Antimicrobial Resistance Surveillance Task Force (ARSTF)
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 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), has been recommended by the Antimicrobial Resistance Surveillance Task Force (ARSTF) 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, and a subsequent compilation of materials, possibly in a toolkit format.

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 survey is about 15-20 minutes. For questions please contact Brooke Beaulieu at brooke@cste.org or Rich Melchreit at richmelchreit@gmail.com.

Thank you!

Deadline: 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.

- **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.

- **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.

Section 1: Jurisdiction Information

1.Please select your jurisdiction:

▼ 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 we contact you to follow up on specific responses?

- ○ Yes
- ○ No

Section 2: Jurisdictional Antibiogram Development and Specifications

5. Has your jurisdiction developed a jurisdictional antibiogram?

- ○ Yes, and it remains a current activity
- ○ Yes, but we decided to discontinue. If selected, please specify reasons for discontinuation: _____
- ○ No

**If respondents answer 'No' to this question, they will be directed to Q24.*

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 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, please specify: _____

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

8. Is data collection automated or manually collected? Check all that apply.

- [ ] Automated
- [ ] 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 staff involved in creating your jurisdictional antibiogram. In this context, Full Time Equivalent (FTE) refers to individuals working 35-40 hours/week. 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?

- ○ Yes, it is mandatory
- ○ No, it is voluntary. If voluntary, please specify how you encourage laboratories/facilities to submit data. _____

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

- ☐ Clinical laboratories
- ☐ State public health laboratory (e.g., ARLN activity data)
- ☐ Healthcare providers (e.g., IP programs)
- ☐ Other. If selected, please specify: _____

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. Approximately how many clinical labs are licensed in your jurisdiction (including regional labs)?

_____

15. What is the approximate number of clinical labs from which you are requesting data for your jurisdictional antibiogram?

_____

16. Of those clinical labs from which you request data, approximately how many comply and submit?

_____

Section 3: Use of Antibiograms and Adherence to Standards

17. How do you 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)
- ☐ If not represented above, list the ways in which you are currently using your jurisdictional antibiogram within and beyond the public health department:

_____

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

- ○ Yes. If selected, how is the jurisdictional antibiogram being used by clinicians? (e.g., empiric therapy in nursing homes, stewardship)

_____

- ○ No

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

- ○ Yes. If selected, please describe these plans:

_____

- ○ No

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
- [ ] Overall antimicrobial susceptibility profile
- [ ] 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
- [ ] % Susceptible for groups of organisms (E.g., all GNR from blood)
- [ ] % Non-susceptible
- [ ] % Susceptible dose-dependent (SDD)
- [ ] Don't know
- [ ] Other, please specify:

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

_____

_____

_____

_____

_____

23. 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, 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.
U*se 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

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

- ○ We have already developed a jurisdictional antibiogram
- ○ Yes, we plan to develop a jurisdictional antibiogram
- ○ No, we do not plan to develop a jurisdictional antibiogram. If selected, please describe your barriers to developing: _____

25. 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.

26. 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, please specify: _____

27. 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, please specify: _____

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.