

2020 Carbapenem Resistant Enterobacteriaceae (CRE)/ Carbapenem Resistant *A. baumannii* (CRAB)

Multi-site Gram-Negative Surveillance Initiative (MuGSI)

Healthcare-Associated Infections Community Interface (HAIC) Case Report

Form Approved
OMB No. 0920-0978



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:	8a. ETHNIC ORIGIN:	8b. RACE: (Check all that apply)
____ - ____ - ____	<input type="checkbox"/> MALE <input type="checkbox"/> FEMALE	<input type="checkbox"/> Hispanic or Latino	<input type="checkbox"/> American Indian or Alaska Native
6. AGE: _____	<input type="checkbox"/> Unknown	<input type="checkbox"/> Not Hispanic or Latino	<input type="checkbox"/> Native Hawaiian or Other Pacific Islander
<input type="checkbox"/> Days <input type="checkbox"/> Mos. <input type="checkbox"/> Yrs.	<input type="checkbox"/> Check if transgender	<input type="checkbox"/> Unknown	<input type="checkbox"/> Asian
			<input type="checkbox"/> Black or African American <input type="checkbox"/> White
			<input type="checkbox"/> Unknown
9. DATE OF INCIDENT SPECIMEN COLLECTION (DISC):	10. ORGANISM: <input type="checkbox"/> CRE <input type="checkbox"/> CRAB		
____ - ____ - ____	If CRE, select one of the following: <ul style="list-style-type: none"> <input type="checkbox"/> <i>Escherichia coli</i> <input type="checkbox"/> <i>Enterobacter cloacae</i> <input type="checkbox"/> <i>Klebsiella aerogenes</i> <input type="checkbox"/> <i>Klebsiella pneumoniae</i> <input type="checkbox"/> <i>Klebsiella oxytoca</i> 		
11. INCIDENT SPECIMEN COLLECTION SITE:			
<input type="checkbox"/> Blood <input type="checkbox"/> Bone <input type="checkbox"/> CSF <input type="checkbox"/> Internal body site (specify): _____ <input type="checkbox"/> Joint/synovial fluid <input type="checkbox"/> Muscle <input type="checkbox"/> Peritoneal fluid <input type="checkbox"/> Pericardial fluid <input type="checkbox"/> Pleural fluid <input type="checkbox"/> Urine <input type="checkbox"/> Other normally sterile site (specify): _____			
12. LOCATION OF SPECIMEN COLLECTION:		13. WHERE WAS THE PATIENT LOCATED ON THE 3 RD CALENDAR DAY BEFORE THE DISC?	
<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		<input type="checkbox"/> INPATIENT: Facility ID: _____ <input type="checkbox"/> ICU <input type="checkbox"/> OR <input type="checkbox"/> Radiology <input type="checkbox"/> Other inpatient	
<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		<input type="checkbox"/> Private residence <input type="checkbox"/> LTACH Facility ID: _____ <input type="checkbox"/> LTCF Facility ID: _____ <input type="checkbox"/> Hospital inpatient Facility ID: _____ <input type="checkbox"/> Homeless <input type="checkbox"/> Incarcerated <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown Was the patient transferred from this hospital? <input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown	
14. WAS THE PATIENT HOSPITALIZED ON THE DAY OF OR IN THE 29 CALENDAR DAYS AFTER THE DISC?		15a. WAS THE PATIENT IN AN ICU IN THE 7 DAYS BEFORE THE DISC?	
<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown IF YES, DATE OF ADMISSION: ____ - ____ - ____		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown IF YES, DATE OF ICU ADMISSION: ____ - ____ - ____ OR <input type="checkbox"/> Date unknown	
		15b. WAS THE PATIENT IN AN ICU ON THE DAY OF INCIDENT SPECIMEN COLLECTION OR IN THE 6 DAYS AFTER THE DISC?	
		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Unknown IF YES, DATE OF ICU ADMISSION: ____ - ____ - ____ OR <input type="checkbox"/> Date unknown	
16. PATIENT OUTCOME: <input type="checkbox"/> Survived <input type="checkbox"/> Died <input type="checkbox"/> Unknown			
DATE OF DISCHARGE: ____ - ____ - ____ OR <input type="checkbox"/> Date unknown		DATE OF DEATH: ____ - ____ - ____ OR <input type="checkbox"/> Date unknown	
IF SURVIVED, DISCHARGED TO:		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?	
<input type="checkbox"/> Private residence <input type="checkbox"/> LTCF Facility ID: _____ <input type="checkbox"/> LTACH Facility ID: _____ <input type="checkbox"/> Other (specify): _____ <input type="checkbox"/> Unknown		<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> 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 (0920-0978).



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

<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): _____

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 <input type="checkbox"/> Cystic fibrosis <input type="checkbox"/> Chronic pulmonary disease	IMMUNOCOMPROMISED CONDITION <input type="checkbox"/> HIV infection <input type="checkbox"/> AIDS/CD4 count < 200 <input type="checkbox"/> Primary immunodeficiency <input type="checkbox"/> Transplant, hematopoietic stem cell <input type="checkbox"/> Transplant, solid organ	NEUROLOGIC CONDITION <input type="checkbox"/> Cerebral palsy <input type="checkbox"/> Chronic cognitive deficit <input type="checkbox"/> Dementia <input type="checkbox"/> Epilepsy/seizure/seizure disorder <input type="checkbox"/> Multiple sclerosis <input type="checkbox"/> Neuropathy <input type="checkbox"/> Parkinson's disease <input type="checkbox"/> Other (specify): _____	SKIN CONDITION <input type="checkbox"/> Burn <input type="checkbox"/> Decubitus/pressure ulcer <input type="checkbox"/> Surgical wound <input type="checkbox"/> Other chronic ulcer or chronic wound <input type="checkbox"/> Other (specify): _____
CHRONIC METABOLIC DISEASE <input type="checkbox"/> Diabetes mellitus <input type="checkbox"/> With chronic complications	LIVER DISEASE <input type="checkbox"/> Chronic liver disease <input type="checkbox"/> Ascites <input type="checkbox"/> Cirrhosis <input type="checkbox"/> Hepatic encephalopathy <input type="checkbox"/> Variceal bleeding <input type="checkbox"/> Hepatitis C <input type="checkbox"/> Treated, in SVR <input type="checkbox"/> Current, chronic	PLEGIAS/PARALYSIS <input type="checkbox"/> Hemiplegia <input type="checkbox"/> Paraplegia <input type="checkbox"/> Quadriplegia	OTHER <input type="checkbox"/> Connective tissue disease <input type="checkbox"/> Obesity or morbid obesity <input type="checkbox"/> Pregnant
CARDIOVASCULAR DISEASE <input type="checkbox"/> CVA/Stroke/TIA <input type="checkbox"/> Congenital heart disease <input type="checkbox"/> Congestive heart failure <input type="checkbox"/> Myocardial infarction <input type="checkbox"/> Peripheral vascular disease (PVD)	MALIGNANCY <input type="checkbox"/> Malignancy, hematologic <input type="checkbox"/> Malignancy, solid organ (non-metastatic) <input type="checkbox"/> Malignancy, solid organ (metastatic)	RENAL DISEASE <input type="checkbox"/> Chronic kidney disease Lowest serum creatinine: _____ mg/DL <input type="checkbox"/> Unknown or not done	MUGSI CONDITIONS <input type="checkbox"/> Urinary tract problems/ abnormalities <input type="checkbox"/> Premature birth <input type="checkbox"/> Spina bifida
GASTROINTESTINAL DISEASE <input type="checkbox"/> Diverticular disease <input type="checkbox"/> Inflammatory bowel disease <input type="checkbox"/> Peptic ulcer disease <input type="checkbox"/> Short gut syndrome			

19. SUBSTANCE USE

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

DOCUMENTED USE DISORDER (DUD)/ABUSE: Marijuana, cannabinoid (other than smoking)
 Opioid, DEA schedule I (e.g., heroin)
 Opioid, DEA schedule II-IV (e.g., methadone, oxycodone)
 Opioid, NOS
 Cocaine
 Methamphetamine
 Other (specify): _____
 Unknown substance

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
 IDU Skin popping Non-IDU Unknown
 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)

20. 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: _____, _____, _____

21a. WEIGHT: _____ lbs. _____ oz. OR _____ kg Unknown

21b. HEIGHT: _____ ft. _____ in. OR _____ cm Unknown

21c. BMI: _____ Unknown

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



URINE CULTURES ONLY: 22a. WAS THE URINE COLLECTED THROUGH AN INDWELLING URETHRAL CATHETER?

Yes No Unknown

URINE CULTURES ONLY: 22b. RECORD THE COLONY COUNT: _____

URINE CULTURES ONLY: 22c. 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.

- None Unknown Frequency Suprapubic tenderness Urgency Costovertebral angle pain or tenderness Dysuria Fever [temperature ≥ 100.4 °F (38 °C)]

- Symptoms for patients ≤ 1 year of age only: Apnea Lethargy Bradycardia Vomiting

URINE CULTURES ONLY: 22d. WAS A BLOOD CULTURE POSITIVE IN THE 3 CALENDAR DAYS BEFORE THROUGH THE 3 CALENDAR DAYS AFTER THE DISC FOR THE SAME MuGSI ORGANISM?

Yes No Unknown

23. WAS THE INCIDENT SPECIMEN POLYMICROBIAL?

Yes No Unknown

24a. WAS THE INCIDENT SPECIMEN TESTED FOR CARBAPENEMASE?

Yes No Laboratory not testing Unknown

24b. IF YES, WHAT TESTING METHOD WAS USED? (Check all that apply):

Non-Molecular Tests

- CarbaNP Carbapenemase Inactivation Method (CIM) Disk Diffusion/ROSCO Disk E-test Modified Carbapenemase Inactivation Method (mCIM) Modified Hodge Test (MHT) RAPIDEC Other (specify): _____ Unknown

Molecular Tests

- Automated Molecular Assay Carba-R Check Points MALDI-TOF MS Next Generation Nucleic Acid Sequencing PCR Other (specify): _____ Unknown

24c. IF TESTED, WHAT WAS THE TESTING RESULT?

Non-Molecular Test Results: Positive Indeterminate Negative Unknown

Molecular Test Results:

- NDM Pos Neg Ind Unk KPC Pos Neg Ind Unk OXA Pos Neg Ind Unk OXA-48 Pos Neg Ind Unk VIM Pos Neg Ind Unk IMP Pos Neg Ind Unk Other Pos Neg Ind Unk (specify) _____

25. WAS THE SAME ORGANISM (Q10) CULTURED FROM A DIFFERENT STERILE SITE OR URINE IN THE 30 DAYS AFTER THE DISC?

Yes No Unknown

IF YES, SOURCE: (check all that apply)

- Blood Bone CSF Internal body site (specify): _____ Joint/synovial fluid Muscle Peritoneal fluid Pericardial fluid Pleural fluid Urine Other normally sterile site (specify): _____

26. ENTEROBACTERIACEAE ONLY: WERE CULTURES OF STERILE SITE(S) OR URINE POSITIVE FOR A DIFFERENT ORGANISM (Q10) IN THE 30 DAYS BEFORE THE DISC?

Yes No Unknown N/A

IF YES, SOURCE: (check all that apply)

- Blood Bone CSF Internal body site (specify): _____ Joint/synovial fluid Muscle Peritoneal fluid Pericardial fluid Pleural fluid Urine Other normally sterile site (specify): _____

IF YES, INDICATE ORGANISM AND ASSOCIATED STATE ID FOR THE INCIDENT CLOSEST TO THE DISC:

- Escherichia coli Enterobacter cloacae Klebsiella aerogenes Klebsiella pneumoniae Klebsiella oxytoca

STATE ID: _____

27a. A. BAUMANNII CULTURES ONLY: WERE CULTURES OF OTHER STERILE SITE(S) OR URINE POSITIVE FOR ANOTHER A. BAUMANNII IN THE 30 DAYS BEFORE THE DISC?

Yes No Unknown N/A

IF YES, SOURCE: (check all that apply)

- Blood Bone CSF Internal body site (specify): _____ Joint/synovial fluid Muscle Peritoneal fluid Pericardial fluid Pleural fluid Urine Other normally sterile site (specify): _____

IF YES, STATE ID FOR THE INCIDENT CLOSEST TO THE DISC: _____

27b. A. BAUMANNII CULTURES ONLY: DID THE PATIENT HAVE A SPUTUM CULTURE POSITIVE FOR CRAB IN THE 30 DAYS BEFORE THE DISC?

Yes No Unknown N/A

27c. A. BAUMANNII CULTURES ONLY: RISK FACTORS IN THE 7 DAYS BEFORE THE DISC:

- 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

28a. WAS THE PATIENT POSITIVE FOR THE SAME ORGANISM IN THE YEAR BEFORE THE DISC?

Yes No Unknown

28b. IF YES, SPECIFY DATE OF CULTURE AND STATE ID FOR THE FIRST POSITIVE CULTURE IN THE YEAR BEFORE:

DATE OF CULTURE: ____ - ____ - ____

STATE ID: _____

29a. ENTEROBACTERIACEAE ONLY: WAS THE PATIENT POSITIVE FOR A MuGSI ENTEROBACTERIACEAE IN THE YEAR BEFORE THE DISC?

Yes No Unknown N/A

29b. IF YES, SPECIFY ORGANISM, DATE OF CULTURE, AND STATE ID FOR THE FIRST POSITIVE ENTEROBACTERIACEAE CULTURE IN THE YEAR BEFORE THE DISC:

- Escherichia coli Enterobacter cloacae Klebsiella aerogenes Klebsiella pneumoniae Klebsiella oxytoca

DATE OF CULTURE: ____ - ____ - ____

STATE ID: _____

30a. DID THE PATIENT HAVE A POSITIVE TEST(S) FOR SARS-CoV-2 (MOLECULAR ASSAY, SEROLOGY OR OTHER CONFIRMATORY TEST) ON OR BEFORE THE DISC?

Yes No Unknown

30b. IF YES, COMPLETE TABLE BELOW:

	Specimen collection date	Test type
FIRST positive test for SARS-CoV-2 on or before the DISC:	____/____/____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Molecular assay <input type="checkbox"/> Serology <input type="checkbox"/> Unknown <input type="checkbox"/> Other (specify): _____
MOST RECENT positive test for SARS-CoV-2 on or before the DISC:	____/____/____ <input type="checkbox"/> Unknown	<input type="checkbox"/> Molecular assay <input type="checkbox"/> Serology <input type="checkbox"/> Unknown <input type="checkbox"/> Other (specify): _____

30c. COVID-NET CASE ID: _____

30d. NNDSS IDs (please provide at least one of the following when applicable):

Local case ID: _____ Local record ID: _____ State case identifier: _____ Legacy case identifier: _____



31. 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	
	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												

32a. WAS CASE FIRST IDENTIFIED THROUGH AUDIT? Yes No

32b. CRF STATUS: Complete Pending Chart unavailable after 3 requests

32c. SO INITIALS: _____

32d. DATE OF ABSTRACTION: _____

32e. COMMENTS:

