

# Worldwide AMS Survey

## 1. Worldwide Antimicrobial Stewardship Survey

Dear Colleague

Worldwide Antimicrobial Stewardship Survey

On behalf of ESGAP [ESCMID STUDY GROUP FOR ANTIBIOTIC POLICIES] & ISC [INTERNATIONAL SOCIETY FOR CHEMOTHERAPY] Working Group for Antimicrobial Stewardship, we invite you to complete the first worldwide survey on Antimicrobial Stewardship. The survey is based on previous national surveys from around the world, and has been piloted and refined across all five continents. The results will be presented at each both ISC & ESCMID meetings, and data will be available to allow continental, national and local benchmarking of antimicrobial stewardship programmes.

We would like one person from each hospital to complete the survey. It would be helpful, where appropriate, if you could disseminate this survey link through your contacts or organisations. The survey uses the web-based software SurveyMonkey®. It will take between 30 to 45 minutes to complete the survey completely.

Could you please complete the survey NO LATER THAN MARCH 19TH 2012. After this time we will not be able to include your data in the analysis for ECCMID 2012 but we are still happy to hear from you. THE FINAL DEADLINE DATE IS 10/4/2012.

We have also sent you a PDF version of the survey to allow people to know what information is needed, but we need the survey completed on line to analyse the results.

The link to the survey is <http://www.surveymonkey.com/s/ESCMID-ISC-AMS>

If you have any problems accessing the survey using the link provided, please contact Philip Howard at [p.howard@leeds.ac.uk](mailto:p.howard@leeds.ac.uk) He will sort out another method for you.

We hope you are able to participate in this important survey. Many thanks in advance.

Yours sincerely,

Prof. Dilip Nathwani  
Chair of ESGAP  
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Dr. Gabriel Levy Hara  
Chair of ISC Antimicrobial Stewardship Working Group  
[glevyhara@fibertel.com.ar](mailto:glevyhara@fibertel.com.ar)

## 2. Please tell us about yourself and your institution

### \*1. Demographic information. What country and continent are you from?

	Country	Continent
Select one	<input type="text"/>	<input type="text"/>
Other (please specify)	<input type="text"/>	

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## \*2. Please complete the information about you and your healthcare institution

Name of person completing survey on behalf of hospital

Healthcare institution name

Job title:

City/Town:

State/Province/County

ZIP/Postal Code:

E-mail

## \*3. What is your role(s) in the hospital or organisation?

- |  |  |
|--|--|
| <input type="checkbox"/> Antimicrobial stewardship committee member        | <input type="checkbox"/> Chief executive             |
| <input type="checkbox"/> Drug and therapeutics committee member            | <input type="checkbox"/> Infectious Diseases doctor  |
| <input type="checkbox"/> Infection prevention and control committee member | <input type="checkbox"/> Medical Microbiology doctor |
| <input type="checkbox"/> Infection prevention control team                 | <input type="checkbox"/> Other doctor                |
| <input type="checkbox"/> Medical director                                  | <input type="checkbox"/> Pharmacist                  |
| <input type="checkbox"/> Nursing director                                  | <input type="checkbox"/> Nurse                       |
| <input type="checkbox"/> Senior management                                 | <input type="checkbox"/> Manager                     |
| <input type="checkbox"/> Other (please specify)                            |  |

## \*4. What type of hospital are you?

- Teaching tertiary hospital       District or general hospital       Private hospital
- Non-teaching tertiary hospital       Community hospital
- Other (please specify)

## \*5. How many In patient (overnight) beds do you have?

Please state actual number

## 3. Please tell us about Antimicrobial Stewardship and your institution

The terms used to define Antimicrobial stewardship programs may vary considerably: antibiotic policies, antibiotic management programs, antibiotic control programs, and other terms may be used more or less interchangeably. These terms generally refer to an overarching program to change and direct antimicrobial use at a health care institution, which may employ any of a number of individual strategies.

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## 6. Do you have national, regional or local standards for antimicrobial stewardship (AMS)?

	Yes	In preparation	No	Don't know
Does your country have standards for AMS?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does your region have standards for AMS?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Does your hospital / organisation have standards for AMS?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## \*7. Antimicrobial Stewardship structure, strategy and vision. Does your healthcare institution have the following?

	Yes	No	In planning	Don't know
Drug and Therapeutics Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Antimicrobial Stewardship Committee	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Published Antimicrobial Stewardship Strategy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Published Antimicrobial Stewardship annual workplan	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Published Antimicrobial Stewardship annual report	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Antimicrobial Stewardship policy or code of practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## \*8. Do you have an Antimicrobial Stewardship Programme?

Yes  No  Planned

## 4. Tell us about your current or planned Antimicrobial Stewardship Programme

### \*9. What are the barriers to you providing a functional and effective antimicrobial stewardship program (ASP)?

	Current ASP	Planned ASP
Lack of personnel or funding	<input type="radio"/>	<input type="radio"/>
Other higher priority initiatives	<input type="radio"/>	<input type="radio"/>
Administration not aware of ASP	<input type="radio"/>	<input type="radio"/>
Opposition from prescribers	<input type="radio"/>	<input type="radio"/>
Lack of information technology support and/or ability to get data	<input type="radio"/>	<input type="radio"/>
No barriers	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## 10. What are the three key objectives for your current or planned antimicrobial stewardship programme?

- |  |  |
|--|--|
| <input type="checkbox"/> Reduce or stabilise resistance  | <input type="checkbox"/> Prevent unintended harm                 |
| <input type="checkbox"/> Reduce Clostridium difficile infection and other healthcare acquired infections | <input type="checkbox"/> Reduce amount of antibiotic prescribing |
| <input type="checkbox"/> Reduce cost   | <input type="checkbox"/> Reduce length of stay                   |
| <input type="checkbox"/> Improve clinical outcomes   | <input type="checkbox"/> Reduce mortality                        |

Other (please specify)

## \*11. How many years has your AMS Programme been running?

Other (please specify)

## \*12. What is the (planned or actual) membership of your Antimicrobial Stewardship Committee? Please select a number.

	0	1	2	3	>3
Medical Microbiologist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Infectious Diseases (ID) doctor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other medical doctor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surgeon	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Critical Care doctor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Doctors in training	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Antimicrobial or ID pharmacist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pharmacy technician	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other pharmacist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Infection control staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurse	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scientist or laboratory staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Medical director	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nurse director	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data analyst / IT specialist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administrative support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

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## \*13. How often does (or will) the AMS Committee meet?

- Monthly or less
  Every 4 months
  Meets only when required  
 Every 2 months
  Every 6 months
  Never meets  
 Every 3 months
  Every 12 months or more
  Don't have an AMS committee  
 Other (please specify)

## \*14. How does (or will) the Antimicrobial Stewardship Committee (AMSC) interact with other committees and official bodies in the hospital?

	Rep attends AMSC meeting	AMSC rep is a member of both	AMSC annual report sent to them	No interaction	Don't know
Institution Board	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drug and therapeutics committee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Risk Management / Patient Safety Committee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infection prevention and control committee	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infection prevention control team	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medical director	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Nursing director	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Chief executive	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

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## 15. What dedicated resource does (or will) your Antimicrobial Stewardship Program have? Please enter the number of hours per week (whole numbers only).

Medical Microbiologist	<input type="text"/>
Infectious Diseases (ID) doctor	<input type="text"/>
Other medical specialty	<input type="text"/>
Surgeon	<input type="text"/>
Doctors in training	<input type="text"/>
Antimicrobial or ID pharmacist	<input type="text"/>
Pharmacy technician	<input type="text"/>
Other pharmacist	<input type="text"/>
Infection control staff	<input type="text"/>
Nurse	<input type="text"/>
Scientist or laboratory staff	<input type="text"/>
Data analyst / IT specialist	<input type="text"/>
Administrative support	<input type="text"/>

## \*16. How is (or will) your Antimicrobial Stewardship team funded?

	General hospital or departmental funding	Dedicated funding	Funded from savings on antimicrobials	Not applicable	Don't know
Medical Microbiologist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Infectious Diseases (ID) doctor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Antimicrobial or ID pharmacist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data analyst / IT specialist	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Administrative support	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="text"/>				

## 5. Please tell us about your Antimicrobial Stewardship Policy

### \*17. Do you have a published antimicrobial stewardship policy?

Yes
  No
  Don't know

Other (please specify)

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## \*18. What does your antimicrobial stewardship policy contain?

	Yes	No	Don't know
Emphasis of avoidance of use and risks of resistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emphasis of importance of documenting sepsis parameters	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emphasis of importance of documenting severity of illness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guidelines on specimen collection	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Antibiotic formulary (approved & reserve antibiotics)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advice on duration of therapy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Seek advice in case of uncertainty / complex infections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Review of IV therapy at 48 / 72 hours / day 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Automatic stop / review policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IV to oral switch therapy guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advice on monitoring serum antibiotic levels	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restrictions on access by pharmaceutical industry representatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## 6. Please tell us what Antimicrobial Stewardship strategies you have

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## \*19. What antimicrobial stewardship strategies do you use?

	Yes (all areas)	For some areas	No	Don't know
Antibiotic formulary (approved antibiotics)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restricted / reserve antibiotics needing authorization by indication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Treatment guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surgical prophylaxis guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Review of IV therapy at 48 / 72 hours / day 3	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Automatic stop / review policy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IV to oral switch therapy guidance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Programme for antibiotic cycling	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Microbiology / Infectious disease advice by phone	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Microbiology / Infectious disease advice on ward rounds	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Systematic ID/micro advice for bacteraemia	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dose optimization on request	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pre-authorized pharmacy driven dose optimization (e.g. automatic renal dose adjustments, IV to oral conversions, etc)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Separate antimicrobial prescription chart or section	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Care bundles (e.g. ventilator associated pneumonia)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inflammatory marker testing (e.g. procalcitonin) to prevent initiation of antibiotics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Inflammatory marker testing (e.g. procalcitonin) to stop antibiotics early	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restrictions on access by pharmaceutical industry representatives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## 7. Do you do antimicrobial stewardship ward rounds?

### \*20. Do you do antimicrobial stewardship (AMS) ward rounds?

Yes  No  Don't know

Other (please specify)

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## \*21. Which units do you do AMS ward rounds on?

	Daily	Weekdays	2x weekly	3x weekly	Once a week	Less than weekly	Never	Don't know
Medical wards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surgical wards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paediatric wards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ICU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

## \*22. Do you have results of the interventions from question 21 above?

- Yes
  No
  Don't know

## \*23. What has happened to antimicrobial consumption?

	Declined	Remained stable	Increased	Don't know	Not applicable
Overall	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Medical wards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Surgical wards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Paediatric wards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ICU	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Emergency department	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

## 8. Please tell us what is in your antimicrobial guidelines

### \*24. Do you have antimicrobial guidelines?

- Yes
  No
  Don't know

## \*25. What information do your antimicrobial guidelines contain?

	Yes	No	Don't know
Therapy for specific indications?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Situations when an antibiotic is NOT needed?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Diagnosis?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Investigations?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Individual drugs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drug class?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
First choice antibiotic?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Alternative choice (e.g. if allergic)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dosage?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dosage for special populations (e.g. renal or liver impairment?)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dosage for obese patients?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Route of administration?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Duration of prescription?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Micro-organisms covered by antibiotic tested?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Side effects?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Costs?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Directed or revision of therapy?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IV to oral switch guidance?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Evidence base?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to monitor guideline use?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ability to give feedback on guideline?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surgical prophylaxis guidelines?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Antifungal guidelines?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Antiviral guidelines?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

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## 26. How frequently are your antimicrobial formulary or guidelines updated?

	Every year	Every 2 years	Every 3 years	Yes but >3 years	Never	These don't exist
Antimicrobial formulary?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restricted antimicrobial list?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Empiric antimicrobial guidelines?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Directed antimicrobial guidelines?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surgical prophylaxis guidelines?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## 9. Please tell us about your reserve or restricted antimicrobials

### \*27. Do you have a restricted or reserve antimicrobial list or formulary?

- Yes
  No
  Don't know

Other (please specify)

### \*28. How is your restricted antimicrobial list enforced?

	Yes all areas	Yes except critical care (ICU)	No	No restriction	Not applicable	Automated dispensing
Pre-authorisation before 1st dose	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pre-authorisation before 2nd or further doses	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Pre-authorisation during working day only (e.g. 0900-1700 Mon to Fri)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Retrospective follow up of supply by pharmacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restriction outside of guidelines only	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## 10. How do you educate your staff on antimicrobial stewardship?

### \*29. Do you educate your staff on antimicrobial stewardship?

- Yes
  No
  Don't know

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## \*30. How do you educate your healthcare workers on prudent antimicrobial use?

Select all that apply per row.

	Senior doctors	Trainee doctors	Medical students	Nurses	Pharmacists	Other clinical staff (e.g. assistants)	None by this method
At induction - face to face	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At induction - e-learning	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
At induction - written information provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compulsory annual update	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Compulsory update 2 yearly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Short courses	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Don't educate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

## 11. How do you communicate with your staff about antimicrobial stewardship?

### \*31. Do you communicate with your staff about antimicrobial stewardship?

Yes

No

Don't know

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## 32. How do you communicate with other healthcare workers in your hospital?

	Formulary & restricted list	Empiric guidelines	Directed guidelines	Surgical prophylaxis guidelines	Antibiograms (hospital resistance map)	Antimicrobial usage	Learning points from incidents
Booklets	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Posters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Credit cards	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Intranet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Smartphone application	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
E-mail	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Newsletters (paper)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Screensavers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other staff meetings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Not communicated	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Don't know	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Other (please specify)

## 12. Please tell us about what antimicrobial audits you do

### \*33. Do you do antimicrobial audits?

- Yes
  No
  Don't know

# Worldwide AMS Survey

## \*34. What antimicrobial audits do you do?

	Monthly or less	Quarterly	Six monthly	Yearly	Never	Don't know
Clinical specialties audit their own practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Time to 1st dose in severe sepsis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Compliance to antibiotic choice against guidelines	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outcome of the 48/72 hour review	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Surgical site infection antibiotic prophylaxis	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cultures taken before starting antimicrobials	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Duration or review dates on antimicrobial prescriptions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Clinical indication on prescription	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Percentage of patients on IV antibiotics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Percentage of patients on IV antibiotics after 72 hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Glycopeptide or aminoglycoside level monitoring	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Infection Care Bundles (e.g. ventilator associated pneumonia, catheter associated bacteraemia)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## 13. Please tell us about how you measure the effectiveness of your antimicrobia...

### \*35. Do you monitor and report antimicrobial usage?

- Yes
  No
  Don't know

# Worldwide AMS Survey

## \*36. What antimicrobial usage do you monitor and report? DDD is defined daily doses. OBD is occupied bed day.

	Never	Yearly	Quarterly	Monthly	Other	Don't know
Expenditure at hospital level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Units at hospital level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DDD at hospital level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DDD/OBD at hospital level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Expenditure at speciality level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Units at speciality level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DDD at speciality level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
DDD/OBD at speciality level	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Point prevalence surveys	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Linked to infection rates	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Linked to antimicrobial resistance patterns	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## 14. Please tell us what impact you think your Antimicrobial Stewardship Program...

### \*37. Have you formally assessed your Antimicrobial Stewardship Programme?

Yes  No  Don't know

## 15. Please tell us what you think the impact of your ASP has been

### \*38. What did your formal assessment on the return on investment / economic viability for your antimicrobial stewardship programme?

	Positive benefit shown	No benefit shown	Don't know
Reduction in direct expenditure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in usage of broad spectrum agents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in length of stay / mortality metrics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in inappropriate prescribing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in healthcare acquired infections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in antimicrobial resistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other:

## Worldwide AMS Survey

### 39. If you haven't done a formal assessment, do you think there has been positive evidence for the antimicrobial stewardship programme in your hospital?

	Yes	No	Don't know
Reduction in direct expenditure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in usage of broad spectrum agents	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in length of stay / mortality metrics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in inappropriate prescribing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in healthcare acquired infections	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Reduction in antimicrobial resistance	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other:

## 16. Tell us about any antibiotic cycling or diversity you practice

### \*40. Do you practice antibiotic diversity (using a broad range of antibiotic classes to minimise resistance) or antimicrobial cycling (changing empirical treatment on a regular basis)?

	Yes across all areas	In critical care	In high risk patients only	No	Don't know
Deliberate diversity (mixing)?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restrict cephalosporins?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restrict fluoroquinolones?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Restrict carbapenems?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Cycling of antibiotics?	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## 17. Please tell us if you have any electronic prescribing

### \*41. Do you have electronic prescribing (computerized physician order entry [CPOE])?

- Yes, all patients
  Yes, adult patients only
  Don't know
- Yes, critical care patients only
  No
- Yes: selected patients (please specify)

## 18. Please tell us about your electronic prescribing

### \*42. What parameters does your electronic prescribing (CPOE) have?

	Yes, all patients	Yes, critical care patients only	Yes, selected patients: state	Yes, adult patients only	No	Don't know
ALL drug prescribing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
All antibiotic prescribing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In-Patient antibiotics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ambulatory (out patient) antibiotics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Must state duration	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Must state indication	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Approval for restricted antibiotics	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

## 19. Tell us about any electronic patient records or antimicrobial stewardship t...

### \*43. Do you have electronic patient records, automated or individual patient dispensing or automated data warehousing surveillance systems?

**Data warehousing links patient level data from pharmacy & microbiology systems and identifies where patients are on the wrong treatment e.g. SafetySurveillor, MedMined, TheraDoc, STELLARA, ABxAlert).**

	Yes, all patients	Yes, critical care patients only	Yes, adult patients only	Yes, selected patients: state	No	Don't know
Electronic patient records	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Automated antimicrobial dispensing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Antimicrobial dispensing to individual patients	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Data warehousing surveillance systems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Other (please specify)

THANK YOU VERY MUCH FOR YOUR TIME IN COMPLETING THIS QUESTIONNAIRE