

Antimicrobial Stewardship KAP Survey

Hello!

You are being asked to participate in a research study, which focuses on reducing infections and antibiotic resistance at your institution. By completing this survey, you are consenting to participate in this study. This study is completely voluntary and there are no potential risks to participation. We are interested in providing the best possible antimicrobial stewardship education to prescribers.

Your answers to this survey will be recorded anonymously and will be used to guide the development of educational tools. It will take about 10-15 minutes to complete the survey.

Thank you for participating in this survey and sharing your perspective with us. Let's get started!

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The first set of statements reflect your opinions related to the medical community in the U.S.

1. Changes in antimicrobial prescribing practices could reduce antimicrobial resistance.

Strongly disagree

Disagree

Agree

Strongly agree

2. Prescribing subtherapeutic doses of antimicrobials can lead to antimicrobial resistance.

Strongly disagree

Disagree

Agree

Strongly agree

3. Antimicrobial stewardship programs reduce the problem of antimicrobial resistance.

Strongly disagree

Disagree

Agree

Strongly agree

4. In general, antimicrobial stewardship programs improve patient care and safety.

Strongly disagree

Disagree

Agree

Strongly agree

Antimicrobial Stewardship KAP Survey

The following statements are about your hospital in general.

5. Antibiotic resistance is a significant problem at this hospital.

Strongly disagree	Disagree	Agree	Strongly Agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

6. Antibiotics are overused at this hospital.

Strongly disagree	Disagree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. This hospital's antimicrobial stewardship program improves patient care and safety.

Strongly disagree	Disagree	Agree	Strongly agree	N/A
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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The following statements are about your personal experiences at your hospital.

8. Antibiotic restrictions at this hospital negatively affect patient care because I cannot prescribe the antibiotic I want.

Strongly disagree	Disagree	Agree	Strongly agree	N/A – my hospital has no restriction policies
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. This hospital's antimicrobial restriction policies delay antimicrobial administration to patients and negatively affect their care.

Strongly disagree	Disagree	Agree	Strongly agree	N/A – my hospital has no restriction policies
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

10. On most occasions, how long does it take to receive a response after paging for antimicrobial approval?

- <5min
- 5-15 min
- 16-30 min
- 31-60 min
- >60 min.
- I don't know
- N/A – my prescribing is not subject to approval

11. This hospital's antimicrobial approval system assists me in making the best treatment choices possible.

Strongly disagree	Disagree	Agree	Strongly agree	N/A – my hospital has no restriction policies
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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The following statements seek to assess your confidence with different aspects of antimicrobial prescribing. The results will be used to develop future educational tools.

12. I am confident that I know when to start antimicrobial therapy.

Strongly disagree	Disagree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. I am confident in my ability to choose the correct antimicrobial dose and interval for different sites of infection.

Strongly disagree	Disagree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

14. I am confident in my ability to choose the correct antimicrobial dose and interval for renal or hepatic function.

Strongly disagree	Disagree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

15. I am confident in my ability to use hospital-specific antimicrobial resistance patterns (antibiograms) to guide empiric antibiotic therapy.

Strongly disagree	Disagree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. I am confident in my ability to interpret *in vitro* antimicrobial susceptibility testing results.

Strongly disagree	Disagree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

17. I am confident in my ability to de-escalate antimicrobial therapy according to clinical evaluation and diagnostic test results.

Strongly disagree	Disagree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

18. I am confident in my ability to determine the duration of antibiotic treatment.

Strongly disagree	Disagree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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The following statements/questions seek to assess your knowledge and practices related to antimicrobial prescribing.

19. Improving my antimicrobial prescribing practices would reduce resistance at this hospital.

Strongly disagree	Disagree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

20. When prescribing empiric antibiotics, I prefer to be on the safe side and use the most broad-spectrum antibiotic possible for treatment.

Never	Rarely	Sometimes	Usually	Always
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

21. Antimicrobial resistance will be less of a problem in the future because many new antibiotics are being developed.

Strongly disagree	Disagree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

22. When selecting an empiric antibiotic, which of the following are you most concerned about? Choose **THREE**.

- Cost
- Emergence of resistance
- Covering all potential pathogens
- Impact on the microbiome
- Risk of *C. difficile*
- Toxicity
- Tolerability and side effects

23. When I am caring for outpatients with presumptive respiratory viral infection, I find it difficult to deny them antibacterial therapy if they demand it.

Strongly disagree	Disagree	Agree	Strongly agree	N/A – I don't work in an outpatient setting
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

24. In an inpatient setting, do you reassess your patients' antimicrobial therapy after 48-72 hours of starting therapy?

Never	Sometimes	Usually	Always	N/A – I work in the ED
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

25. Among patients hospitalized on ICU units at your hospital, the proportion of *S. aureus* resistant to methicillin (MRSA) is approximately:

- 15%
- 40%
- 60%
- 85%
- I don't know

26. Compared with cefazolin, ceftriaxone is more likely to lead to antimicrobial resistance.

- Yes
- No
- I don't know

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Continued... The following question seeks to assess your knowledge and practices related to antimicrobial prescribing.

27. Your patient has been admitted to a general ward with a UTI and has an isolate of *E. coli*. The patient is clinically stable and you are waiting on susceptibilities. Based on the antibiogram below, which antibiotic would you prescribe empirically?

- Ampicillin/sulbactam
- Levofloxacin
- Meropenem
- Ceftriaxone

□

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Continued... The following question seeks to assess your knowledge and practices related to antimicrobial prescribing.

28. You are caring for a patient with urosepsis. The urine culture returns with *E. coli* with the following susceptibilities. Which antibiotic would you prescribe?

- Ceftriaxone
- Piperacillin-Tazobactam
- Meropenem
- Cefazolin

□

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Continued... The following questions seek to assess your knowledge and practices related to

antimicrobial prescribing.

29. In which of the following situations is it appropriate to treat asymptomatic bacteruria? Choose all that apply.

- If the organism is multi-drug resistant
- If the patient is immunocompromised
- If the patient is pregnant
- If the patient has a foley catheter
- None of the above

30. Which antimicrobial agent(s) provide activity against most anaerobic bacteria? Choose all that apply.

- Piperacillin/tazobactam
- Ampicillin/sulbactam
- Levofloxacin
- Meropenem
- Aztreonam

31. Which antimicrobial agent(s) may provide activity against enterococci? Choose all that apply.

- Ceftriaxone
- Cefepime
- Piperacillin/tazobactam
- Vancomycin
- Ampicillin

32. Which antimicrobial agent(s) have similar intravenous and oral bioavailability? Select all that apply.

- Levofloxacin
- Fluconazole
- Linezolid
- First generation cephalosporin (e.g. cephalexin, cefazolin)
- None of the above

The following questions are related to antimicrobial prescribing resources and training.

33. Which resources do you use to guide antimicrobial management? Choose all that apply.

- Formal lectures
- Literature searches
- Pocket guides or handheld device-based resources (e.g., Sanford, Epocrates)
- Guidelines from professional societies (American Heart Association, Infectious Disease Society of America, etc.)
- Institution-specific web-based resources (formulary, antibiograms, empiric treatment guidelines)
- Web-based resources (UpToDate, Johns Hopkins Guide, MD consult, etc.)
- ID consultations
- Discussions with ID pharmacists
- The Red Book
- Textbooks

Other (please specify)

34. Are you aware of this hospital's empiric antimicrobial treatment guidelines?

- I am not aware of these guidelines
- I am aware of, but not familiar with, these guidelines
- I am aware of and familiar with these guidelines
- Not applicable - my hospital does not use these guidelines

35. Which component(s) of an antibiotic stewardship program do you think would be most helpful to improve patient care? Choose all that apply.

- Preauthorization (antibiotic approval)
- Review of antibiotic therapy at 48-72 hours and feedback to prescriber
- IV to PO conversion protocol
- Consultations to assist with selection of an appropriate agent
- Consultations to assist with selection of optimal drug dosing

36. Discussion with ID pharmacists is valuable in helping me plan antimicrobial management.

N/A – my hospital has no ID pharmacists

Strongly disagree	Disagree	Agree	Strongly agree	N/A – my hospital has no ID pharmacists
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

37. Through which venue(s) would you be most interested in receiving additional education related to antimicrobial prescribing and resistance? Choose all that apply.

- Grand rounds lectures
- Lecture series
- Case-based, small group problem-solving sessions
- Role-playing sessions dealing with patients demanding antimicrobial therapy
- Computer-based training resources

Other (please specify)

38. I have received adequate training on antimicrobial prescribing and use while at this institution.

Strongly disagree	Disagree	Agree	Strongly agree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

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Demographic Information

Please answer the following demographic questions to the best of your ability. All responses are recorded anonymously.

39. At which hospital do you work?

- Hospital A
- Hospital B
- Hospital C
- Hospital D
- Hospital E

40. Please select your primary specialty.

- Medicine and medical sub-specialties
- Surgery and surgical sub-specialties
- Pediatrics
- Adult Emergency Medicine
- Pediatric Emergency Medicine
- Ob/Gyn
- Anesthesiology/anesthesiology critical care group
- Other (psych and path)

Other (please specify)

41. Do you work more than 50% of the time in an ED?

- Yes
- No

42. Do you work more than 50% of the time in an ambulatory care setting?

- Yes
- No

43. Please select your highest academic degree or license:

- MD/DO
- NP
- PA

Other (please specify)

44. Please select your role.

- Attending physician
- Resident
- Fellow

Other (please specify)

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You chose 'resident' as your role.

45. Which year are you?

- PGY1
- PGY2
- PGY3
- PGY4+

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You chose 'attending' as your role.

46. How many years have you practiced medicine since you completed your residency?

- <5 years
- 5-10 years
- 10-19
- 20+

47. How many years have you practiced medicine at this institution?

- <5 years
- 5-10 years
- 10-19
- 20+

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Thank you for participating in this survey! We value your input and your time.

