# FoodNet Variable Definitions

*Below is a list and description of variables included in FoodNet active surveillance data. Variable names used in the dataset are indicated by parentheses.*

**Pathogen** [Pathogen]: Format (Character); Length (25). Name of bacterial or parasitic pathogen identified from the case-patient's specimen (prior to 2011 called 'Isolate'). Responses include: '*Campylobacter', 'Cryptosporidium'*, '*Cyclospora', 'E. coli', 'Listeria', 'Salmonella', 'Shigella', 'Vibrio', and 'Yersinia'.*

**Site** [State]: Format (Character); Length (2). Case-patient's state of residence (two character state abbreviations).

**Age** [Age]: Format (Numeric); Length (7). Age of case-patient in years (includes two decimal places). *If you would like age defined in months (for persons less than 1 year), please specify this in the comments field of the data request form.*

**Sex** [Sex]: Format (Character); Length (1). Case-patient's gender. Responses are 'M' (Male), 'F' (Female), or 'U' (Unknown).

**Race** [Race]: Format (Character); Length (1). Case-patient's race. Responses are 'A' (Asian), 'B' (Black), 'I' (American Indian or Alaskan Native), 'M' (Multiracial), 'O' (Other), 'P' (Pacific Islander or Native Hawaiian), 'W' (White), 'U' (Unknown).

**Ethnicity** [Ethnicity]: Format (Character); Length (1). Case-patient's ethnicity. Responses are 'H' (Hispanic), 'N' (Non-Hispanic), and 'U' (Unknown).

**County** [County]: Format (Character); Length (20). Case-patient's county of residence.

**Hospitalization** [Hospital]: Format (Character): Length (7). Was the case-patient hospitalized within (+/-) 7 days of specimen collection? Responses are 'Yes', 'No', 'Unknown'. *Visits to the emergency room are not included unless the patient was subsequently admitted.*

**Hospitalization Dates**
- **[DtAdmit]:** Format (Date); Length (mmddyyyy10). Date of hospital admission.
- **[DtDisch]:** Format (Date); Length (mmddyyyy10). Date of hospital discharge.
- **[DtAdmit2]:** Format (Date); Length (mmddyyyy10). Date of admission for second hospitalization, defined as $\geq$ 24 hours after first hospital discharge date.
- **[DtDisch2]:** Format (Date); Length (mmddyyyy10). Date of hospital discharge for second hospitalization, defined as $\geq$ 24 hours after first hospital discharge date.

# FoodNet Variable Definitions

- *If a patient is transferred from one hospital to another, [DtAdmit] will reflect date of admission to first hospital and [DtDisch] will be date discharged from last hospital. [DtAdmit2] and [DtDisch2] are only used if the patient is discharged for at least 24hrs and then re-admitted.*

**Length of Hospital Stay** [HospStay]: Format (Numeric); Length (7). Total length (in days) of hospitalization.

**Hospital Transfer** [HospTrans]: Format (Character); Length (7). If case patient was hospitalized, was s/he transferred to another hospital? Responses are 'Yes', 'No', 'Unknown'.

**Death** [Outcome]: Format (Character); Length (7). Case-patient's outcome. Assessed for non-hospitalized cases within 7 days of specimen collection date and hospitalized cases at hospital discharge. Responses are 'Alive', 'Dead', 'Unknown'. *Does not indicate whether the death resulted from the FoodNet infection, only that the patient died within the specified time period.*

**Bloody Diarrhea** [BloodyDiarr]: Format (Character); Length (10). Did the case-patient have bloody diarrhea (self-reported) during this illness? Responses are 'Yes', 'No' 'Unknown'. *Only available for selected cases from 2012 to current.*

**Diarrhea** [Diarrhea]: Format (Character); Length (10). Did the case-patient have diarrhea (self-reported) during this illness? Responses are 'Yes', 'No' 'Unknown'. *Only available for selected cases from 2012 to current.*

**Fever** [Fever]: Format (Character); Length (10). Did the case-patient have fever (self-reported) during this illness? Responses are 'Yes', 'No' 'Unknown'. *Only available for selected cases from 2012 to current.*

**HUS** [HUS]: Format (Character); Length (7). Did case-patient have a diagnosis of hemolytic uremic syndrome (HUS)? Responses are 'Yes', 'No', 'Unknown'. *Only available for E.coli cases from 2010 to current.*

**Date of Illness Onset** [DtOnset]: Format (Date); Length (mmddyyyy10). Date that the case-patient's symptoms first began. *Only available from 2009 to current.*

**Outbreak-related** [Outbreak]: Format (Character); Length (7). Was the case-patient part of a recognized outbreak? Responses are 'Yes', 'No'. *Only available from 2004 to current.*

**CDC Outbreak ID** [EforsNum]: Format (Character); Length (6). CDC FDOSS outbreak identification number. *Only available from 2004 to current.*

**Outbreak Type** [OutbrkType]: Format (Character): Length (50). Type of transmission mode for the outbreak in which that the case-patient was involved. Responses are 'Foodborne', 'Waterborne', 'Animal contact', 'Person-to-Person', 'Environmental contamination other than food/water', 'Indeterminate', 'Other', 'Unknown'. *Only available from 2004 to current.*

**International Travel** [TravelInt]: Format (Character); Length (7). Did the case-patient travel internationally? Responses are 'Yes', 'No', 'Unknown'. Travel is assessed within 30 days of illness onset for *Salmonella* Typhi, *Salmonella* Paratyphi, and *Listeria*, within 15 days of illness onset for *Cryptosporidium* and *Cyclospora*, and within seven days of illness onset for other FoodNet pathogens. *Only available from 2004 to current.*

**Travel Destination** [TravelDest]: Format (Text); Length (70). To which country did the case-patient travel? Does not include domestic travel destinations. *Only available from 2004 to current.*

**Dates of International Travel**
- **[DtUSDepart]:** Format (Date); Length (mmddyyyy10). Date of departure from the U.S.
- **[DtUSReturn]:** Format (Date); Length (mmddyyyy10). Date of return to the U.S.

# FoodNet Variable Definitions

**Immigrate** [Immigrate]: Format (Character); Length (7). Did the case-patient immigrate to the U.S. (*within specific time period*)? Responses are 'Yes', 'No', 'Unknown'. Immigration is assessed within 30 days of illness onset for *Salmonella* Typhi, *Salmonella* Paratyphi, and *Listeria*, within 15 days of illness onset for *Cryptosporidium* and *Cyclospora*, and within seven days of illness onset for other FoodNet pathogens. *Only available from 2004 to current.*

**Specimen source** [SpecSrce]: Format (Character): Length (30). Categories include: 'Abscess', 'Blood', 'CSF', 'Ortho', 'Placenta/fetal tissue', ''Stool', 'Urine', 'Other sterile site', 'Other', 'Unknown'.

**Specimen Collection Date** [DtSpec]: Format (Date); Length (mmddyyyy10). Date of case-patient's specimen collection.

**Specimen Collection Month** [Month]: Format (Numeric); Length (2). Month of case-patient's specimen collection. Legal values are 1-12.

**State Lab Received** [StLabRcvd]: Format (Character); Length (7). Was the isolate sent to a state public health laboratory? Responses are 'Yes', 'No', 'Unknown'. *This question indicates receipt at any state public health laboratory, including those outside of the FoodNet catchment area.*

**State Lab ID** [SLabsID]: Format (Character); Length (30). State laboratory isolate identification number.

**Sent to CDC** [SentCDC]: Format (Character); Length (7). Was specimen or isolate forwarded to CDC for testing or confirmation? Reponses are 'Yes', 'No', 'Unknown'.

## Culture-Independent Variables

- **[BioID]:** Format (Character); Length (10). Was the pathogen identified by culture? Responses are 'Yes', 'No', 'Unknown', 'Not Tested'.
- **[AgClinic]:** Format (Character); Length (30). For possible *E. coli* cases: What was the result of specimen testing for Shiga toxin using an antigen-based test (e.g. EIA or lateral flow) at a clinical laboratory?
  - For *E.coli*, Responses are 'Stx1+','Stx2+', 'Stx1+ and Stx2+', 'Positive undifferentiated', 'Negative', 'Not tested'.
  - For other pathogens: What was the result of specimen testing using an antigen-based test (e.g. EIA or lateral flow) at a clinical laboratory? Responses are 'Positive', 'Negative', 'Indeterminate', 'Not tested'. For possible *Cryptosporidium* cases, results from rapid card testing or EIA would be entered.
- **[AgClinicTestType]:** Format (Character); Length (100). Name of antigen-based test used at clinical laboratory. This encompasses both EIA and lateral flow tests. Responses include the following test types, but others can be added as new tests are identified.
  - *E.coli* test types: 'Immunocard STAT! EHEC (Meridian) ', 'Duopath Verotoxins (Merck) ', 'Premier EHEC (Meridian)', 'ProSpecT STEC (Remel)', 'VTEC Screen (Denka Seiken)'.
  - *Cryptosporidium* test types: 'ImmunoCard STAT! Crypto/Giardia (Meridian) ', 'Xpect Crypto (Remel) ', Xpect Crypto/Giardia (Remel) ' 'ColorPAC Crypto/Giardia (Becton Dickinson)', 'ProSpecT Crypto (Remel) ', ProSpecT Crypto/Giardia (Remel) ', 'Wampole EIA Cryptosporidium', 'TechLab EIA Cryptosporidium', 'Crypto CELISA (Cellabs)', 'Para-TECHT Crypto Antigen 96 (Medical Chemical Corporation)', 'Triage parasite panel (BioSite)'.
  - *Campylobacter* test types: 'ProSpecT Campylobacter assay (Remel)', 'PREMIER™ CAMPY assay (Meridian)', 'ImmunoCard STAT! CAMPY (Meridian)', 'Xpect Campylobacter assay (Remel)'.
  - All pathogens: 'Other', 'Unknown'.
- **[AgSphl]:** Format (Character); Length (30).
  - For possible *E. coli* cases: What was the result of specimen testing for Shiga toxin using an antigen-based test (e.g. EIA or lateral flow) at a state public health laboratory? Responses are 'Stx1+','Stx2+', 'Stx1+ and Stx2+', 'Positive undifferentiated', 'Negative', 'Not tested'.
  - For other pathogens: What was the result of specimen testing using an antigen-based test (e.g. EIA or lateral flow) at a state public health laboratory? Responses are 'Positive', 'Negative',

‘Indeterminate’, ‘Not tested. For possible *Cryptosporidium* cases, results from rapid card testing or EIA would be entered here.

- **[AgSphlTestType]:** Format (Character); Length (100). Name of antigen-based test used at a state public health laboratory. This encompasses both EIA and lateral flow tests. Responses include the following test types, but others can be added as new tests are identified.
    - *E.coli test* types: ‘Immunocard STAT! EHEC (Meridian) ’, ‘Duopath Verotoxins (Merck) ’, ‘Premier EHEC (Meridian)’, ‘ProSpecT STEC (Remel)’, ‘VTEC Screen (Denka Seiken)’.
    - *Cryptosporidium* test types: ‘ImmunoCard STAT! Crypto/Giardia (Meridian) ’, ‘Xpect Crypto (Remel) ’, Xpect Crypto/Giardia (Remel) ’ ‘ColorPAC Crypto/Giardia (Becton Dickinson)’, ‘ProSpecT Crypto (Remel) ’, ProSpecT Crypto/Giardia (Remel) ‘, ‘Wampole EIA Cryptosporidium’, ‘TechLab EIA Cryptosporidium’, ‘Crypto CELISA (Cellabs)’, ‘Para-TECHT Crypto Antigen 96 (Medical Chemical Corporation)’, ‘Triage parasite panel (BioSite)’.
    - *Campylobacter* test types: ‘ProSpecT Campylobacter assay (Remel)’, ‘PREMIER™ CAMPY assay (Meridian)’, ‘ImmunoCard STAT! CAMPY (Meridian)’, ‘Xpect Campylobacter assay (Remel)’
    - All pathogens: ‘Other’, ‘Unknown’.
- **[PcrClinic]:** Format (Character); Length (30)
    - For possible *E.coli* cases: what was the result of specimen testing for Shiga toxin using PCR at a clinical laboratory? Responses are ‘Stx1+’,’Stx2+’, ‘Stx1+ and Stx2+’, ‘Positive undifferentiated’, ‘Negative’, ‘Not tested’.
    - For other pathogens: What was the result of specimen testing using PCR at a clinical laboratory? Responses are ‘Positive’, ‘Negative’, ‘Not tested’. The goal of this PCR testing should be primary detection. If PCR is being performed for subtyping or speciation, then the response should be ‘Not tested’.
- **[PCRClinicTestType]:** Format (Character); Length (100). Name of PCR assay used at a clinical laboratory. Responses include (but are not limited to): ‘Diatherix’, ‘Metametrix’, ‘Seegene’, ‘Statens Serum Institut PCR assay’, ‘Home brew assay’, ‘Unknown’.
- **[PcrSphl]:** Format (Character); Length (30).
    - For possible *E.coli* cases: what was the result of specimen testing for Shiga toxin using PCR at a state public health laboratory? Responses are ‘Stx1+’,’Stx2+’, ‘Stx1+ and Stx2+’, ‘Positive undifferentiated’, ‘Negative’, ‘Not tested’.
    - For other pathogens: What was the result of specimen testing for diagnosis using PCR at a state public health laboratory? Do not enter PCR results if PCR was performed for speciation or subtyping. Responses are ‘Positive’, ‘Negative’, ‘Not Tested’.
- **[PcrCdc]:** Format (Character); Length (30)
    - For possible *E.coli* cases: what was the result of specimen testing for Shiga toxin using PCR at CDC? Responses are ‘Stx1+’,’Stx2+’, ‘Stx1+ and Stx2+’, ‘Positive undifferentiated’, ‘Negative’, ‘Not tested’.
    - For other pathogens: What was the result of specimen testing for diagnosis using PCR at CDC? Do not enter PCR results if PCR was performed for speciation or subtyping. Responses include ‘Positive’, ‘Negative’, ‘Not tested’.
- **[OtherClinicTest]:** Format (Character); Length (30)
    - For possible *E.coli* cases: What was the result of specimen testing for Shiga toxin using another test at a clinical laboratory? Responses are ‘Stx1+’,’Stx2+’, ‘Stx1+ and Stx2+’, ‘Positive undifferentiated’, ‘Negative’, ‘Not tested’.
    - For other pathogens: What was the result of specimen testing using another test at a clinical laboratory? Responses are ‘Positive’, ‘Negative’, ‘Indeterminate’, ‘Not tested’.
- **[OtherClinicTestType]:** Format (Character); Length (100). Name of other test used at a clinical laboratory. Responses include (but are not limited to) 'DFA-PARA-TECHTTM *Cryptosporidium*/*Giardia* DFA 75', 'DFA-Merifluor (Meridian)', 'Cellabs Crypto Cel', 'Wet mount', ‘Trichrome stain’, ‘Modified acid-fast’, 'Other', 'Unknown test type'. If ‘other’, please list actual name or description of test.
- **[OtherSphlTest]:** Format (Character); Length (30)
    - For possible *E.coli* cases: What was the result of specimen testing for Shiga toxin using another test at the state public health laboratory? Responses are ‘Stx1+’,’Stx2+’, ‘Stx1+ and Stx2+’,

'Positive undifferentiated', 'Negative', 'Not tested'.

- For other pathogens: What was the result of specimen testing using another test at a state public health laboratory? Responses are 'Positive', 'Negative', 'Indeterminate', 'Not tested'.

- **[OtherSphlTestType]:** Format (Character); Length (100). Name of other test used at the state public health laboratory. Responses include (but are not limited to) 'DFA-PARA-TECHTTM Cryptosporidium/Giardia DFA 75', 'DFA-Merifluor (Meridian)', 'Cellabs Crypto Cel', 'Wet mount', 'Trichrome stain', 'Modified acid-fast', 'Other', 'Unknown test type'. If 'other', please list actual name or description of test.

- **[OtherCdcTest]:** Format (Character); Length (30)
  - For possible *E.coli* cases: What was the result of specimen testing for Shiga toxin using another test at CDC? Responses are 'Stx1+','Stx2+', 'Stx1+ and Stx2+', 'Positive undifferentiated', 'Negative', 'Not tested'.
  - For other pathogens: What was the result of specimen testing using another test at the CDC? Responses are 'Positive', 'Negative', 'Indeterminate', 'Not tested'.

- **[OtherCdcTestType]:** Format (Character); Length (100). Name of other test used at CDC. Responses include (but are not limited to): 'DFA-PARA-TECHTTM Cryptosporidium/Giardia DFA 75', 'DFA-Merifluor (Meridian)', 'Cellabs Crypto Cel', 'Wet mount', 'Trichrome stain', 'Modified acid-fast', 'Other', 'Unknown test type'.

**Serogroup** [SalGroup]: Format (Character); Length (2). *Salmonella* serogroup. *Only available for Salmonella cases.*

**Pregnant** [Pregnant]: Format (Character); Length (7). Is this case pregnancy-associated? Responses are 'Yes', 'No', 'Unknown'. *Only available for Listeria cases.*

- Responses will be 'Yes' if case occurred in a pregnant woman, or an infant born to a mother with a *Listeria* infection (*Listeria* isolated at birth or within 30 days of delivery; may also include infants who developed symptoms within 30 days of delivery but are cultured >30 days after delivery). If *Listeria* is isolated from both mother and an infant, both will be included in surveillance.
- *This variable refers to a pregnancy-associated infection; it does not ask if the case is pregnant. Therefore, this field can be answered 'Yes' for a male infant.*

**Fetal Outcome** [OutFetal]: Format (Character); Length (35). If the case is pregnancy-associated, what was the outcome of the fetus? Responses are 'Survived, no apparent illness', 'Survived, clinical infection', 'Live birth/neonatal death', 'Abortion/still birth', 'Induced abortion', 'Unknown', 'Abortion, otherwise undetermined', 'Live birth, otherwise undetermined', 'Survived, otherwise undetermined'. *Only available for Listeria cases.*

**Underlying Conditions** [Comorb1], [Comorb2], [Comorb3], [Comorb4], [Comorb5]: Format (Text); Length (70). What are the underlying causes or associated illness? Responses may include but are not limited to the following: 'AIDS', 'Alcohol Abuse', 'Artherosclerotic Cardiovascular Disease (ASCVD/CAD)', Asthma', 'Blunt Trauma', 'Burns', 'Cirrhosis', 'CSF Leak (2 trauma/surgery)', 'Diabetes Mellitus', 'Emphysema/COPD', 'Heart Failure/CHF', 'HIV Infection', 'Hodgkin's Disease', 'Immunoglobulin Deficiency', 'Immunosuppressive Therapy (steroids, chemotherapy, radiation)', 'IVDU', 'Leukemia', 'Multiple Myeloma', 'Nephrotic Syndrome', 'Organ Transplant' , 'Other Illness', 'Other Malignancy', 'Penetrating Trauma', 'Renal Failure/Dialysis', 'Sickle Cell Anemia', 'Splenectomy/asplenia', 'Surgical Wound (post-operative)', 'Systemic Lupus Erythematosus (SLE)', 'Unknown', 'Varicella'. *Only available for Listeria cases.*

**Mom-Baby Pair**
- **[MomBaby]:** Format (Character); Length (7). Is the case part of a mom-baby pair? Responses are 'Yes', 'No'. *Only available for Listeria cases.*
- [**MomBabyID**]: Format (Character); Length (20). If [MomBaby] ='Yes', designates which other case is part of the pair. Response will be the 'PatID' field of associated case. *Only available for Listeria cases.*

# FoodNet Variable Definitions

**Sterile Site** [Sterile]: Format (Character); Length (30). Was the specimen source from a sterile body site? Responses are 'Yes', 'No'. *Only available for Listeria cases.*

**Where Pathogen Cultured**
- **[CultClinic]:** Format (Character); Length (20). What was the culture result at the clinical lab? Responses are 'Positive', 'Negative', 'Unknown', 'No bacterial growth', 'Not Tested'. *Only available for Campylobacter cases from 2009 to current.*
- **[CultSphl]:** Format (Character); Length (20). What was the culture result at a state public health lab? *(Refers to primary detection; it does not include isolate confirmation).* Responses are 'Positive', 'Negative', 'Unknown', 'No bacterial growth', 'Not Tested'. *Only available for Campylobacter cases from 2009 to current.*
- **[CultCdc]:** Format (Character); Length (20). What was the culture result at CDC? Responses are 'Positive', 'Negative', 'Unknown', 'No bacterial growth', 'Not Tested'. *Only available for Campylobacter cases from 2009 to current.*

**Where Pathogen Speciated** [SpeciesCdc]: Format (Character); Length (60). What was the species result at CDC? *Only available for Campylobacter for 2009 to current.* Responses are: *'jejuni', ' jejuni subsp jejuni', ' jejuni subsp doylei', 'coli', 'lari', 'lari subsp. concheus',' lari subsp. lari',' upsaliensis',' helveticus',' fetus', 'fetus subsp fetus ', 'fetus subsp venerealis', 'hyointestinalis','hyointestinalis subsp. hyointestinalis','hyointestinalis subsp lawsonii', 'sputorum','sputorum bv sputorum', 'sputorum by paraureolyticus', 'lanienae', 'mucosalis', 'insulaenigrae', 'concisus', 'curvus', 'rectus', 'showae', 'gracilis', 'canadenesis', 'peloridis', 'avium','cuniculorum','hominis','* Unknown', 'Not tested'.

**CSTE Case Definition** [CSTE]: Format (Character); Length (20). Classifies *Listeria* and *Cryptosporidium* cases according to CSTE case definition (where it differs from FoodNet definition); for analysis. Responses are 'Yes, confirmed', 'Yes, probable', 'No'. *Only available for Listeria and Cryptosporidium cases.*

**Interview** [Interview]: Format (Character): Length (7). Was the case interviewed by public health (i.e. state or local health department or FoodNet staff)? Responses are 'Yes', 'No', 'Unknown'. *Only available from 2009 to current.*

**Serotype/Species** [SerotypeSummary]: Format (Character); Length (60). Serotype/species of pathogen.

**Year** [Year]: Format (Numeric); Length (4). Year of case-patient's specimen collection.