



**Antimicrobial Stewardship in Community Pharmacy**

**Pharmacist version**

This study is led by the University of Strathclyde in collaboration with Health Improvement Scotland and is funded by NHS Education for Scotland. The purpose of this questionnaire is to explore community pharmacists’ awareness, attitudes and behaviours regarding antimicrobial stewardship and their engagement with the public to raise awareness of antimicrobial resistance and the appropriate use of antimicrobials. The results from this questionnaire will be used to inform future training and support for community pharmacy teams in Scotland. (This questionnaire was developed prior to COVID-19 **and does not focus upon COVID-19**).

The questionnaire takes up to 15 minutes to complete. If you work in more than one pharmacy, please answer based on the pharmacy to which the questionnaire was sent and not any of the other pharmacies in which you work.

The information that you provide in this questionnaire will be held in the strictest confidence and will be anonymised in publications and presentations that arise from this work. This study has received ethical approval from the Strathclyde Institute of Pharmacy and Biomedical Sciences, University of Strathclyde.

**If you choose to complete this questionnaire, this activity can contribute to your Continuing Professional Development portfolio.**

If you have any questions or comments, please contact the research team at the University of Strathclyde.

**Contact details of the research team:**

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**Are you a pharmacist?**

* Yes (Move to the consent form)
* No (Move to the next block then end the survey)

**You have indicated that you are not a pharmacist, therefore you are not eligible to complete the survey. The research team thank you for your interest.**

**If you are happy to participate, please sign the consent below:**

|  |  |
| --- | --- |
| I confirm that I have read the participant information sheet and fully understand the information provided | □ |
| I confirm that I have the opportunity to ask questions if needed by contacting the research team | □ |
| I understand that my participation in this study is voluntary and that I am free to withdraw at any time without giving reasons | □ |
| I understand that the data obtained from the questionnaire will be anonymised | □ |
| I understand that the results may be published in a peer reviewed journal and that the results will be reported to the funding body and other relevant organisations | □ |
| I agree to take part in the questionnaire | □ |

**Please print your name:**

**Date:**

**Knowledge of Antimicrobial Stewardship and Antimicrobial Resistance**

The following section explores general concepts of antimicrobial stewardship practice including antimicrobial resistance and the use of antimicrobials.

Please indicate your agreement or disagreement with each statement.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree |
| Antimicrobial resistance is a serious problem in Scotland |  |  |  |  |  |
| Stopping antimicrobial treatment early may cause bacteria to develop antimicrobial resistance |  |  |  |  |  |
| The overuse of antimicrobials in humans leads to antimicrobial resistance |  |  |  |  |  |
| The overuse of antimicrobials in animals leads to antimicrobial resistance |  |  |  |  |  |
| The lack of new antimicrobials is a serious problem |  |  |  |  |  |
| The increased uptake of the flu vaccine will result in fewer antimicrobial prescriptions |  |  |  |  |  |
| Individual efforts on antimicrobial stewardship have no impact on antimicrobial resistance problem |  |  |  |  |  |
| Inappropriate use of antimicrobial therapy contributes to patient harm |  |  |  |  |  |

**Antimicrobial Stewardship Strategies**

Please state your agreement or disagreement regarding which of the following strategies are appropriate for community pharmacy to reduce antimicrobial resistance. In addition, please indicate in the final column whether this strategy is currently undertaken in this pharmacy.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | Strongly agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree | **This is currently undertaken in this pharmacy** |
| The NHS should develop a service for diagnostic testing for suspected bacterial infections e.g., urinary tract infections via community pharmacy |  |  |  |  |  |  |
| **Community pharmacists should ..** | | | | | | |
| ..provide advice regarding the management of self-limiting illnesses to avoid the use of antimicrobials |  |  |  |  |  |  |
| ..promote hand hygiene |  |  |  |  |  |  |
| .. promote flu vaccination |  |  |  |  |  |  |
| ..ensure the provision of verbal or written information to patients/customers about antimicrobial resistance |  |  |  |  |  |  |

**Antimicrobial Stewardship Practice**

The following section explores types of antimicrobial stewardship practice when dealing with incoming prescriptions. For each of the following statements, please state the frequency with which you undertake any of the following activities.

1. **When dispensing an antimicrobial medicine, I…**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Always** | **Very often** | **Sometimes** | **Rarely** | **Never** |
| … ask the patient if they have any allergies |  |  |  |  |  |
| … contact the prescriber if the patient is allergic to the prescribed antimicrobial |  |  |  |  |  |
| … contact the prescriber if the antimicrobial dose/frequency does not comply with the BNF recommendations |  |  |  |  |  |
| … check the patient’s other medication for any possible drug interactions with the new prescription |  |  |  |  |  |
| … contact the prescriber if I find a drug interaction with the prescribed antimicrobial |  |  |  |  |  |
| … check if the choice of antimicrobial reflects local antibiotic prescribing guidelines |  |  |  |  |  |
| … contact the prescriber if the choice of antibiotic does not reflect local antimicrobial prescribing guidelines |  |  |  |  |  |

1. **When handing over ANY antimicrobial prescription, I advise the patient about ...**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Always** | **Very often** | **Sometimes** | **Rarely** | **Never** |
| .. the importance of completing the full course to avoid antimicrobial resistance |  |  |  |  |  |
| .. possible side effects |  |  |  |  |  |
| .. what should be done if they experience a side effect with their antimicrobial treatment |  |  |  |  |  |
| .. action to take if symptoms do not resolve with antimicrobial treatment |  |  |  |  |  |
| .. reading the patient information leaflet on the necessary information about their antimicrobial prescription |  |  |  |  |  |

**Antimicrobial Stewardship Activities**

The following statements are a list of possible activities related to antimicrobial stewardship. Please state how often you perform each of the following activities.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Always | Very often | Sometimes | Rarely | Never |
| Recommend flu vaccination to people at high risk of flu complications |  |  |  |  |  |
| Deliver public health campaigns (e.g., Keep Antibiotics Working) related to the appropriate use of antimicrobials |  |  |  |  |  |
| Provide patient advice and counselling on infection-related topics e.g., hand hygiene, appropriate use of antimicrobials |  |  |  |  |  |
| Provide advice on prevention of recurring symptoms e.g., recurrent urinary tract infection |  |  |  |  |  |

**Facilitators to Implementing Antimicrobial Stewardship**

Which of the following factors would help you to engage further with antimicrobial stewardship in your community pharmacy?

Please state your agreement or disagreement with the following statements.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree |
| Having accessible information on antimicrobial stewardship for community pharmacy teams |  |  |  |  |  |
| Collaboration with other healthcare professionals including local general practices |  |  |  |  |  |
| Having clarification of the recommended roles of pharmacy teams regarding antimicrobial stewardship |  |  |  |  |  |
| Having access to patient clinical data |  |  |  |  |  |
| Having access to patient laboratory data e.g., microbiology results |  |  |  |  |  |
| Public awareness campaigns that highlight the role of community pharmacy in antimicrobial stewardship |  |  |  |  |  |

**Engagement with Antimicrobial Stewardship Activities**

(1) Previous research has identified a range of factors that influence engagement with antimicrobial stewardship activities in community pharmacies.

Please state your agreement or disagreement with the following statements.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Strongly agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree |
| I have read local guidelines to support antimicrobial stewardship |  |  |  |  |  |
| I have sufficient knowledge and understanding of antimicrobial stewardship |  |  |  |  |  |
| I require more training to fully participate in antimicrobial stewardship |  |  |  |  |  |
| With the allocation of appropriate protected learning and funded time, I could complete training and participate in all aspects of antimicrobial stewardship |  |  |  |  |  |
| The support staff in this pharmacy have been trained to provide advice on the management of common infections |  |  |  |  |  |

(2) The following statements explore your engagement with antimicrobial stewardship. Please state to what extent you agree or disagree.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **As a community pharmacist, I..** | Strongly agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree |
| ..currently contribute to antimicrobial stewardship |  |  |  |  |  |
| ..am confident in my ability to contribute to antimicrobial stewardship |  |  |  |  |  |
| ..have a responsibility to take a prominent role in antimicrobial stewardship and infection prevention |  |  |  |  |  |
| ..believe the pharmacy support staff in this pharmacy currently contribute to antimicrobial stewardship |  |  |  |  |  |
| ..believe the role of the pharmacy support staff includes a responsibility to support the delivery of antimicrobial stewardship and infection prevention |  |  |  |  |  |
| ..have job satisfaction when I engage with patients about managing infection and prudent use of antimicrobials |  |  |  |  |  |
| ..feel confident about assessing patients’ clinical signs and symptoms associated with self-limiting infections to provide advice on whether self-care or referral is the best option |  |  |  |  |  |

**Scenarios**

**The following scenarios reflect commonly occurring situations that arise in community pharmacies. Please select all that apply.**

Scenario 1

A mother comes to the pharmacy to consult with you about her 4-year-old child who had an eye infection for 3 days, which of the following action(s) do you take:

1. Speak with the mother and give self-care advice about her child’s condition
2. Prescribe chloramphenicol 0.5% eye drops for 5 days
3. Refer to an optician
4. Refer to a GP
5. Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_

Scenario 2

A 35-year-old women has visited the pharmacy complaining about dysuria, urgency, and frequency of urination for the last five days. She had no abdominal pain and no blood in the urine. Which of the following action(s) do you take?

1. Speak with the patient and give self-care advice
2. Carry out an NHS Pharmacy First Consultation under the NHS Board UTI PGD to determine the appropriate treatment for the patient
3. Refer the patient to a GP
4. Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_

Scenario 3

Upon reviewing a prescription for a child (aged 6 years, ‘normal’ body weight), you notice that amoxicillin was prescribed as 250mg three times a day for 5 days, which of the following action(s) do you take:

1. Dispense the prescription
2. Dispense the prescription and provide counselling to the child’s guardian
3. Phone the GP to discuss the prescription
4. Refuse to supply the prescribed medicine
5. Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_

**Awareness and use of Education and Training about Antimicrobial Stewardship**

Please indicate which of the following resources you have read or completed (please tick all that apply)

|  |  |
| --- | --- |
|  | I have read/  completed the module |
| Royal Pharmaceutical Society “The pharmacy contribution to antimicrobial stewardship” [Link to the RPS resource](https://www.rpharms.com/Portals/0/RPS%20document%20library/Open%20access/Policy/AMS%20policy.pdf) |  |
| Royal Pharmaceutical Society Antimicrobial stewardship training national programme [Link to the RPS training](https://www.rpharms.com/development/education-training/training/antimicrobial-stewardship) |  |
| NHS Education for Scotland Antimicrobial stewardship module [Link to NES AMS module](https://learn.nes.nhs.scot/Scorm/Launch/24622) |  |
| NHS Education for Scotland “Pharmacy First” module [Link to NES Pharmacy First module](https://learn.nes.nhs.scot/Scorm/Launch/1596) |  |
| The British Society for Antimicrobial Chemotherapy Antimicrobial Stewardship E-Book [BSAC E-Book](http://www.bsac.org.uk/antimicrobial-stewardship-from-principles-to-practice-e-book/ebook-download/) |  |
| TARGET training resources [Link to RCGP TARGET resources](https://www.rcgp.org.uk/clinical-and-research/resources/toolkits/amr/target-antibiotics-toolkit.aspx) |  |

**Education and Training about Antimicrobial Stewardship**

**Have you received any previous education and training regarding antimicrobial stewardship and/or antimicrobial resistance?**

1. Yes
2. No

**Would you be interested in undertaking education and training about antimicrobial stewardship and/or antimicrobial resistance?**

1. Yes (take them to Q which asks them to specify topics for which they would want training and list some options)
2. No (needs to be directed beyond next question)

**What is your preferred format for training events related to antimicrobial stewardship?** (More than one choice) Please note that time will be provided for these events.

1. Direct face-to-face learning events
2. Distance learning/online courses
3. Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_

**Information about you and your pharmacy**

The following section includes questions about you as a pharmacist and your place of work. If you work in more than one pharmacy**, please answer based on the pharmacy to which this questionnaire was sent and not any of the other pharmacies in which you work.**

**How would you describe your gender identity?**

1. Man
2. Woman
3. In another way
4. Prefer not to say
5. Other (please specify) \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Do you have a prescribing qualification?**

1. Yes
2. No

**Are you an Antibiotic Guardian?**

1. Yes
2. No

**What is your year** of registration as a pharmacist? \_ \_ \_ \_

**For how many years have you worked in community pharmacy? \_\_\_**

**How many hours per week do you work in community pharmacy? \_ \_ hours**

**What is the highest degree you have completed?**

1. BSc/BPharm
2. MPharm
3. MSc/MPhil
4. PhD
5. Other (please specify)

**In which NHS Health Board do you primarily work?**

|  |  |
| --- | --- |
| 1. Ayrshire and Arran | 1. Greater Glasgow and Clyde |
| 1. Borders | 1. Highland |
| 1. Dumfries and Galloway | 1. Lanarkshire |
| 1. Western Isles | 1. Lothian |
| 1. Fife | 1. Orkney |
| 1. Forth Valley | 1. Shetland |
| 1. Grampian | 1. Tayside |

**What is your role in this pharmacy?**

1. Owner
2. Employee pharmacist
3. Pre-registration pharmacist
4. Locum
5. Other (please specify)

**Select what best describes this pharmacy (please tick one only)**

1. Independent, single pharmacy
2. Independent, 2-5 pharmacies
3. Independent, 6+ pharmacies
4. Company Chemist/Large chain e.g., Boots, Lloyds, Rowlands, Well, ASDA, Morrisons, Tesco, Superdrug
5. Other, please specify \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Is there is a consultation room/area available for use in this pharmacy?**

1. Yes
2. No

If you have any comments on the topics addressed by this questionnaire, please write them here. These comments could include any specific types of training you would prefer and/or any resources that you have useful on the topics addressed by this questionnaire, or any other relevant information.

|  |
| --- |
|  |

**Would you be interested in being involved with any future research initiatives in relation to antimicrobial stewardship in community pharmacy?**

1. Yes
2. No

**Do you want to be entered into the prize draw for £40 Amazon voucher?**

1. Yes
2. No

**Email address:**

(This will only be asked if participants answered **Yes** to at least one of the previous two questions)

**Thank you for your time to participate in this questionnaire, your input is invaluable, and it will be used to shape future initiatives. You will be sent information regarding antimicrobial stewardship after the survey period has ended.**