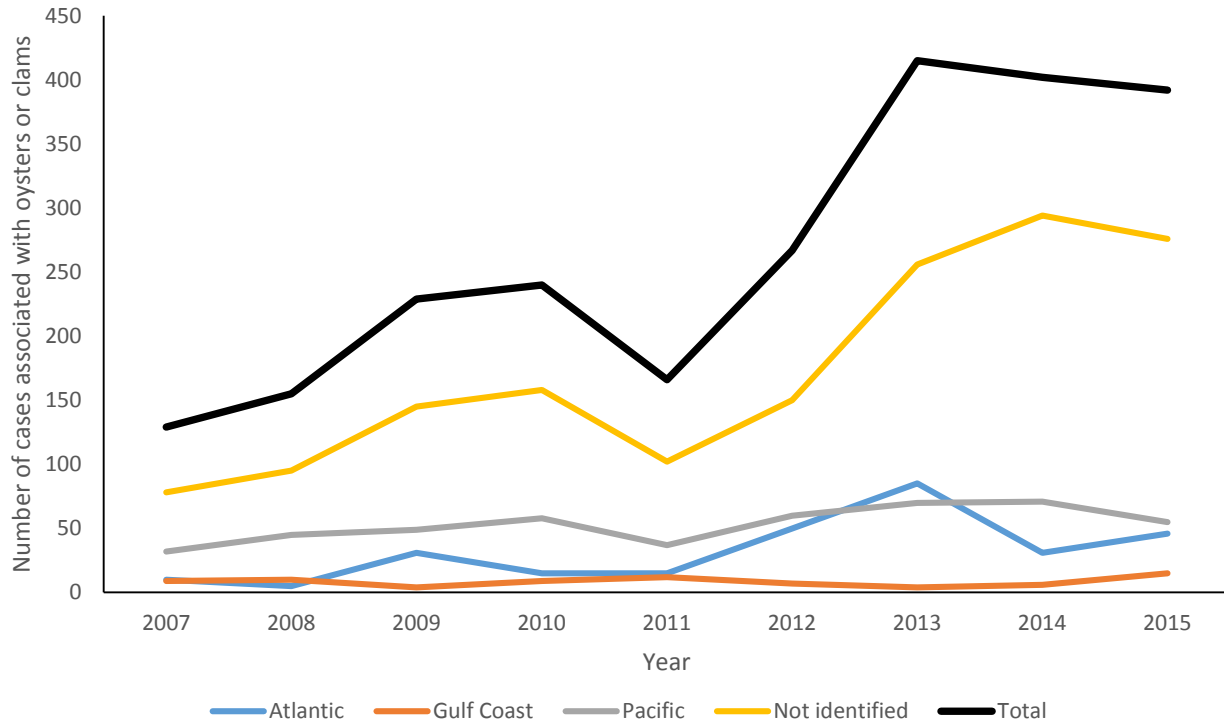
■ Atlantic ■ Gulf Coast ■ Pacific

2012–2015 (n=500)

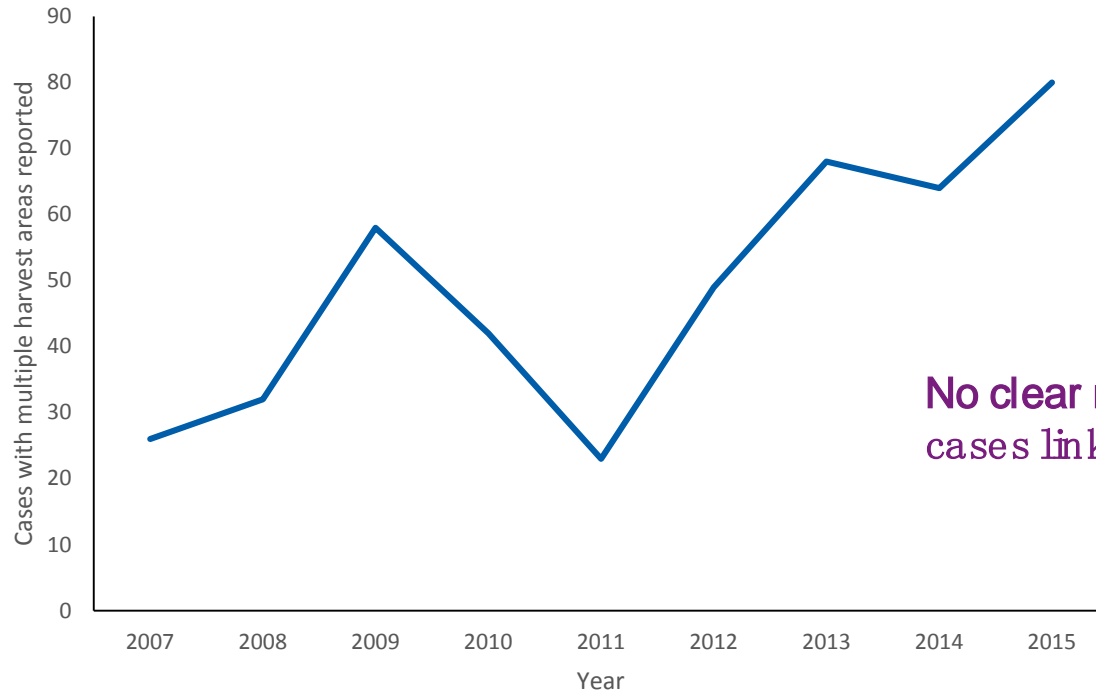


■ Atlantic ■ Gulf Coast ■ Pacific

More oyster- and clam-associated cases are being reported with no harvest area information



Reports of multiple harvest areas are increasing in *V. parahaemolyticus* cases



498 total cases associated with oysters or clams (19% of total reported) reported more than one harvest area

No clear methods or protocols to account for cases linked to ≥ 1 harvest area

CIDT Results: Background

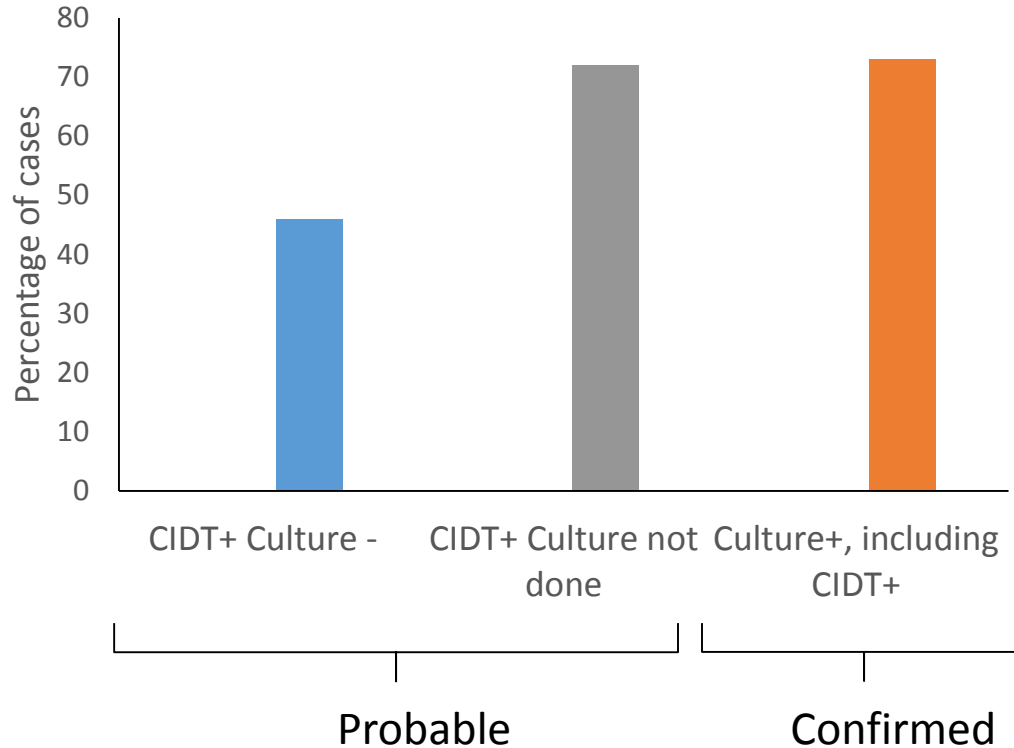
- *Vibrio* results detected by CIDT (as reported to COVIS in 2017):
 - *Vibrio* species
 - *V. cholerae*
 - *Vibrio* species and *V. cholerae*
 - *V. parahaemolyticus* (rarely used by states)
- Current *Vibrio* species assays are **designed to detect *V. parahaemolyticus*, *V. cholerae*, and *V. vulnificus*** however cross-reactivity can occur
 - *V. fluvialis*, *G. hollisae*, and *V. alginolyticus* have all been culture-confirmed in CIDT positive cases received by COVIS this year

Preliminary 2017 CIDT results*

- **450 COVIS forms** received this year, **165 (37%)** reported a CIDT+ result
- **Probable cases: 133 (81%)** CIDT+ reported a negative culture or did not report a culture result
 - 49 probable cases were never cultured
- **Confirmed cases: 32 (19%)** CIDT+ cases reported a positive culture result
 - Of those confirmed by culture, 12 were identified as *V. parahaemolyticus*

Note: 3 case were CIDT+ for *Vibrio parahaemolyticus* and were not cultured (tested by Diatherix) and were **classified as probable *V. parahaemolyticus***

More than half of probable vibriosis cases report seafood consumption



Thank you!
Questions:
COVISResponse@cdc.gov

For more information, contact CDC
1-800-CDC-INFO (232-4636)
TTY: 1-888-232-6348 www.cdc.gov

The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the Centers for Disease Control and Prevention.

