

**2024 HAIC Multi-site Gram-negative Surveillance Initiative (MuGSI) Supplemental Surveillance Officer Survey**

Please answer the following questions for the year **2024, unless otherwise specified**. The purpose of the survey is to verify and document current surveillance procedures, including isolate collection and testing methods at clinical laboratories. Please enter your responses into the corresponding REDCap database. If you have questions, please contact Julian Grass ([hij3@cdc.gov](mailto:hij3@cdc.gov)) and Joshua Brandenburg ([ode4@cdc.gov](mailto:ode4@cdc.gov)).

Site: \_\_\_ CA \_\_\_ CO \_\_\_ CT \_\_\_ GA \_\_\_ MD \_\_\_ MN \_\_\_ NM \_\_\_ NY \_\_\_ OR \_\_\_ TN  
Person(s) Completing the Form: \_\_\_\_\_

Please note that the information collected in the sections below about specific MuGSI pathogens should only be completed for those sites that participate in those surveillance activities.

**Surveillance Area Characteristics**

1. What counties are under surveillance for MuGSI activities at your site?
  - a. Carbapenem-resistant Enterobacterales (CRE) surveillance area, please specify: \_\_\_\_\_
  - b. Carbapenem-resistant *Acinetobacter baumannii* (CRAB) surveillance area, please specify: \_\_\_\_\_
  - c. Extended-spectrum  $\beta$ -lactamases-producing Enterobacterales (ESBL-E) surveillance area, please specify: \_\_\_\_\_
  - d. **Invasive *Escherichia coli* (iEC) surveillance area, please specify:**  
\_\_\_\_\_
  
2. Is CRE reportable at your state/site? \_\_\_ yes \_\_\_ no
  - a. If yes:
    - i. Please describe your state reportable definition of CRE: \_\_\_\_\_
    - ii. **Where in your state is CRE reportable?**  
\_\_\_\_\_  
\_\_\_\_\_ Statewide  
\_\_\_\_\_ **Defined area, such as a county(ies).** Please specify \_\_\_\_\_
    - iii. Is isolate submission to the State Health Department Laboratory required?  
\_\_\_\_\_ yes \_\_\_\_\_ no **specify \_\_\_\_\_**
  - b. If no:
    - i. What mechanism do you have in place that allows for **surveillance officers** (SOs) to have access to CRE **laboratory reports** and medical records?  
\_\_\_\_\_ Agent of the state  
\_\_\_\_\_ State Health Department Regulation  
\_\_\_\_\_ Other, please explain: \_\_\_\_\_
    - ii. Does your state/site plan to make CRE reportable? \_\_\_ yes \_\_\_ no **unknown**  
**1. If yes, when does your state/site plan to make CRE reportable?**

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3. Is CRAB reportable at your state/site? \_\_\_ yes \_\_\_ no

a. If yes:

i. Please describe your state reportable definition of CRAB: \_\_\_\_\_

ii. Where in your state is CRAB reportable?

\_\_\_\_\_ Statewide

\_\_\_\_\_ Defined area, such as a county(ies). Please specify \_\_\_\_\_

iii. Is isolate submission to the State Health Department Laboratory required?

\_\_\_\_\_ yes \_\_\_\_\_ no

b. If no:

i. What mechanism do you have in place that allows for SOs to have access to CRAB laboratory reports and medical records?

\_\_\_\_\_ Agent of the state

\_\_\_\_\_ State Health Department Regulation

\_\_\_\_\_ Other, please explain: \_\_\_\_\_

ii. Does your state/site plan to make CRAB reportable? \_\_\_ yes \_\_\_ no   
unknown

1. If yes, when does your state/site plan to make CRAB reportable?  
\_\_\_\_\_

4. Is ESBL-E reportable at your state/site? \_\_\_ yes \_\_\_ no

a. If yes:

i. Please describe your state reportable definition of ESBL-E: \_\_\_\_\_

ii. Where in your state is ESBL-E reportable?

\_\_\_\_\_ Statewide

\_\_\_\_\_ Defined area, such as a county(ies). Please specify \_\_\_\_\_

iii. Is isolate submission to the State Health Department Laboratory required?

\_\_\_\_\_ yes \_\_\_\_\_ no

b. If no:

i. What mechanism do you have in place that allows for SOs to have access to ESBL-E laboratory reports and medical records?

\_\_\_\_\_ Agent of the state

\_\_\_\_\_ State Health Department Regulation

\_\_\_\_\_ Other, please explain: \_\_\_\_\_

ii. Does your state/site plan to make ESBL-E reportable? \_\_\_ yes \_\_\_ no   
unknown

1. If yes, when does your state/site plan to make ESBL-E reportable?  
\_\_\_\_\_

5. Is iEC reportable at your state/site? \_\_\_ yes \_\_\_ no

a. If yes:

i. Please describe your state reportable definition of iEC: \_\_\_\_\_

ii. Where in your state is iEC reportable?

\_\_\_\_\_ Statewide

\_\_\_\_\_ Defined area, such as a county(ies). Please specify \_\_\_\_\_

iii. Is isolate submission to the State Health Department Laboratory required?

\_\_\_\_\_ yes \_\_\_\_\_ no

b. If no:

i. What mechanism do you have in place that allows for SOs to have access to iEC laboratory reports and medical records?

\_\_\_\_\_ Agent of the state

\_\_\_\_\_ State Health Department Regulation

\_\_\_\_\_ Other, please explain: \_\_\_\_\_

ii. Does your state/site plan to make iEC reportable? \_\_\_ yes \_\_\_ no \_\_\_ unknown

1. If yes, when does your state/site plan to make IEC reportable?  
\_\_\_\_\_

### Laboratory Participation and Isolate Testing – Part 1

1. Please describe the clinical laboratories in the MuGSI catchment area:

a. CRE

i. Proportion of clinical laboratories serving the MuGSI CRE surveillance area with queries installed on their automated testing instrument (ATI) or laboratory information system (LIS): \_\_\_\_\_

ii. Numerator: Number of clinical laboratories serving the MuGSI CRE surveillance area with queries installed on their ATI or LIS: \_\_\_\_\_

iii. Denominator: Total number of clinical laboratories that receive and process specimens from residents of the MuGSI CRE surveillance area: \_\_\_\_\_

iv. Please describe how MuGSI CRE surveillance is conducted at laboratories where ATI/LIS queries are not installed (e.g., HL7 messages from LabCorp):  
\_\_\_\_\_

b. CRAB

i. Proportion of clinical laboratories serving the MuGSI CRAB surveillance area with queries installed on their ATI or LIS: \_\_\_\_\_

ii. Numerator: Number of clinical laboratories serving the MuGSI CRAB surveillance area with queries installed on their ATI or LIS: \_\_\_\_\_

iii. Denominator: Total number of clinical laboratories that receive and process specimens from residents of the MuGSI CRAB surveillance area: \_\_\_\_\_

iv. Please describe how MuGSI CRAB surveillance is conducted at laboratories where ATI/LIS queries are not installed (e.g., HL7 messages from LabCorp):  
\_\_\_\_\_

c. ESBL-E

i. Proportion of clinical laboratories serving the MuGSI ESBL-E surveillance area with queries installed on their ATI or LIS: \_\_\_\_\_

- ii. Numerator: Number of clinical laboratories serving the MuGSI ESBL-E surveillance area with queries installed on their ATI or LIS: \_\_\_\_\_
- iii. Denominator: Total number of clinical laboratories that receive and process specimens from residents of the MuGSI ESBL-E surveillance area: \_\_\_\_\_
- iv. Please describe how MuGSI ESBL-E surveillance is conducted at laboratories where ATI/LIS queries are not installed (e.g., HL7 messages from LabCorp):  
\_\_\_\_\_

d. iEC

- i. Proportion of clinical laboratories serving the MuGSI iEC surveillance area with queries installed on their ATI or LIS: \_\_\_\_\_
- ii. Numerator: Number of clinical laboratories serving the MuGSI iEC surveillance area with queries installed on their ATI or LIS: \_\_\_\_\_
- iii. Denominator: Total number of clinical laboratories that receive and process specimens from residents of the MuGSI iEC surveillance area: \_\_\_\_\_
- iv. Please describe how MuGSI iEC surveillance is conducted at laboratories where ATI/LIS queries are not installed (e.g., HL7 messages from LabCorp):  
\_\_\_\_\_

2. Did any laboratories drop out of participation in 2023? \_\_\_\_\_ yes \_\_\_\_\_ no

- a. If yes, how many? \_\_\_\_\_
- b. Why did these laboratories drop out of participation?  
\_\_\_\_\_

3. In 2023, did you identify additional laboratories, regardless of location, which identify MuGSI isolates from persons who are residents of the MuGSI surveillance area at your site?

\_\_\_\_\_ yes \_\_\_\_\_ no

- a. If yes, how many? \_\_\_\_\_
- b. If yes, how many of these laboratories were added? \_\_\_\_\_
  - i. If all new laboratories identified were not added, why not?  
\_\_\_\_\_

c. If yes, how did you identify these new laboratories?  
\_\_\_\_\_

d. Approximately how many cases are identified at the new laboratories each year among residents of the MuGSI surveillance area? \_\_\_\_\_

4. Did your site send any MuGSI isolates to CDC for characterization in calendar year 2023?  
\_\_\_\_\_ yes \_\_\_\_\_ no

- a. If yes, please describe how your site determines which MuGSI isolates to send to CDC:
  - i. CRE: \_\_\_\_\_
  - ii. CRAB: \_\_\_\_\_
  - iii. ESBL: \_\_\_\_\_
  - iv. iEC: \_\_\_\_\_
- b. If yes, how many clinical laboratories contributed MuGSI isolates:
  - i. CRE: \_\_\_\_\_
  - ii. CRAB: \_\_\_\_\_

iii. ESBL: \_\_\_\_\_

iv. iEC: \_\_\_\_\_

5. How many isolates with a specimen collection date in 2023 did you expect to be able to collect from the clinical laboratories?

\_\_\_\_\_ CRE; \_\_\_\_\_ CRAB; \_\_\_\_\_ ESBL; \_\_\_\_\_ iEC

6. What was the total number of isolates with a specimen collection date in 2023 that were collected from the clinical laboratories?

\_\_\_\_\_ CRE; \_\_\_\_\_ CRAB; \_\_\_\_\_ ESBL; \_\_\_\_\_ iEC

## Laboratory Participation and Isolate Testing – Part 2

Please complete the following information for each clinical laboratory participating in MuGSI surveillance at your site in 2023:

1. Laboratory ID: \_\_\_\_\_

2. Type of laboratory:

- clinical laboratory
- public health laboratory
- research laboratory
- reference laboratory

3. MuGSI pathogen(s) under surveillance:

- CRE
- CRAB
- ESBL
- iEC

4. Method for sharing laboratory reports with your site:

- electronic messaging, such as HL7
- e-mail
- fax
- EIP staff manually generate reports on-site
- other, please specify \_\_\_\_\_
- unknown

5. Method for case identification:

- automated testing instrument
- laboratory information system
- medical record
- other, please specify \_\_\_\_\_
- unknown

6. Type of ATI and card: \_\_\_\_\_

7. Carbapenem confirmatory testing method

a. Please report the carbapenem confirmatory testing method(s) performed for each MuGSI organism separately.

kirby bauer:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
other, please specify: _____	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
laboratory not testing	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
unknown	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC

8. Carbapenemase testing method

a. Please report the carbapenemase testing method(s) performed for each MuGSI organism separately.

**Non-molecular test methods**

carbaNP:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
carbapenemase inactivation method:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
CPO detect:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
disk diffusion/ROSCO disk e-test:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
modified carbapenemase inactivation method:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
modified hodge test:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
RAPIDEC:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
Other, please specify: _____	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
laboratory not testing:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
unknown:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC

**Molecular test methods**

automated molecular assay:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
carba-R:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
check points:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
MALDI-TOF MS:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
next generation nucleic acid sequencing:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
polymerase chain reaction:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
streck ARM-D:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
other, please specify: _____	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
laboratory not testing:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
unknown:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC

9. ESBL production testing method

a. Please report the ESBL production testing method(s) performed for each MuGSI organism separately.

broth microdilution – ESBL well:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
broth microdilution – ATI flag:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
broth microdilution – manual:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
disk diffusion:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
e-test:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
molecular test, please specify: _____	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
other non-molecular test, please specify: _____	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
laboratory not testing:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
unknown:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC

10. Organism identification method†

a. Please report the organism identification method(s) performed for each MuGSI organism separately.

MALDI-TOF:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
polymerase chain reaction:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
whole genome sequencing:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
DNA sequencing, please specify: _____	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
rRNA gene sequencing, please specify: _____	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
biochemical tests, please specify: _____	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
immunological techniques, please specify: _____	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
other, please specify: _____	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
laboratory not testing:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC
unknown:	_____	CRE	_____	CRAB	_____	ESBL	_____	iEC

b. Please specify the database or library for the instrument(s) selected above: \_\_\_\_\_

11. Culture-independent diagnostic test:

\_\_\_\_\_ yes, please specify the type of test \_\_\_\_\_

\_\_\_\_\_ If yes, is a positive test result always followed up by a culture? \_\_\_\_\_ yes \_\_\_\_\_ no \_\_\_\_\_ unknown

\_\_\_\_\_ no

\_\_\_\_\_ unknown

12. Isolate submission to state public health laboratory



- yes
- no
- unknown

13. Most recent year a check-in was completed for the laboratory: \_\_\_\_\_

14. Please describe the participating laboratory's policy on maximum duration of referral for antimicrobial susceptibility testing for successive isolates of the same MuGSI organism. Successive isolates are defined as two microorganisms with similar identification that was cultured from the same patient at two different time points. Please indicate if the policy differs depending on whether successive isolates were cultured from the same specimen source or different specimen source.

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**Additional information on MuGSI surveillance activities**

1. Does your site complete a survey for any of the following types of facilities:
  - a. Physician/Outpatient provider: \_\_\_\_\_ yes \_\_\_\_\_ no
    - i. If yes, the last survey was completed in: \_\_\_\_\_
  - b. LTCF: \_\_\_\_\_ yes \_\_\_\_\_ no
    - i. If yes, the last survey was completed in: \_\_\_\_\_
  - c. LTACH: \_\_\_\_\_ yes \_\_\_\_\_ no
    - i. If yes, the last survey was completed in: \_\_\_\_\_
  - d. Dialysis center: \_\_\_\_\_ yes \_\_\_\_\_ no
    - i. If yes, the last survey was completed in: \_\_\_\_\_
  - e. Hospital laboratory: \_\_\_\_\_ yes \_\_\_\_\_ no
    - i. If yes, the last survey was completed in: \_\_\_\_\_

2. In 2023, did your site update its inventory of facilities within the MuGSI surveillance area? \_\_\_\_\_ yes \_\_\_\_\_ no

a. If no, why not?

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b. If yes, how many facilities serve the MuGSI surveillance area? \_\_\_\_\_

c. If yes, how many facilities have you identified the clinical laboratory that serves it? \_\_\_\_\_

3. Does your site run a data edit program in addition to the CDC edit program that is sent out monthly? This could include the data edits available on the MuGSI Case Management System dashboard.

\_\_\_\_\_ yes \_\_\_\_\_ no

a. If yes, how often:

\_\_\_\_\_ Monthly

\_\_\_\_\_ Quarterly

\_\_\_\_\_ Other time frame, specify: \_\_\_\_\_

\_\_\_\_\_ Never

b. If yes, what type of edits are you running? Do you think they would be helpful to add to edits generated by CDC?

4. Did your site geocode MuGSI cases in 2023? \_\_\_\_\_ yes \_\_\_\_\_ no

a. If yes, what is the most recent year of surveillance data that was geocoded? \_\_\_\_\_

b. If no, why not?

\_\_\_\_\_  
\_\_\_\_\_

5. Did your site match MuGSI cases to the state vital statistics death registry in 2023? \_\_\_\_\_ yes \_\_\_\_\_ no

a. If yes, what is the most recent year of surveillance data that was matched? \_\_\_\_\_

b. If no, why not?

\_\_\_\_\_  
\_\_\_\_\_

6. Did your site complete CRF re-abstractions in 2023? \_\_\_\_\_ yes \_\_\_\_\_ no

a. If yes, what was the most recent year of surveillance data with CRFs re-abstracted? \_\_\_\_\_

b. If no, why not?

\_\_\_\_\_  
\_\_\_\_\_

7. What is the IRB determination for MuGSI at your site? \_\_\_\_\_ Research \_\_\_\_\_ Non-Research \_\_\_\_\_ Other \_\_\_\_\_ Unknown

## 8. General comments

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