

Antimicrobial Resistance Communications and Media Support Services Focus Group Guide for Providers on Endemic Mycoses *FINAL: December 21, 2023*

Introduction; approx. 10 minutes

1. Welcome! Thank you for joining today's discussion. My name is **NAME**. I'm an independent researcher and moderator with KRC Research.
2. The sole sponsor of today's focus group discussion is I Centers for Disease Control and Prevention—CDC. Our conversation today will focus on a health topic.
3. I'm a professional researcher, but not a CDC employee or a subject matter expert on health topics. My role is to facilitate our conversation for the next 90 minutes. Let me tell you a bit about it.
 - a. There are no wrong answers. You may have different opinions. That's OK—all of your experiences and opinions are important, and we want to hear from all of you.
 - b. Since we are having these groups online, we will need to talk one at a time and let everyone have time to speak. Not everyone has to answer each question, but it's important that everyone participates throughout this conversation.
 - c. If at any time you can't see the screen well or have difficulty hearing, let me know. We have a technician here who can help us.
 - d. Please silence your cell phones and put away portable devices.
 - e. If you need to step away from our discussion for any reason, you don't have to ask for my permission—just step away and come back when you finish.
4. Because privacy is important, I'm going to share our Privacy Policy.
 - a. We will protect your privacy for today's discussion, and nothing you say will be reported in association with your name. We will use first names only during the conversation. You may choose to use a nickname or any other name you prefer.
 - b. Your participation is voluntary—you do not have to answer anything you are uncomfortable with.

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- c. Like our technician who is with us today virtually but who you do not see, a few colleagues are also with me virtually today to watch quietly and take notes.
- d. We are audio- and videorecording for transcribing of today's discussion. Because we are speaking with many groups like this one, it is important for me to have an accurate record of today's conversation.
- e. We ask that you not share participants' comments or participants' identities with others outside of this group.

Warm-Up; approx. 5 minutes

- 5. Thanks again for joining me today. We are having discussions with healthcare providers from mixed backgrounds and locations. Let's go around the virtual room and introduce ourselves to one another. Tell us...
 - a. Your first name
 - b. Where you're located
 - c. Your role or title
 - d. What type of practice setting you work in

Community-Acquired Pneumonia and Differential Diagnoses; approx. 15 minutes

I'd like to start our conversation by focusing on the topic of community-acquired pneumonia, or CAP.

- 6. How often do you see CAP in your patient population?
 - a. Which pathogens do you think tend to lead to pneumonia among your patients?
- 7. When you encounter patients with CAP, what pathogens are commonly included in your list of differentials? In other words, what are top candidate pathogens?
PROBE FOR MULTIPLE, DO NOT MENTION MYCOSES
 - a. What causes you to include the candidate pathogens you mentioned?
 - b. Do you include based on candidate pathogen prevalence in your population or your area? Severity or risk of the candidate pathogen? Other reasons?
- 8. When you see a patient with pneumonia, do you ever prescribe antibiotics before running any initial diagnostics?
- 9. When you do prescribe antibiotics for CAP, at what point do you determine if the antibiotics are or are not working? What would you do next if they weren't working?
- 10. Are fungal pathogens ever included in differential diagnoses for CAP? When?
- 11. What causes or would cause you to include fungal pathogens as part of CAP differentials?
 - a. What sparks (or has sparked) their inclusion as candidate conditions?
 - b. Do fungal pathogens generally come up early? Or later, after other candidate conditions are ruled out or after patients don't respond to treatment?

12. For those who say fungal pathogens aren't often included in differentials, why are they not included?

Fungal Pathogens Experiences; approx. 12 minutes

In the next part of our conversation, I'd like to talk about fungal infections in more detail.

13. How familiar are you with fungal infections causing CAP?
- What specific infections come to mind? Which are you aware of?
 - Are you aware of any mycoses that are endemic to your area? Which ones?
14. For those aware of specific fungal infections prevalent to your area, how did you learn about that? What sources can you recall? **PROBE:** specific sources, like news outlets, professional sources, CMEs, colleagues, encountered patient with endemic mycotic CAP, etc.
15. Here's three fungal infections, or mycoses, that are prevalent in different parts of the United States: blastomycosis, coccidioidomycosis (or valley fever), and histoplasmosis. **REFER TO SPECIFIC PATHOGENS WHENEVER POSSIBLE IN REMAINING DISCUSSION. AVOID REFERRING TO "ENDEMIC MYCOSES" DUE TO LIMITED USE/FAMILIARITY.**
- What do you know about any of these? Tell me about it.
 - ASK:** How are these different from each other?
 - Are any of these new or less familiar to you? Which ones?
16. Can you describe the severity, or range of severity of, symptoms you see or would expect to see in a patient with histoplasmosis, coccidiomycosis, or blastomycosis? How common is severe illness? Do you know of any populations that are at higher risk of becoming severely ill?
17. For those who have clinically suspected a fungal infection causing CAP, what motivated that decision?
- For those who haven't, what would cause you suspect it?
18. For those who have tested for coccidioidomycosis, histoplasmosis, and blastomycosis, what motivated that decision?
- What tests did you use?
 - Why did you decide to use that test or those tests in particular?
 - Were there other options you considered but decided against?

Challenges to Decisions, Tests, and Interpretation of Results; approx. 10 minutes

I'd like to focus more on testing for coccidioidomycosis, histoplasmosis, and blastomycosis. As part of that, I'd like to hear from the group about any challenges that are involved.

PREFACE WITH: When you share, if you are thinking primarily about one of these specific fungal diseases, please let me know which one you are speaking about. If you're speaking about all or multiple together, please also let me know that. **AS NEEDED, ASK RESPONDENT TO CLARIFY WHICH DISEASE OR DISEASES THEY ARE REFERRING TO IN NEXT SECTIONS, AS RESPONSES MAY BE VERY DIFFERENT BY DISEASE.**

19. First, how familiar are you with diagnostic testing for coccidioidomycosis, histoplasmosis, or blastomycosis?
20. What kind of testing have you used for each pathogen? (In-house or send-out testing?)
21. How does (or would) the process of ordering a test and conducting the test play out in your practice? Can you walk me through that briefly?
22. Let's think about the decision about whether and when to test. Just focus on the decision making for now. Is that a...
 - a. Simple decision? Difficult decision? Why, and under what circumstances?
 - b. What are the questions you have or challenges you face at this stage?
23. Now, let's think about the process of ordering and conducting these tests. Is that a...
 - a. Simple process? Difficult process? Why, and under what circumstances?
 - b. What are the questions you have or challenges you face at this stage?
24. Finally, let's think about interpreting diagnostic test results for coccidioidomycosis, histoplasmosis, and blastomycosis. Is that a...
 - a. Simple process? Difficult process? Why, and under what circumstances?
 - b. What are the questions you have or challenges you face at this stage?

Information Used and Needed; approx. 15 minutes

We've talked about challenges, and that leads me to the next topic: information.

25. Where have you looked for or received information about... **ASK EACH BELOW, WITH PROBES THAT FOLLOW**
 - a. Clinical diagnostic testing broadly?
 - b. Pneumonia?
 - c. Fungal pneumonia? **PROBE:** pneumonias that do not respond to treatment?
 - d. Coccidioidomycosis, histoplasmosis, and blastomycosis?
 - e. Non-fungal pneumonia? **PROBE:** pneumonias that do not respond to treatment?

FOR EACH ABOVE:

- a. What specific sources have you learned from? **PROBE:** people, platforms, publications, alerts, websites, etc.
- b. What sources have particularly useful information?
- c. Where would you look if you wanted more information about this topic? Why?

26. Let's focus on coccidioidomycosis, histoplasmosis, and blastomycosis again. What questions do you have about these diseases?
- What would you like to know more about?
 - What information on histoplasmosis, blastomycosis, or coccidioidomycosis have you looked for in the past and had a hard time finding or couldn't find?
27. What information would you want to have about coccidioidomycosis, histoplasmosis, and blastomycosis to address some of the challenges or questions we've discussed today?
- What information would you most want to have close at hand or easy to find quickly?
 - PROBE:** facts about mycoses, prevalence information, symptoms to include when thinking about differentials, testing information, guidance on interpretation, etc.
28. What resources would you like to have related to coccidioidomycosis, histoplasmosis, and blastomycosis, to help address some of the challenges or questions we've discussed?
- PROBE:** frequently asked questions, clinical guidance, algorithms, data, maps, etc.
29. What resources would be helpful to you to guide diagnosis of all types of pneumonias?
30. What format would be most useful for the information or resources you've mentioned? **PROBE:** bulleted summary pages, pocket cards, brief videos, podcasts, articles, visual algorithms, etc.
31. From what channels would you prefer to get information on this topic? **PROBE:** through EMR, email newsletters, webpages, periodicals and other publications, webinars, in-person conference sessions, etc.

Algorithms; approx. 20 minutes

In the last part of our discussion, I'd like to focus on clinical diagnostic algorithms for coccidioidomycosis, histoplasmosis, and blastomycosis.

32. **BRIEFLY:** First, are you aware of any such diagnostic algorithms for coccidioidomycosis, histoplasmosis, and blastomycosis? Which ones?
33. **BRIEFLY:** Have you used the algorithm you've mentioned?
- How was that experience?

I'm going to share a couple of examples of diagnostic algorithms for coccidioidomycosis, histoplasmosis, and blastomycosis on the screen. These were made by CDC and are available on CDC's website. I'm going to give us a minute or two to review each one, and then we'll talk about them.

SHARE ONE TO THREE ON SCREEN AS TIME ALLOWS:

[Community-Acquired Pneumonia \(CAP\) When to Think Fungus: Blastomycosis](#)

[Community-Acquired Pneumonia \(CAP\) When to Think Fungus: Coccidioidomycosis](#)
[Community-Acquired Pneumonia \(CAP\) When to Think Fungus: Histoplasmosis](#)

34. Now that you've had a brief chance to review, what are your initial reactions to what you've seen?
35. Are these easy to understand? What makes you say that?
36. What's confusing or unclear?
37. What questions do you have about any of these?
38. As presented here, how feasible would it be for you to implement these in your practice? Why?
- a. Would it be easy? Difficult?
 - b. What hurdles might stand in the way of implementing?
39. Do these seem useful?
- a. Do they address any of the questions or information needs you shared before?
40. Would you use these algorithms?
- a. **IF YES:** How often, and in what situations?
 - b. **IF YES:** How would you use them in practice—you yourself? Someone else? How would it play out?
 - c. **IF NO:** Why not?
41. How would you improve upon what you've seen? What would make them better?
42. What other information, if any, would you want to see in tandem with these?
43. Finally, what's your impression of how these look and how they're presented? Do you have any feedback on "look and feel?" **AS NEEDED, RE-ASK FOCUSED SPECIFICALLY ON THE ALGORITHM "DECISION TREE"**
- a. What about the "look and feel" is contributing to or taking away from their effectiveness?

Wrap Up; approx. 3 minutes

Thank you for your insights over the last hour-plus. We're going to wrap up in a moment. Just a couple important closing questions.

We've been talking about mycoses, and we've talked about how they fit into considerations about diagnosing pneumonia.

44. What would ultimately cause or help you to consider mycoses—fungal diseases—more often in the context of pneumonia?
45. What kind of messages should CDC be working on to help get the word out that mycoses should be considered in the context of pneumonia?

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46. Would combining messaging about viral, bacterial, and fungal pneumonias be useful? Do you feel like they need to be addressed separately?

MODERATOR THANK AND DISMISS