

National Enteric Disease Surveillance: *Listeria* Annual Summary, 2008

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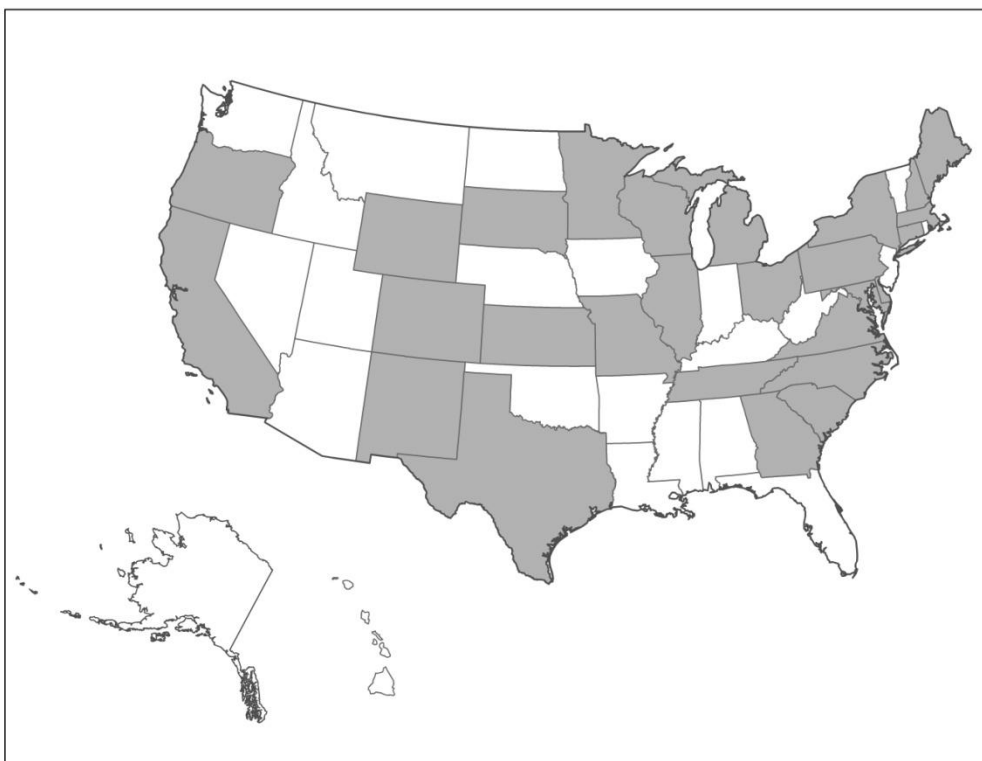
Listeria Initiative Data

An overview of the *Listeria* Initiative surveillance system is available at <http://www.cdc.gov/listeria/surveillance.html>

States reporting at least one listeriosis case to the *Listeria* Initiative during 2008 are shown in Figure 1.

- Twenty-seven states reported 349 listeriosis cases.
 - 273 cases (78%) were non-pregnancy-associated.
 - 73 cases (21%) were pregnancy-associated.
 - Pregnancy status was not reported for three cases.

Figure 1. States reporting at least one case of listeriosis to the *Listeria* Initiative, 2008 (n=27).*



*Reporting states are indicated in gray.

Demographic and clinical characteristics of patients with non-pregnancy-associated and pregnancy-associated listeriosis are shown in Tables 1 and 2, respectively.

- The median age of patients was 69 years for non-pregnancy-associated cases and 24.5 years for pregnancy-associated cases.
- Hispanic ethnicity was substantially more common in patients with pregnancy-associated cases (48%) than with non-pregnancy-associated cases (15%).
- Eighteen percent of patients with non-pregnancy associated cases died. Sixteen percent of pregnancy-associated cases led to fetal death among pregnancies no longer ongoing at the time of interview; at least 7% of live-born infants with cases of listeriosis died.

Table 1. Demographic and clinical characteristics of patients with non-pregnancy-associated listeriosis reported to the *Listeria* Initiative, 2008 (n=273).

Characteristic (number with information)	n	%
Age in years (n=273)		
Median (range)	69 (2-100)	
Female sex (n=273)	141	52
Hispanic ethnicity (n=205)*	30	15
Race (n=231)*		
White	187	81
African American	29	13
Asian	12	5
Multiracial/Other	3	1
Source of isolate [†] (n=272)		
Blood	210	77
CSF	50	18
Stool	1	<1
Other [§]	30	11
Hospitalized (n=255)	239	94
Died (n=233)	43	18
*Does not include reports with missing or unknown ethnicity (n=68) or race (n=42).		
[†] Nineteen cases had more than one site of isolation		
[§] Peritoneal fluid, urine, and other sites.		

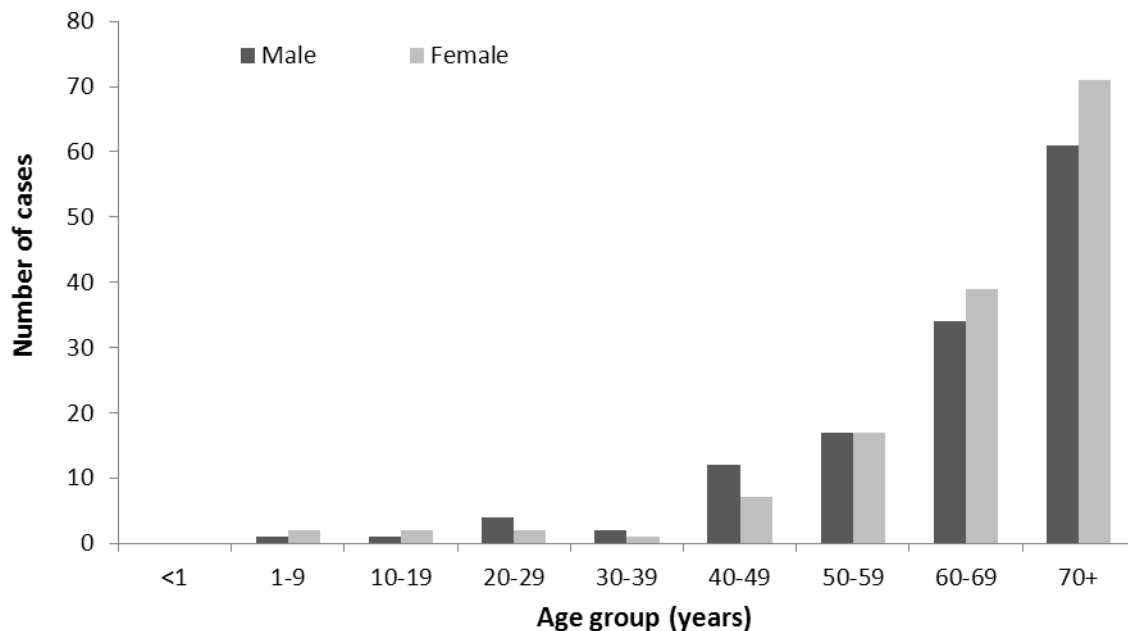
Table 2. Demographic and clinical characteristics of patients with pregnancy-associated listeriosis reported to the *Listeria* Initiative, 2008 (n=73).*

Characteristic (number with information)	n	%
Mother's age in years (n=52)		
Median (range)	24.5 (17-43)	
Hispanic ethnicity (n=65) [†]	31	48
Race (n=58) [†]		
White	44	76
African American	10	17
Asian	3	5
Multiracial/Other	1	2
Source of isolate (n=73) [§]		
Blood from neonate	38	52
Blood from mother	21	29
Placenta	15	21
CSF from neonate	11	15
Amniotic fluid	6	8
Other [¶]	4	5
Hospitalization**		
Mothers (n=59)	30	51
Live born infants (n=48)	45	94
Pregnancy outcome (n=69)		
Live birth, survived	42	61
Live birth, died	3	4
Live birth, unknown outcome	10	14
Fetal Death	11	16
Still pregnant	3	4
<p>*Cases involving mother-infant pairs are counted as a single case. [†]Does not include reports with missing or unknown ethnicity (n=8) or race (n=15). [§]In four cases, three sites of isolation were reported; in 14 cases, two sites of isolation, were reported. [¶]Vagina, cord blood, and other sites. **Hospitalization related to <i>Listeria</i> infection.</p>		

Patients with non-pregnancy-associated listeriosis reported to the *Listeria* Initiative during 2008 are shown by patient age group and sex in Figure 2.

- As in previous years, the number of cases per 10-year age group increased with age.

Figure 2. Patients with non-pregnancy-associated listeriosis, by patient age group and sex, *Listeria* Initiative, 2008 (n=273)



The *Listeria* Initiative questionnaire was designed not only for reporting of clinical characteristics of cases but also to assist public health investigation by capturing food exposures. It assisted in implicating foods in at least three investigations in 2008:

- The New York City Department of Health and Mental Hygiene determined that an outbreak of five cases was due to tuna salad served in a hospital (1),
- State partners and CDC determined that a multistate outbreak of twenty cases was due to sprouts, and
- The Connecticut Department of Health linked a case to contaminated chicken salad (2).

The CDC *Listeria* Reference Laboratory serotypes *Listeria monocytogenes* isolates from cases reported to the *Listeria* Initiative. Serotypes identified from cases reported in 2008 are shown in Table 3.

- Serotype 4b remained the most commonly identified serotype, accounting for 48% of isolates.

Table 3. Serotypes of *Listeria monocytogenes* isolated in cases reported to the *Listeria* Initiative, 2008 (n=236).

Serotype	n	%
4b	113	48
1/2a	65	28
1/2b	37	16
Other Serotypes	16	7
Untypeable	5	2

NNDSS Data

The National Notifiable Disease Surveillance System (NNDSS) collects and compiles reports of nationally notifiable infectious diseases, including listeriosis. The 2008 NNDSS report is available at <http://www.cdc.gov/mmwr/PDF/wk/mm5754.pdf>.

- A total of 759 cases of listeriosis were reported to NNDSS during 2008 (3).

Outbreak Data

The Foodborne Disease Outbreak Surveillance System (FDOSS) collects reports of foodborne disease outbreaks from local, state, tribal, and territorial public health agencies. Reports can be found at http://www.cdc.gov/outbreaknet/surveillance_data.html.

- In 2008, three confirmed listeriosis outbreaks were reported (4)
 - An outbreak in New York associated with tuna salad that caused five illnesses and three deaths (1),
 - a multistate outbreak associated with Mexican-style, pasteurized cheese that caused eight illnesses and no deaths, and
 - a multistate outbreak associated with sprouts that caused 20 illnesses and no deaths.

References

1. Cokes, C., A.M. France, V. Reddy, et al. Serving high-risk foods in a high-risk setting: A survey of hospital food service practices after an outbreak of listeriosis in a hospital. *Infection Control and Hospital Epidemiology* 2011; 33(4):380-386.
2. Marcus, R., S. Hurd, L. Mank, et al. Chicken salad as the source of a case of *Listeria monocytogenes* infection in Connecticut. *Journal of Food Protection* 2009; 72(12):2602-2606.
3. CDC. Summary of notifiable diseases—United States, 2008. *MMWR* 2010; 57(54): 1-94.
4. CDC. Surveillance for Foodborne Disease Outbreaks – United States, 2008. *MMWR* 2011; 60(35);1194-1202.

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