



## 2024 Multi-site Gram-Negative Surveillance Initiative (MuGSI) Healthcare-Associated Infections Community Interface (HAIC) Case Report

NOTE: Enter all dates as mm/dd/yyyy

Form Approved  
OMB No. 0920-0978

PATIENT'S NAME: _____			PHONE NO.: _____		
ADDRESS: _____				MRN: _____	
ADDRESS TYPE: _____			HOSPITAL: _____		
----Patient Identifier information is not transmitted to CDC----					
<b>DEMOGRAPHICS</b>					
1. STATE: _____		2a. COUNTY: _____		2b. PLANNING REGION: _____	
3. STATE ID: _____					
4a. LABORATORY ID WHERE INCIDENT SPECIMEN IDENTIFIED: _____				4b. FACILITY ID WHERE PATIENT TREATED: _____	
5. DATE OF BIRTH: _____		7. SEX AT BIRTH:		8a. ETHNIC ORIGIN:	
		Male Female Unknown Check if transgender <input type="checkbox"/>		Hispanic or Latino Not Hispanic or Latino Unknown	
6. AGE: _____ Days    Mos    Yrs				8b. RACE: (Check all that apply)	
				American Indian or Alaska Native Asian Black or African American Native Hawaiian or Other Pacific Islander White Unknown	
9a. DATE OF INCIDENT SPECIMEN COLLECTION (DISC): _____		10. ORGANISM:			
		Carbapenem-Resistant <i>Enterobacteriales</i> (CRE) <i>Escherichia coli</i> <i>Klebsiella pneumoniae</i> <i>Klebsiella oxytoca</i> <i>Klebsiella aerogenes</i> <i>Enterobacter cloacae</i>			
9b. TIME OF DISC: _____		Extended-Spectrum Beta-Lactamase-producing <i>Enterobacteriales</i> (ESBL-E) <i>Escherichia coli</i> <i>Klebsiella pneumoniae</i> <i>Klebsiella oxytoca</i>			
		Carbapenem-Resistant <i>A. baumannii</i> (CRAB) Invasive <i>Escherichia coli</i> (IEC) (not CRE or ESBL-E)			
11. SPECIMEN COLLECTION SITE(S):					
Blood Bone Bronchoalveolar lavage (CRAB only, complete Q23c) CSF Internal body site (specify): _____		Muscle Peritoneal fluid Pericardial fluid Pleural fluid Joint/synovial fluid Sputum (CRAB only, complete Q23c) Tracheal aspirate (CRAB only, complete Q23c)		Urine (complete 22a-22c) Wound (specify): _____ (CRAB only) Other LRT site (specify): _____ (CRAB only, complete Q23c) Other normally sterile site (specify): _____	
12. LOCATION OF SPECIMEN COLLECTION:			13. WHERE WAS THE PATIENT LOCATED ON THE 3RD CALENDAR DAY BEFORE THE DISC?		
<b>OUTPATIENT</b> Facility ID: _____ Emergency room Clinic/Doctor's office Dialysis center Surgery Observational/Clinical decision unit Other outpatient			<b>INPATIENT</b> Facility ID: _____ ICU OR Radiology Other inpatient		
<b>LTCF</b> Facility ID: _____ <b>LTACH</b> Facility ID: _____ <b>Autopsy</b> <b>Other (Specify):</b> <div style="border: 1px solid black; width: 100px; height: 40px; margin: 5px 0;"></div> <b>Unknown</b>			Private residence LTCF Facility ID: _____ Hospital inpatient Facility ID: _____ Was the patient transferred from this hospital? Yes    No    Unknown		
			LTACH Facility ID: _____ Homeless Incarcerated Other (specify): <div style="border: 1px solid black; width: 100px; height: 40px; margin: 5px 0;"></div> Unknown		
14. WAS THE PATIENT HOSPITALIZED ON THE DAY OF OR IN THE 29 CALENDAR DAYS AFTER THE DISC?    Yes    No    Unknown					
IF YES, DATE OF ADMISSION: _____					
15a. WAS THE PATIENT IN AN ICU IN THE 7 DAYS BEFORE THE DISC?    Yes    No    Unknown					
IF YES, DATE OF ICU ADMISSION: _____ OR    Date unknown					
15b. WAS THE PATIENT IN AN ICU ON THE DAY OF INCIDENT SPECIMEN COLLECTION OR IN THE 6 DAYS AFTER THE DISC?					
Yes    No    Unknown					
IF YES, DATE OF ICU ADMISSION: _____ OR    Date unknown					
Public reporting burden of this collection of information is estimated to average 28 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-XXXX).					

**16. PATIENT OUTCOME:**

Survived  
Died  
Unknown

DATE OF DISCHARGE: \_\_\_\_\_ OR  
Date unknown  
Left against medical advice (AMA)

**IF SURVIVED, DISCHARGED TO:**

Private residence  
LTCF, Facility ID: \_\_\_\_\_  
LTACH, Facility ID: \_\_\_\_\_

Other (specify): \_\_\_\_\_  
Unknown

DATE OF DEATH: \_\_\_\_\_ OR Date unknown

**17a. TYPES OF INFECTION ASSOCIATED WITH CULTURE(S):** (Check all that apply)

None Colonized Unknown

- |                                     |                          |                                       |  |
|-------------------------------------|--------------------------|---------------------------------------|--|
| Abscess, not skin                   | Decubitus/pressure ulcer | Pneumonia (CRAB cases, complete Q23c) | Skin abscess                               |
| AV fistula/graft infection          | Empyema                  | Pyelonephritis (complete 22a–22c)     | Surgical incision infection                |
| Bacteremia                          | Endocarditis             | Sepsis                                | Surgical site infection (internal)         |
| Bursitis                            | Epidural abscess         | Urosepsis                             | Traumatic wound                            |
| Catheter site infection (CVC)       | Meningitis               | Septic arthritis                      | Urinary tract infection (complete 22a–22c) |
| Cellulitis                          | Osteomyelitis            | Septic emboli                         | Other (specify): _____                     |
| Chronic ulcer/wound (not decubitus) | Peritonitis              | Septic shock                          |  |

**17b. RECURRENT UTI:**

Yes No Unknown

**17c. WAS THE PATIENT TREATED FOR THE MUGSI ORGANISM?**

Yes No Unknown

**18. UNDERLYING CONDITIONS:** (Check all that apply)

None Unknown

**CHRONIC LUNG DISEASE**

Cystic fibrosis  
Chronic pulmonary disease

**CHRONIC METABOLIC DISEASE**

Diabetes mellitus  
With chronic complications

**CARDIOVASCULAR DISEASE**

CVA/Stroke/TIA  
Congenital heart disease  
Congestive heart failure  
Myocardial infarction  
Peripheral vascular disease (PVD)

**GASTROINTESTINAL DISEASE**

Diverticular disease  
Inflammatory bowel disease  
Peptic ulcer disease  
Short gut syndrome

**IMMUNOCOMPROMISED CONDITION**

HIV infection  
AIDS/CD4 count < 200  
Primary immunodeficiency  
Transplant, hematopoietic stem cell  
Transplant, solid organ:

**LIVER DISEASE**

Chronic liver disease  
Ascites  
Cirrhosis  
Hepatic encephalopathy  
Variceal bleeding

**Hepatitis C**

Treated, in SVR  
Current, chronic

**MALIGNANCY**

Malignancy, hematologic  
Malignancy, solid organ (non-metastatic)  
Malignancy, solid organ (metastatic)

**NEUROLOGIC CONDITION**

Cerebral palsy  
Chronic cognitive deficit  
Dementia  
Epilepsy/seizure/seizure disorder  
Multiple sclerosis  
Neuropathy  
Parkinson's disease  
Other (specify): \_\_\_\_\_

**PLEGIAS/PARALYSIS**

Hemiplegia  
Paraplegia  
Quadriplegia

**RENAL DISEASE**

Chronic kidney disease  
Lowest serum creatinine: \_\_\_\_\_ mg/DL  
Unknown or not done

**SKIN CONDITION**

Burn  
Decubitus/pressure ulcer  
Surgical wound  
Other chronic ulcer or chronic wound  
Other (specify): \_\_\_\_\_

**OTHER**

Connective tissue disease  
Obesity or morbid obesity  
Pregnant

**MUGSI CONDITIONS**

Urinary tract problems/abnormalities  
Premature birth  
Spina bifida

**19. SUBSTANCE USE**

**SMOKING:** (Check all that apply)

None Tobacco Marijuana  
Unknown E-nicotine delivery system

**ALCOHOL ABUSE:**

Yes No Unknown

**OTHER SUBSTANCES:** (Check all that apply)

None Unknown

	DUD/ ABUSE	MODE OF DELIVERY (Check all that apply)			
		IDU	Skin popping	Non-IDU	Unknown
Marijuana, cannabinoid (other than smoking)	DUD or abuse	IDU	Skin popping	Non-IDU	Unknown
Opioid, DEA schedule I (e.g., heroin)	DUD or abuse	IDU	Skin popping	Non-IDU	Unknown
Opioid, DEA schedule II-IV (e.g., methadone, oxycodone)	DUD or abuse	IDU	Skin popping	Non-IDU	Unknown
Opioid, NOS	DUD or abuse	IDU	Skin popping	Non-IDU	Unknown
Cocaine	DUD or abuse	IDU	Skin popping	Non-IDU	Unknown
Methamphetamine	DUD or abuse	IDU	Skin popping	Non-IDU	Unknown
Other (specify): _____	DUD or abuse	IDU	Skin popping	Non-IDU	Unknown
Unknown substance	DUD or abuse	IDU	Skin popping	Non-IDU	Unknown

**DURING THE CURRENT HOSPITALIZATION, DID THE PATIENT RECEIVE MEDICATION ASSISTED TREATMENT (MAT) FOR OPIOID USE DISORDER?**

Yes No N/A (patient not hospitalized or did not have DUD)

<b>20. RISK FACTORS:</b> <i>(Check all that apply)</i>		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
OVERNIGHT STAY IN LTACH IN THE YEAR BEFORE DISC:		Yes	No	Unknown
SURGERY IN THE YEAR BEFORE DISC:		Yes	No	Unknown
INVASIVE OR DIAGNOSTIC UROLOGIC PROCEDURE IN THE YEAR BEFORE DISC:		Yes	No	Unknown
IF YES, CHECK ALL THAT APPLY:      Prostate procedure      Cystoscopy      Other				
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      Condom Catheter				
Suprapubic 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      NG Tube      Nephrostomy Tube				
Gastrostomy Tube      Tracheostomy      Other (specify): _____				
PATIENT TRAVELED INTERNATIONALLY IN THE YEAR BEFORE DISC:		Yes	No	Unknown
COUNTRY(IES): _____				
PATIENT HOSPITALIZED WHILE VISITING COUNTRY(IES) ABOVE:		Yes	No	Unknown
<b>21a. WEIGHT:</b>		<b>21b. HEIGHT:</b>		<b>21c. BMI:</b>
_____ lbs. _____ oz. OR _____ kg      Unknown		_____ ft. _____ in. OR _____ cm      Unknown		_____      Unknown
<b>Complete questions 22a-22c for all MuGSI cases from urine cultures or where UTI or pyelonephritis is marked in question 17a:</b>				
<b>22a. WAS THE URINE COLLECTED THROUGH AN INDWELLING URETHRAL CATHETER?</b>		Yes	No	Unknown
<b>22b. RECORD THE COLONY COUNT:</b> _____				
<b>22c. ASSOCIATED SIGNS AND SYMPTOMS:</b>				
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.				
None	Fever [temperature ≥ 100.4 °F (38 °C)]	<b>Symptoms for patients ≤ 1 year of age only:</b>		
Unknown	Frequency	Apnea	Lethargy	
Costovertebral angle pain or tenderness	Suprapubic tenderness	Bradycardia	Vomiting	
Dysuria	Urgency			
<b>Complete questions 23a-23b ONLY for A. BAUMANNII cases:</b>				
<b>23a. DID THE PATIENT HAVE A SPUTUM CULTURE POSITIVE FOR CRAB IN THE 30 DAYS BEFORE THE DISC?</b>		Yes	No	Unknown
				N/A
<b>23b. RISK FACTORS PRIOR TO CRAB DISC:</b> <i>(Check all that apply)</i>				
Non-invasive positive pressure ventilation (CPAP or BiPAP) at any time in the 7 calendar days before the DISC				
Nebulizer treatment at any time in the 7 calendar days before the DISC				
Mechanical ventilation at any time in the 7 calendar days before the DISC				
Visited a wound care clinic at any time in the year before the DISC				
None of the above				

**Complete question 23c ONLY for A. BAUMANNII cases from LRT site cultures or for non-LRT cultures where pneumonia is marked in question 17a.**

**23c. CHEST RADIOLOGY FINDINGS:** (Check all that apply)

Not done	Ground glass opacities/infiltrates	Consolidation	Nodules
No report available	Bronchopneumonia/pneumonia	Infiltrate	No evidence of pneumonia
Acute respiratory distress syndrome (ARDS)	Cannot rule out pneumonia	Pleural effusion	
Air space density/opacity	Cavitation		

**24a. IS ANTIMICROBIAL USE (IV OR ORAL) IN THE 30 DAYS BEFORE THE DISC DOCUMENTED?**

Yes No Unknown

**24b. IF YES, CHECK ALL ANTIMICROBIALS USED IN THE 30 DAYS BEFORE THE DISC:** (Check all that apply)

Unknown

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

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

**25a. DID THE PATIENT HAVE A POSITIVE TEST(S) FOR SARS-CoV-2 (MOLECULAR ASSAY, ANTIGEN, OR OTHER VIRAL TEST, EXCLUDING SEROLOGY) IN THE 90 DAYS BEFORE OR DAY OF THE DISC?**

Yes No Unknown

**25b. SPECIMEN COLLECTION DATES FOR POSITIVE TESTS IN THE 90 DAYS BEFORE OR THE DAY OF THE DISC:**

**First positive test:** \_\_\_\_\_ or Date unknown **Most recent positive test:** \_\_\_\_\_ or Date unknown

**25c. COVID-NET CASE ID IN THE YEAR BEFORE OR DAY OF DISC:** \_\_\_\_\_ None or N/A

**26. WAS THE INCIDENT SPECIMEN POLYMICROBIAL?**

Yes No Unknown

**27a. WAS THE INCIDENT SPECIMEN TESTED FOR CARBAPENEMASE GENES?**

Yes No Laboratory not testing Unknown

**27b. IF YES, WHAT TESTING METHOD WAS USED?** (Check all that apply)

**Non-Molecular Test Methods:**

**Molecular Test Methods:**

CarbaNP	Modified Hodge Test (MHT)	Automated Molecular Assay	Streck ARM-D
Carbapenemase Inactivation Method (CIM)	RAPIDEC	Carba-R	Other (specify):
CPO Detect	Other (specify):	Check Points	_____
Disk Diffusion/ROSCO Disk	_____	MALDI-TOF MS	Unknown
E-test	Unknown	Next Generation Nucleic Acid Sequencing	
Modified Carbapenemase Inactivation Method (mCIM)		PCR	

**27c. IF TESTED, WHAT WAS THE TESTING RESULT?**

**Non-Molecular Test Results:**

**Molecular Test Results:**

Positive	NDM	Pos	Neg	Ind	Unk
Indeterminate	KPC	Pos	Neg	Ind	Unk
Negative	OXA (specify):	Pos	Neg	Ind	Unk
Unknown	_____				
	VIM	Pos	Neg	Ind	Unk
	IMP	Pos	Neg	Ind	Unk
	Other carbapenemase gene (specify):	Pos	Neg	Ind	Unk
	_____				

**28a. WAS THE INCIDENT SPECIMEN TESTED FOR ESBL PRODUCTION OR OTHER BETA-LACTAMASE GENES?**

- Yes
- No
- Laboratory not testing
- Unknown

**28b. IF TESTED, WHAT TESTING METHOD WAS USED? (Check all that apply):**

**28c. IF TESTED, WHAT WAS THE RESULT?**

Broth Microdilution (ATI detection)

ESBL well

Expert rule (ATI flag)

Unknown

Broth Microdilution (Manual)

Disk Diffusion

E-test

Molecular test (specify): \_\_\_\_\_

Gene variant (specify): \_\_\_\_\_

Other non-molecular test (specify): \_\_\_\_\_

Pos Neg Ind Unk

Pos Neg Ind Unk

Pos Neg Ind Unk

Pos Neg Ind Unk

Pos Neg Ind Unk

Pos Neg Ind Unk

Pos Neg Ind Unk

Pos Neg Ind Unk

**29. SUSCEPTIBILITY RESULTS:**

Please complete the table below based on the information found in the indicated data source.

No susceptibility data from the medical record are available

Antibiotic	Data source:	Data source:	Data source:	Data source:	Data source:	Data source:
	MIC or zone diameter	Interpretation	MIC or zone diameter	Interpretation	MIC or zone diameter	Interpretation
Amikacin						
Amoxicillin/Clavulanate						
Ampicillin						
Ampicillin/Sulbactam						
Aztreonam						
Cefazolin						
Cefepime						
Cefiderocol						
Cefotaxime						
Cefoxitin						
Ceftazidime						
Ceftazidime/Avibactam						
Ceftolozane/Tazobactam						
Ceftriaxone						
Cephalothin						
Ciprofloxacin						
Colistin						
Doripenem						
Doxycycline						
Eravacycline						
Ertapenem						
Fosfomycin						
Gentamicin						
Imipenem						
Imipenem-relebactam						
Levofloxacin						
Meropenem						
Meropenem-vaborbactam						
Minocycline						
Moxifloxacin						
Nitrofurantoin						
Omadacycline						
Piperacillin/Tazobactam						
Plazomicin						
Polymyxin B						
Rifampin						
Tetracycline						
Tigecycline						
Tobramycin						
Trimethoprim-sulfamethoxazole						

<p><b>30a. WAS THE CASE FIRST IDENTIFIED THROUGH AN AUDIT?</b></p> <p>Yes No</p>	<p><b>30b. CRF STATUS:</b></p> <p>Complete Pending Chart unavailable after 3 requests Complete – pending data</p>	<p><b>30c. SO INITIALS:</b></p> <p>_____</p>	<p><b>30d. DATE OF ABSTRACTION:</b></p> <p>_____</p>
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**30e. COMMENTS:**

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