



2019 Extended-Spectrum Beta-Lactamase (ESBL)-Producing Enterobacteriaceae

Multi-site Gram-Negative Surveillance Initiative (MuGSI)

Healthcare-Associated Infections Community Interface (HAIC) Case Report

Form Approved
OMB No. 0920-0978
Exp. Date: XX-XX-XXXX

Patient's Name: _____		Phone no. () _____	
Address: _____		MRN: _____	
City: _____	State _____	ZIP: _____	Hospital: _____
----Patient Identifier information is not transmitted to CDC----			

DEMOGRAPHICS			
1. STATE: _____	2. COUNTY: _____	3. STATE ID: _____	4a. LABORATORY ID WHERE INCIDENT SPECIMEN IDENTIFIED: _____
4b. FACILITY ID WHERE PATIENT TREATED: _____			

5. DATE OF BIRTH: _____	7. SEX AT BIRTH: <input type="checkbox"/> MALE <input type="checkbox"/> FEMALE <input type="checkbox"/> Unknown <input type="checkbox"/> Check if transgender	8a. ETHNIC ORIGIN: <input type="checkbox"/> Hispanic or Latino <input type="checkbox"/> Not Hispanic or Latino <input type="checkbox"/> Unknown	8b. RACE: (Check all that Apply) <input type="checkbox"/> American Indian or Alaska Native <input type="checkbox"/> Asian <input type="checkbox"/> Black or African American <input type="checkbox"/> Native Hawaiian or Other Pacific Islander <input type="checkbox"/> White <input type="checkbox"/> Unknown
6. AGE: _____ <input type="checkbox"/> Days <input type="checkbox"/> Mos. <input type="checkbox"/> Yrs.			

9. DATE OF INCIDENT SPECIMEN COLLECTION (DISC): _____	10. ORGANISM: Extended-Spectrum Cephalosporin-resistant: <input type="checkbox"/> <i>Escherichia coli</i> <input type="checkbox"/> <i>Klebsiella pneumoniae</i> <input type="checkbox"/> <i>Klebsiella oxytoca</i>
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11. INCIDENT SPECIMEN COLLECTION SITE:

Blood Bone CSF Internal body site (specify): _____ Joint/synovial fluid Muscle

Peritoneal fluid Pericardial fluid Pleural fluid Urine Other normally sterile site (specify): _____

<p>12. LOCATION OF SPECIMEN COLLECTION:</p> <p><input type="checkbox"/> OUTPATIENT: Facility ID: _____ <input type="checkbox"/> Emergency room <input type="checkbox"/> Clinic/Doctor's office <input type="checkbox"/> Dialysis center <input type="checkbox"/> Surgery <input type="checkbox"/> Observational/Clinical decision unit <input type="checkbox"/> Other outpatient</p> <p><input type="checkbox"/> INPATIENT: Facility ID: _____ <input type="checkbox"/> ICU <input type="checkbox"/> OR <input type="checkbox"/> Radiology <input type="checkbox"/> Other inpatient</p> <p><input type="checkbox"/> LTCF: Facility ID: _____ <input type="checkbox"/> LTACH: Facility ID: _____ <input type="checkbox"/> Autopsy <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown</p>	<p>13. WHERE WAS THE PATIENT LOCATED ON THE 3RD CALENDAR DAY BEFORE THE DISC?</p> <p><input type="checkbox"/> Private residence <input type="checkbox"/> LTACH <input type="checkbox"/> LTACH Facility ID: _____ <input type="checkbox"/> Homeless <input type="checkbox"/> Hospital inpatient <input type="checkbox"/> Incarcerated <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown</p> <p>Was the patient transferred from this hospital? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown</p>
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<p>14. WAS THE PATIENT HOSPITALIZED ON THE DAY OF OR IN THE 29 CALENDAR DAYS AFTER THE DISC?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown IF YES, DATE OF ADMISSION: _____ - _____ - _____</p>	<p>15a. WAS THE PATIENT IN AN ICU IN THE 7 DAYS BEFORE THE DISC?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown IF YES, DATE OF ICU ADMISSION: _____ - _____ - _____ OR <input type="checkbox"/> Date unknown</p> <p>15b. WAS THE PATIENT IN AN ICU ON THE DAY OF INCIDENT SPECIMEN COLLECTION OR IN THE 6 DAYS AFTER THE DISC?</p> <p><input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown IF YES, DATE OF ICU ADMISSION: _____ : _____ - _____ OR <input type="checkbox"/> Date unknown</p>
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16. PATIENT OUTCOME: Survived Died Unknown

DATE OF DISCHARGE: _____ - _____ - _____ OR Date unknown Left against medical advice (AMA)

DATE OF DEATH: _____ - _____ - _____ OR Date unknown

IF SURVIVED, DISCHARGED TO: Private residence LTACH Facility ID: _____ LTACH Facility ID: _____ Other (specify): _____ Unknown

ON THE DAY OF OR IN THE 6 CALENDAR DAYS BEFORE DEATH, WAS THE PATHOGEN OF INTEREST ISOLATED FROM A SITE THAT MEETS THE CASE DEFINITION?
 Yes No Unknown

Public reporting burden of this collection of information is estimated to average 25 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. An agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a currently valid OMB control number. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to CDC/ATSDR Information Collection Review Office, 1600 Clifton Road NE, MS D-74, Atlanta, Georgia 30329; ATTN: PRA (0920-0978).



17. TYPES OF INFECTION ASSOCIATED WITH CULTURE(S): (Check all that apply) None Unknown

<input type="checkbox"/> Abscess, not skin	<input type="checkbox"/> Cellulitis	<input type="checkbox"/> Epidural Abscess	<input type="checkbox"/> Pyelonephritis	<input type="checkbox"/> Surgical incision infection
<input type="checkbox"/> AV fistula/graft infection	<input type="checkbox"/> Chronic ulcer/wound (not decubitus)	<input type="checkbox"/> Meningitis	<input type="checkbox"/> Septic arthritis	<input type="checkbox"/> Surgical site infection (internal)
<input type="checkbox"/> Bacteremia	<input type="checkbox"/> Decubitus/pressure ulcer	<input type="checkbox"/> Osteomyelitis	<input type="checkbox"/> Septic emboli	<input type="checkbox"/> Traumatic wound
<input type="checkbox"/> Bursitis	<input type="checkbox"/> Empyema	<input type="checkbox"/> Peritonitis	<input type="checkbox"/> Septic shock	<input type="checkbox"/> Urinary tract infection
<input type="checkbox"/> Catheter site infection (CVC)	<input type="checkbox"/> Endocarditis	<input type="checkbox"/> Pneumonia	<input type="checkbox"/> Skin abscess	<input type="checkbox"/> Other (specify): _____

18. RECURRENT UTI

Yes
 No
 Unknown

19. UNDERLYING CONDITIONS: (Check all that apply) None Unknown

CHRONIC LUNG DISEASE	IMMUNOCOMPROMISED CONDITION	NEUROLOGIC CONDITION	SKIN CONDITION
<input type="checkbox"/> Cystic fibrosis	<input type="checkbox"/> HIV infection	<input type="checkbox"/> Cerebral palsy	<input type="checkbox"/> Burn
<input type="checkbox"/> Chronic pulmonary disease	<input type="checkbox"/> AIDS/CD4 count < 200	<input type="checkbox"/> Chronic cognitive deficit	<input type="checkbox"/> Decubitus/pressure ulcer
CHRONIC METABOLIC DISEASE	<input type="checkbox"/> Primary immunodeficiency	<input type="checkbox"/> Dementia	<input type="checkbox"/> Surgical wound
<input type="checkbox"/> Diabetes mellitus	<input type="checkbox"/> Transplant, hematopoietic stem cell	<input type="checkbox"/> Epilepsy/seizure/seizure disorder	<input type="checkbox"/> Other chronic ulcer or chronic wound
<input type="checkbox"/> With chronic complications	<input type="checkbox"/> Transplant, solid organ	<input type="checkbox"/> Multiple sclerosis	<input type="checkbox"/> Other (specify): _____
CARDIOVASCULAR DISEASE	LIVER DISEASE	<input type="checkbox"/> Neuropathy	OTHER
<input type="checkbox"/> CVA/Stroke/TIA	<input type="checkbox"/> Chronic liver disease	<input type="checkbox"/> Parkinson's disease	<input type="checkbox"/> Connective tissue disease
<input type="checkbox"/> Congenital heart disease	<input type="checkbox"/> Ascites	PLEGIAS/PARALYSIS	<input type="checkbox"/> Obesity or morbid obesity
<input type="checkbox"/> Congestive heart failure	<input type="checkbox"/> Cirrhosis	<input type="checkbox"/> Hemiplegia	<input type="checkbox"/> Pregnant
<input type="checkbox"/> Myocardial infarction	<input type="checkbox"/> Hepatic encephalopathy	<input type="checkbox"/> Paraplegia	MUGSI CONDITIONS
<input type="checkbox"/> Peripheral vascular disease (PVD)	<input type="checkbox"/> Variceal bleeding	<input type="checkbox"/> Quadriplegia	<input type="checkbox"/> Urinary tract problems/abnormalities
GASTROINTESTINAL DISEASE	<input type="checkbox"/> Hepatitis C	RENAL DISEASE	<input type="checkbox"/> Premature birth
<input type="checkbox"/> Diverticular disease	<input type="checkbox"/> Treated, in SVR	<input type="checkbox"/> Chronic kidney disease	<input type="checkbox"/> Spina bifida
<input type="checkbox"/> Inflammatory bowel disease	<input type="checkbox"/> Current, chronic	Lowest serum creatinine: _____ mg/DL	
<input type="checkbox"/> Peptic ulcer disease	MALIGNANCY		
<input type="checkbox"/> Short gut syndrome	<input type="checkbox"/> Malignancy, hematologic		
	<input type="checkbox"/> Malignancy, solid organ (non-metastatic)		
	<input type="checkbox"/> Malignancy, solid organ (metastatic)		

20. SUBSTANCE USE, CURRENT

SMOKING: (Check all that apply) None Unknown

Tobacco E-nicotine delivery system Marijuana

ALCOHOL ABUSE: Yes No Unknown

OTHER SUBSTANCES: (Check all that apply) None Unknown

Marijuana/cannabinoid (other than smoking)
 Opioid, DEA schedule I (e.g., heroin)
 Opioid, DEA schedule II-IV (e.g., methadone, oxycodone)
 Cocaine or methamphetamine
 Other (specify): _____
 Unknown substance

DOCUMENTED USE DISORDER (DUD)/ABUSE: DUD or abuse DUD or abuse DUD or abuse DUD or abuse DUD or abuse DUD or abuse

MODE OF DELIVERY: (Check all that apply)

IDU Skin popping Non-IDU Unknown
 IDU Skin popping Non-IDU Unknown
 IDU Skin popping Non-IDU Unknown
 IDU Skin popping Non-IDU Unknown
 IDU Skin popping Non-IDU Unknown
 IDU Skin popping Non-IDU Unknown

21. RISK FACTORS: (Check all that apply) None Unknown

WAS INCIDENT SPECIMEN COLLECTED 3 OR MORE CALENDAR DAYS AFTER HOSPITAL ADMISSION? Yes No

PREVIOUS HOSPITALIZATION IN THE YEAR BEFORE DISC: Yes No Unknown

If YES, DATE OF DISCHARGE CLOSEST TO DISC: ____ - ____ - ____

OR, DATE UNKNOWN

Facility ID: _____

OVERNIGHT STAY IN LTCF IN THE YEAR BEFORE DISC: Yes No Unknown

Facility ID: _____

OVERNIGHT STAY IN LTACH IN THE YEAR BEFORE DISC: Yes No Unknown

Facility ID: _____

SURGERY IN THE YEAR BEFORE DISC: Yes No Unknown

CURRENT CHRONIC DIALYSIS: Yes No Unknown

IF YES, TYPE: Hemodialysis Peritoneal Unknown

IF HEMODIALYSIS, TYPE OF VASCULAR ACCESS:

AV fistula/graft Hemodialysis central line Unknown

CENTRAL LINE IN PLACE ON THE DISC (UP TO THE TIME OF COLLECTION), OR AT ANY TIME IN THE 2 CALENDAR DAYS BEFORE DISC: Yes No Unknown

Check here if central line in place for > 2 calendar days:

URINARY CATHETER IN PLACE ON THE DISC (UP TO THE TIME OF COLLECTION), OR AT ANY TIME IN THE 2 CALENDAR DAYS BEFORE DISC: Yes No Unknown

IF YES, CHECK ALL THAT APPLY:

Indwelling Urethral Catheter Suprapubic Catheter
 Condom Catheter Other (specify): _____

ANY OTHER INDWELLING DEVICE IN PLACE ON THE DISC (UP TO THE TIME OF COLLECTION), OR AT ANY TIME IN THE 2 CALENDAR DAYS BEFORE DISC: Yes No Unknown

IF YES, CHECK ALL THAT APPLY:

ET/NT Tube Gastrostomy Tube NG Tube
 Tracheostomy Nephrostomy Tube Other (specify): _____

PATIENT TRAVELED INTERNATIONALLY IN THE YEAR BEFORE DISC: Yes No Unknown

COUNTRY: _____, _____, _____

22a. WEIGHT: _____ lbs. _____ oz. OR _____ kg Unknown

22b. HEIGHT: _____ ft. _____ in. OR _____ cm Unknown

22c. BMI: _____ Unknown

PATIENT HOSPITALIZED WHILE VISITING COUNTRY(IES) ABOVE: Yes No Unknown



URINE CULTURES ONLY:

23a. RECORD THE COLONY COUNT:

URINE CULTURES ONLY:

23b. SIGNS AND SYMPTOMS ASSOCIATED WITH URINE CULTURE.

Please indicate if any of the following symptoms were reported during the 5 day time period including the 2 calendar days before through the 2 calendar days after the DISC.

- | | | |
|--|--|--|
| <input type="checkbox"/> None | <input type="checkbox"/> Unknown | Symptoms for patients
≤ 1 year of age only: |
| <input type="checkbox"/> Costovertebral angle pain or tenderness | <input type="checkbox"/> Frequency | <input type="checkbox"/> Apnea |
| <input type="checkbox"/> Dysuria | <input type="checkbox"/> Suprapubic tenderness | <input type="checkbox"/> Bradycardia |
| <input type="checkbox"/> Fever [temperature ≥ 100.4 °F (38 °C)] | <input type="checkbox"/> Urgency | <input type="checkbox"/> Lethargy |
| | | <input type="checkbox"/> Vomiting |

24a. WAS THE INCIDENT SPECIMEN POLYMICROBIAL?

- Yes
- No
- Unknown

24b. WHAT SCREENING/ CONFIRMATORY METHOD WAS USED FOR ESBL IDENTIFICATION?

(Check all that apply): None Unknown

- Broth Microdilution (ATI detection)
 - ESBL well
 - Expert rule (ATI flag)
 - Unknown
- Broth Microdilution (Manual)
- Disk Diffusion
- E-test
- Molecular test (specify): _____
- Other non-molecular test (specify): _____

24c. IF SCREENING/ CONFIRMATORY METHOD WAS USED, WHAT WAS THE RESULT?

- | | | | |
|-----------------------------------|-----------------------------------|--|----------------------------------|
| <input type="checkbox"/> Positive | <input type="checkbox"/> Negative | <input type="checkbox"/> Indeterminate | <input type="checkbox"/> Unknown |
| <input type="checkbox"/> Positive | <input type="checkbox"/> Negative | <input type="checkbox"/> Indeterminate | <input type="checkbox"/> Unknown |
| <input type="checkbox"/> Positive | <input type="checkbox"/> Negative | <input type="checkbox"/> Indeterminate | <input type="checkbox"/> Unknown |
| <input type="checkbox"/> Positive | <input type="checkbox"/> Negative | <input type="checkbox"/> Indeterminate | <input type="checkbox"/> Unknown |
| <input type="checkbox"/> Positive | <input type="checkbox"/> Negative | <input type="checkbox"/> Indeterminate | <input type="checkbox"/> Unknown |
| <input type="checkbox"/> Positive | <input type="checkbox"/> Negative | <input type="checkbox"/> Indeterminate | <input type="checkbox"/> Unknown |
| <input type="checkbox"/> Positive | <input type="checkbox"/> Negative | <input type="checkbox"/> Indeterminate | <input type="checkbox"/> Unknown |
| <input type="checkbox"/> Positive | <input type="checkbox"/> Negative | <input type="checkbox"/> Indeterminate | <input type="checkbox"/> Unknown |

25a. IS ANTIMICROBIAL USE (IV OR ORAL) IN THE 30 DAYS BEFORE THE DISC DOCUMENTED?

- Yes
- No
- Unknown

25b. IF YES, CHECK ALL ANTIMICROBIALS USED IN THE 30 DAYS BEFORE THE DISC: (Check all that apply)

- Unknown

- | | | | |
|--|---|--|--|
| <input type="checkbox"/> Amikacin | <input type="checkbox"/> Ceftazidime | <input type="checkbox"/> Ertapenem | <input type="checkbox"/> Polymyxin B |
| <input type="checkbox"/> Amoxicillin | <input type="checkbox"/> Ceftazidime/avibactam | <input type="checkbox"/> Fidaxomicin | <input type="checkbox"/> Polymyxin E (colistin) |
| <input type="checkbox"/> Amoxicillin/clavulanic acid | <input type="checkbox"/> Ceftizoxime | <input type="checkbox"/> Fosfomicin | <input type="checkbox"/> Rifaximin |
| <input type="checkbox"/> Ampicillin | <input type="checkbox"/> Ceftolozane/tazobactam | <input type="checkbox"/> Gentamicin | <input type="checkbox"/> Tedizolid |
| <input type="checkbox"/> Ampicillin/sulbactam | <input type="checkbox"/> Ceftriaxone | <input type="checkbox"/> Imipenem/cilastatin | <input type="checkbox"/> Telavancin |
| <input type="checkbox"/> Azithromycin | <input type="checkbox"/> Cefuroxime | <input type="checkbox"/> Levofloxacin | <input type="checkbox"/> Tigecycline |
| <input type="checkbox"/> Aztreonam | <input type="checkbox"/> Cephalexin | <input type="checkbox"/> Linezolid | <input type="checkbox"/> Tobramycin |
| <input type="checkbox"/> Cefazolin | <input type="checkbox"/> Ciprofloxacin | <input type="checkbox"/> Meropenem | <input type="checkbox"/> Trimethoprim |
| <input type="checkbox"/> Cefdinir | <input type="checkbox"/> Clarithromycin | <input type="checkbox"/> Meropenem/vaborbactam | <input type="checkbox"/> Trimethoprim/sulfamethoxazole |
| <input type="checkbox"/> Cefepime | <input type="checkbox"/> Clindamycin | <input type="checkbox"/> Metronidazole | <input type="checkbox"/> Vancomycin |
| <input type="checkbox"/> Cefixime | <input type="checkbox"/> Dalbavancin | <input type="checkbox"/> Moxifloxacin | <input type="checkbox"/> IV |
| <input type="checkbox"/> Cefotaxime | <input type="checkbox"/> Daptomycin | <input type="checkbox"/> Nitrofurantoin | <input type="checkbox"/> PO |
| <input type="checkbox"/> Cefoxitin | <input type="checkbox"/> Delafloxacin | <input type="checkbox"/> Oritavancin | <input type="checkbox"/> Other (specify): _____ |
| <input type="checkbox"/> Cefpodoxime | <input type="checkbox"/> Doripenem | <input type="checkbox"/> Penicillin | <input type="checkbox"/> Other (specify): _____ |
| <input type="checkbox"/> Ceftaroline | <input type="checkbox"/> Doxycycline | <input type="checkbox"/> Piperacillin/tazobactam | |

REMINDER: Any prior antimicrobial use that is not noted above should be documented in the other (specify) field.



26. SUSCEPTIBILITY RESULTS:

Please complete the table below based on the information found in the indicated data source. Shaded antibiotics are required to have the MIC entered into the MuGSI-CM system, if available.

Data Source	Medical Record		Microscan		Vitek		Phoenix		Kirby-Bauer		E-test		
	Antibiotic	MIC	Interp	MIC	Interp	MIC	Interp	MIC	Interp	Zone Diam	Interp	MIC	Interp
Amikacin													
Amoxicillin/Clavulanate													
Ampicillin													
Ampicillin/Sulbactam													
Aztreonam													
Cefazolin													
CEFEPIME													
CEFOTAXIME													
CEFTAZIDIME													
Ceftazidime/Avibactam													
Ceftolozane/Tazobactam													
CEFTRIAZONE													
Cephalothin													
Ciprofloxacin													
COLISTIN													
DORIPENEM													
Doxycycline													
ERTAPENEM													
Fosfomycin													
Gentamicin													
IMIPENEM													
Imipenem-relebactam													
Levofloxacin													
MEROPENEM													
Meropenem-vaborbactam													
Minocycline													
Moxifloxacin													
Nitrofurantoin													
Piperacillin/Tazobactam													
Plazomicin													
POLYMYXIN B													
Rifampin													
Tetracycline													
TIGECYCLINE													
Tobramycin													
Trimethoprim-sulfamethoxazole													

27a. WAS CASE FIRST IDENTIFIED THROUGH AUDIT?

- Yes
- No

27b. CRF STATUS:

- Complete
- Pending
- Chart unavailable after 3 requests

27c. SO INITIALS:

27d. COMMENTS:

