Antimicrobial Resistance Surveillance Task Force (ARSTF)
CSTE National Assessment of Jurisdictional Antibiograms

Antimicrobial resistance surveillance, control, and prevention are growing responsibilities of public health agencies. Antibiograms are profiles of cumulative antimicrobial susceptibility results for specific microorganisms, usually compiled at a healthcare facility level, over a period of time (often annually). The Clinical and Laboratory Standards Institute (CLSI) publishes guidance for antibiogram development and data presentation though the M39 standards. Antibiograms have long been used by clinical care providers to make antibiotic prescribing decisions; however, they are also increasingly becoming seen as a valuable public health tool.

The Antimicrobial Resistance Surveillance Task Force (ARSTF) recommends the creation of jurisdictional antibiograms, which aggregate antimicrobial susceptibility profiles from multiple healthcare facilities over a broader geographic region (often at the state or county level), as a tool to help public health agencies conduct antibiotic resistance surveillance and engage local partners in antibiotic stewardship efforts.

Some public health agencies have already developed and are using jurisdictional antibiograms, while others are in the process of developing them. The purpose of this assessment is to evaluate public health agency experiences with the development and use of jurisdictional antibiograms. The ARSTF will use the assessment findings to develop recommendations and guidance regarding the technical assistance needs of public health to develop and use jurisdictional antibiograms.

While the most appropriate person to respond to the assessment may vary among public health departments, we are sending this assessment to the ELC-funded HAI Coordinator, with the understanding that the Coordinator may consult other individuals such as the State Epidemiologist, ELC-funded AR Expert, State Laboratory Director or State Microbiology Laboratory Director, State Healthcare Associated Infections Medical Director, or state surveillance informatics staff. We ask that each jurisdiction **only submit one** completed assessment.

The estimated time to fill out assessment is about 15-20 minutes. If accessed from the same computer, your assessment progress will be saved should you wish pause and come back to complete at a later time. For revisions after your assessment has been officially submitted, or other questions related to the assessment, please contact **Brooke Beaulieu at brooke@cste.org.**

In the coming months, the ARSTF will share aggregate findings from the assessment through various forums, including the CSTE Annual Conference, the ARSTF Year 3 Summary Report, and other communications avenues.

Thank you!

Deadline: Friday, May 24, 2019 at 11:59 PM PT

GLOSSARY:

Antibiograms and related concepts may be termed differently depending on the jurisdiction or institution. For consistency in interpretation and response, we have defined below various terms that appear throughout the assessment itself or that are conceptually related to the subject matter.

- **Antibiogram** – A listing of antimicrobial susceptibilities and resistances performed on a single isolate.

- **Cumulative Antibiogram** – A compilation of individual antibiograms into a single table containing a pairwise listing of the number of isolates and the rate of susceptibility to a given antibiotic. Antibiograms have commonly been developed for specific healthcare facilities ("facility-level") to guide empiric antibiotic therapy for patients at those facilities.

- **CLSI M39 -** A guidance document developed by the Clinical and Laboratory Standards Institute (CLSI) that describes methods for recording and analyzing antimicrobial susceptibility test data and provides guidance to clinical laboratories in the preparation of a cumulative antibiogram. The document contains specific recommendations for data collection, storage, analysis, and presentation. CLSI guidance functions as a standard for laboratory practice.

- **Multi-facility Antibiogram** - A compilation of multiple facility-level cumulative antibiograms across a defined geographic region within a given time frame for the purpose of tracking resistance patterns across a broader area.

- **Jurisdictional Antibiogram** (see also multi-facility antibiogram) – For the purposes of this assessment, we will use the term 'Jurisdictional Antibiogram' to refer to antibiograms developed by health departments that compile cumulative antibiograms across a specified jurisdictional or sub-jurisdictional level.

Section 1: Jurisdiction Information

1.Please select your jurisdiction (dropdown includes ELC-funded large cities):

▼ Alabama ... Wyoming

2. Complete the demographics of the primary respondent to this assessment:

- ○ First and Last Name: _____
- ○ Job Title/Role: _____
- ○ Email Address: _____
- ○ Telephone: _____

3. As necessary, please provide the names and roles of others consulted to fill out the assessment:

- ○ Additional Name and Role: _____
- ○ Additional Name and Role: _____
- ○ Additional Name and Role: _____
- ○ Additional Name and Role: _____

4. May CSTE staff contact you to follow up on specific responses?

- ○ No
- ○ Yes

Section 2: Jurisdictional Antibiogram Development and Specifications

5. Has your jurisdiction developed a jurisdictional antibiogram?

- ○ No
- ○ Yes, we have developed a jurisdictional antibiogram or are in the process of developing one
- ○ Yes, but we decided to discontinue. ***If selected, text box will display for specification.***

If respondents answer 'No' to this question, they will be directed to Q25. Skip patterns may affect the display of questions throughout the assessment.

Please answer the following questions regarding the development of your jurisdictional antibiogram. If your antibiogram is a discontinued activity, please give responses relevant to when it was an ongoing activity.

6. In which year did you start:

The initial process for developing the jurisdictional antibiogram? _____

Collecting data for the jurisdictional antibiogram? _____

Publicly distributing the jurisdictional antibiogram? _____

7. In terms of geographical stratification, is your jurisdictional antibiogram (check all that apply):

- ☐ Jurisdiction-wide
- ☐ Stratified by geographical sub-jurisdiction (e.g., metro areas, counties, division of a state)
- ☐ Stratified by health system (e.g., an organization consisting of a group of health facilities and services of the same or various types, such as hospitals, nursing homes, home health care)
- ☐ Stratified by type of facility (e.g., LTAC, nursing homes, etc.)
- ☐ Stratified by patient location (e.g., inpatient vs. outpatient, or by hospital ward/unit, ER)
- ☐ Stratified by other. ***If selected, text box will display for specification.***

Please answer the following questions related to your infrastructure for your jurisdictional antibiogram development.

8. For the most recently published year, how are data entered into your jurisdiction's antibiogram database? Check all that apply.

- [ ] Automated entry
- [ ] Manually entered

9. What IT platforms, databases, or software (e.g., SQL, Oracle, Access) do you use to:

Capture the data from facilities? _____

Store and manage the data? _____

Analyze the data and generate reports? _____

Please provide the following information regarding your public health agency's staff involvement in data collection and analysis for your jurisdictional antibiogram (excluding staff involvement of responding laboratories/health facilities).

Specify the types (disciplines) of your (state/territorial/city health department staff) involved in creating your jurisdictional antibiogram (Note: this does not include the staff from laboratories or health facilities that are submitting data to you). In this context, Full Time Equivalent (FTE) refers to 40 hours/week of effort on average split among one or more staff persons (e.g., an epidemiologist working 10 hrs/wk on the antibiogram on average over the year equals 0.25 FTE for that discipline).

Please check all that apply and specify number of FTE in the corresponding text field.

- [ ] Epidemiology staff. If selected, number of FTE per year: _____
- [ ] Informatics staff. If selected, number of FTE per year: _____
- [ ] Laboratory staff. If selected, number of FTE per year: _____

Please answer the following questions regarding data collection.

11. Is reporting of data for your jurisdictional antibiogram mandatory?

- ○ Not, it is voluntary. ***If selected, text box will appear asking to specify how jurisdictions encourage labs/facility to voluntarily submit.***
- ○ Yes, it is mandatory.

12. What is the source of data for your jurisdictional antibiogram? Check all that apply.

- ☐ Clinical laboratories
- ☐ Reference laboratories
- ☐ State public health laboratory (e.g., ARLN activity data)
- ☐ Healthcare providers (e.g., IP programs)
- ☐ Other. ***If selected, text box will display for specification.***

13. What is the method of data entry? Check all that apply.

- ☐ Unstructured: Health department staff enter the data once they receive it from the facilities/labs. I.e., “Send us what you’ve got”
- ☐ Structured: The facility/lab/provider enter the data into a form, spreadsheet, or online template provided by health department.

14. What is the approximate number of clinical microbiology laboratories in your jurisdiction (either number licensed if known, or number reporting infectious disease test results to the health department)? Please enter this response as a number.

15. What is the approximate number of facilities (those noted in Question 12) that you are requesting data from for your jurisdictional antibiogram? Please enter this response as a number.

16. Of those facilities from which you request data, approximately how many comply and submit? Please enter this response as a number.

Section 3: Use of Antibiograms and Adherence to Standards

17. How does your health department use your jurisdictional antibiogram? Check all that apply.
Tracking antibiotic resistance patterns over time

- [ ] Comparing antibiotic resistance between geographic regions or healthcare facilities/systems
- [ ] Benchmarking and comparing antibiotic resistance rates between facilities
- [ ] Creation of clinical messaging about antibiotic prescribing (e.g., guidelines for empiric therapy)
- [ ] Engagement of providers and facilities in coordinated stewardship initiatives
- [ ] Sending written reports back to facilities (education of labs, clinicians)
- [ ] Other. ***If selected, text box will display for specification.***

18. Do you assess if/how your jurisdictional antibiogram is being used by clinicians?

- ○ No
- ○ Yes. ***If selected, text box will display for specification.***

19. Do you have near-term (1-2 years) plans to improve your jurisdictional antibiogram?

- ○ No
- ○ Yes. ***If selected, text box will display for specification.***

Please provide information about the models or standards used in your jurisdictional antibiogram.

20. Does your jurisdictional antibiogram conform to the following CLSI M39 standards for a standard antibiogram? Check all that apply.

- [ ] Analyze/present data at least annually
- [ ] Include only final, verified results
- [ ] Include only susceptibility results with at least 30 isolates reported
- [ ] Include diagnostic (not surveillance) isolates
- [ ] Include the first isolate per patient, irrespective of body site
- [ ] Full profile of pathogen/drug susceptibility results
- [ ] Include only drugs routinely tested
- [ ] Present % susceptible (not % resistant)
- [ ] Calculate % fully susceptible (i.e. results do not include % with intermediate susceptibility)
- [ ] Trends in susceptibly over time
- [ ] Don’t know

21. Do you segregate data or perform analysis beyond that suggested for a standard antibiogram as listed below in M39 for enhanced antibiograms? Select all that apply.

- [ ] Location (E.g., outpatient vs. inpatient, unit specific)
- [ ] Specimen type (E.g., urine, blood)
- [ ] Clinical condition (E.g., cystic fibrosis, burn patient)
- [ ] Patient age (E.g., pediatrics vs. adults)
- [ ] Resistance phenotype (E.g., MRSA, MSSA; K. pneumoniae: all, carbapenem-R, carbapenem-S
- [ ] Resistance profiles

- [ ] % Susceptible for combinations of drugs (Piperacillin/tazobactam, ampicillin/sulbactum)
- [ ] % Susceptible for groups of organisms (E.g., all GNR from blood)
- [ ] % Non-susceptible
- [ ] % Susceptible dose-dependent (SDD)
- [ ] Don't know
- [ ] Other. ***If selected, text box will display for specification.***

22. What documents (including other jurisdiction's antibiograms) or standards have you used to develop and refine your jurisdictional antibiogram?

23. Please describe any external collaborations that have been convened to review and further the work of the health department's antibiogram activities. Examples include Advisory Councils, multidisciplinary workgroups (physicians, nurses, pharmacists, etc.).

24. If you have any samples of your antibiogram, protocols, technical assistance materials, or communications with labs and clinicians (e.g., letter templates, formal reporting templates, data request forms, etc.) that you are willing to share with the ARSTF, please attach the most recent versions via the file upload functionality below or link the online version in the text box below.

Use the prompt to upload a file.
Use the prompt to upload a file.
Use the prompt to upload a file.
Use the prompt to upload a file.
Please use the text box below to link any additional documents.

Section 4: Future Planning and Technical Assistance Needs

25. **Is your jurisdiction planning on developing a jurisdictional antibiogram in the near future (1-2 years)?**

- ○ No, we do not plan to develop a jurisdictional antibiogram. ***If selected, text box will display for specification on barriers to development.***
- ○ Yes, we plan to develop a jurisdictional antibiogram
- ○ Unsure at this time

26. Please relay any additional questions or thoughts your jurisdiction may have about developing a jurisdictional antibiogram.

Please provide information on which technical assistance components would be most beneficial to your jurisdiction as you plan to develop, improve, or use your jurisdictional antibiogram.

27. What would you like guidance or technical assistance on regarding jurisdictional antibiograms? Check all that apply.

- [ ] Education about the recommended standards (i.e., CLSI M39)
- [ ] How to develop a jurisdictional antibiogram
- [ ] Conducting a facility/laboratory assessment
- [ ] Data collection
- [ ] Data management and analysis
- [ ] Assessing and validating quality of the submitted data
- [ ] Presentation
- [ ] Using an antibiogram as a public health tool for tracking and reporting
- [ ] Evaluation of the development, implementation, and use of the jurisdictional antibiogram
- [ ] Other. ***If selected, text box will display for specification.***

28. What format would be most beneficial to provide this technical assistance? Check all that apply.

- [ ] Guidelines
- [ ] Toolkit (a collection of technical assistance materials, such as facility background information survey templates, database templates, model data presentation templates, sample letters to reporting sources and providers, etc.)
- [ ] Webinars
- [ ] Other. ***If selected, text box will display for specification.***

End of Assessment

Thank you for your time and thought in filling out this assessment. Responses will be used to inform recommendations and guidance regarding the technical assistance needs of public health to develop and use jurisdictional antibiograms. In the coming months, the ARSTF will share aggregate findings from the assessment through various forums, including the CSTE Annual Conference, the ARSTF Year 3 Summary Report, and other communication avenues. If you have specific questions about how the data might be disseminated or about the assessment generally, please contact Brooke Beaulieu (brooke@cste.org).

Please click “Next” to submit your responses.