

Supplementary

Figure S1: Ethics approval consideration was put through the University of Manchester's ethics decision tool: https://www.training.itservices.manchester.ac.uk/uom/ERM/ethics_decision_tool/story_html5.html.

The figure consists of three screenshots of a web-based ethics decision tool. The browser address bar in all screenshots shows the URL: https://www.training.itservices.manchester.ac.uk/uom/ERM/ethics_decision_tool/story_html5.html.

Top Screenshot: Evaluation Start

Evaluation

You have indicated you are performing an **evaluation**.

Please answer the questions on your screen to determine whether ethical approval is needed.

Need help answering the questions? Click on the help icons for more information.

If you would like to start over, please click the 'Start Again' button below.

Start

Middle Screenshot: Evaluation Questions

Evaluation

You have indicated you are performing an **evaluation**.

Please answer the questions on your screen to determine whether ethical approval is needed.

Need help answering the questions? Click on the help icons for more information.

If you would like to start over, please click the 'Start Again' button below.

Start Again

1. Will you be collecting any personal identifiable information? **No**

2. Will any of the information be considered sensitive or confidential? **No**

3. Will the participants be from vulnerable or dependant groups? **No**

4. Is there a real risk of participants disclosing illegal/unprofessional conduct? **No**

Click for outcome

Bottom Screenshot: Outcome

Outcome: Evaluation

1 Personal information?
No

2 Sensitive/confidential?
No

3 Vulnerable groups?
No

4 Risk of disclosures?
No

Ethical approval not required

Based on the information you have provided, it does not appear that your project requires formal ethical approval.

If you are a student, you **must** verify this outcome with your supervisor before starting your project.

Any queries should be directed to your supervisor or [Ethics Signatory](#).

Please print a copy of this outcome for your records.

Figure S2: Antibiotic Guardian (pledgers blank consent form to be contacted).

**BECOME AN ANTIBIOTIC GUARDIAN
CHOOSE YOUR PLEDGE NOW!**

I AM A

HEALTH OR SOCIAL CARE
PROFESSIONAL OR LEADER
Select from the list below

MEMBER OF
THE PUBLIC
Select from the list below

STUDENT, EDUCATOR OR
SCIENTIST
Select from the list below

SELECT A PLEDGE MESSAGE
Messages will display below

OR
☐ I want to create my own pledge

TITLE*

FULL NAME*
First name Surname


EMAIL*

SELECT YOUR COUNTRY
United Kingdom

POSTCODE*
FIRST HALF POSTCODE only (HCPs please provide full work address postcode)

HOW DID YOU HEAR ABOUT US?
Select from the list below

PERMISSION TO FOLLOW UP*
May we contact you in the future about your antibiotic pledge?
☐ YES
☐ NO
May we contact you in the future about relevant events/activities and add you to our newsletter list?
☐ YES
☐ NO

☐ I'm not a robot  reCAPTCHA
Privacy Terms

SUBMIT

Figure S3: Questionnaire – consent page.



BECOME AN ANTIBIOTIC GUARDIAN

Keep Antibiotics Working

Evaluation of the Antibiotic Guardian 2019 & 2020 Campaign

 [redacted] (not shared) [Switch account](#) 

We are inviting members of Pharmacy Teams to complete this short survey regarding your experience with the Antibiotic Guardian campaign. Your participation is voluntary and your answers will provide us with a more detailed understanding of the campaign as part of our service evaluation.

We anticipate it will take 5 to 10 minutes to complete the questionnaire and your answers are strictly anonymous.
No identifiable information will be asked and your personal details and responses will be anonymised and stored securely.


Your responses will be analysed by Donna Seaton (MRes Public Health student) at the University of Manchester in collaboration with the Antibiotic Guardian campaign. Thank you in advance for your valuable time.



BECOME AN ANTIBIOTIC GUARDIAN

Keep Antibiotics Working

Evaluation of the Antibiotic Guardian 2019 & 2020 Campaign

 [redacted] (not shared) [Switch account](#) 

* Required

Q1. I understand that I am being asked to participate in a questionnaire regarding my Antibiotic Guardianship pledge and that my answers may form part of an analysis by Donna Seaton on behalf of the Antibiotic Guardian campaign. I understand that all my responses are confidential and anonymous and that I can withdraw from the evaluation at any time. *

☐ Accept and Continue

☐ Decline and End Questionnaire

Supplementary Material S1: Raw output of questions included in the distributed survey and the flow

Evaluation of the Antibiotic Guardian Campaign 2021

Start of Block: Consent

Thank you for choosing to pledge to become an Antibiotic Guardian through www.antibioticguardian.com. There are now over 135,000 pledges made! Remember, you can always pledge again to refresh your knowledge! We are inviting members of Pharmacy Teams to complete this short survey regarding your experience with the Antibiotic Guardian campaign. Your participation is voluntary and your answers will provide us with a more detailed understanding of the campaign as part of our service evaluation. We anticipate it will take 5 to 10 minutes to complete the questionnaire and your answers are strictly anonymous. No identifiable information will be asked and your personal details and responses will be anonymised and stored securely. Your responses will be analysed by Donna Seaton (MRes Public Health student) at the University of Manchester in collaboration with the Antibiotic Guardian campaign. Thank you in advance for your valuable time.

Q1. I understand that I am being asked to participate in a questionnaire regarding my Antibiotic Guardianship pledge and that my answers may form part of an analysis by Donna Seaton on behalf of the Antibiotic Guardian campaign. I understand that all my responses are confidential and anonymous and that I can withdraw from the evaluation at any time.

- ☐ Accept and continue
- ☐ Decline and end questionnaire

Skip To: End of Survey If Q1 = Decline and end questionnaire

End of Block: Consent

Start of Block: Demographics

Q2 When pledging, you selected you were a member of a Pharmacy Team: Select your pharmacy group: (select all that apply)

- ☐ Primary care pharmacist
- ☐ Hospital pharmacist
- ☐ Community pharmacist
- ☐ Academic pharmacist
- ☐ Pharmacy technician
- ☐ Pharmacy assistant
- ☐ Pharmacy dispenser
- ☐ Pharmacy counter assistant
- ☐ Pre-registration pharmacist
- ☐ Pre-registration pharmacy technician

Q3 what was your year of registration? (if not registered, what year did you begin working in the pharmacy sector?)

- ☐ Prior to 1970
- ☐ 1970 - 1979
- ☐ 1980 - 1989
- ☐ 1990 - 1999
- ☐ 2000 - 2009
- ☐ 2010 - 2019
- ☐ After 2019
- ☐ I don't know/Prefer not to say

Q4 what is your year of birth?

Q5 Select your gender identity

- ☐ Male ☐ Female ☐ Other ☐ Prefer not to say

End of Block: Demographics

Start of Block: Knowledge

Q6. To what extent do you agree/disagree with the following statement?

Strongly disagree (1)

Disagree (2)

Undecided (3)

Agree (4)

Strongly agree (5)

I do not understand/not applicable (6)

I know what antibiotic resistance is

Skip To: Q8 If Q6 = I know what antibiotic resistance is [strongly disagree]

Q7. To what extent do you agree/disagree with the following statements?

Strongly disagree (1)

Disagree (2)

Undecided (3)

Agree (4)

Strongly agree (5)

I do not understand/not applicable (6)

I know there is a connection between the prescribing of antibiotics and the emergence of antibiotic resistance

I know what information to give to individuals about prudent use of antibiotics and antibiotic resistance

I have sufficient knowledge about how to use antibiotics appropriately for my current practice

I have a key role in helping control antibiotic resistance

I have access to and utilise local antibiotic prescribing guidance

Q8. Please answer whether you believe these statements are true or false

True (1) False (2)

Antibiotics are effective against viruses

Antibiotics are effective against cold and flu

Unnecessary use of antibiotics makes them become ineffective

Taking antibiotics has associated side effects such as nausea, diarrhoea and skin rashes

Taking antibiotics may have associated risks such as drug allergy or Colitis associated with Clostridium

Difficile (C.Diff)

Every person treated with antibiotics is at an increased risk of antibiotic resistant infection

Antibiotic resistant bacteria can spread from person to person

Healthy people can carry antibiotic resistant bacteria

End of Block: Knowledge

Start of Block: Behaviour

Q9. In the last week, have you dealt with prescriptions for antibiotics or given advice to patients/prescribers on antibiotic use?

o Yes o No

Skip To: Q11 If Q9 = No

Q10. To what extent have you acted within the following statements?

never (1) occasionally (2) sometimes (3) most of the time (4) always (5) N/A (6)

In the last week if a customer/patient requested advice on a potentially self-limiting infection, I am satisfied that I have used this opportunity to provide self-care resources and give information/advice

I am aware of local guidance on antibiotics and in the last week checked prescriptions that did not comply with the prescriber before dispensing

In the last week I have faced challenges in advising patients due to Covid 19 restrictions (e.g. patient not being able to present in person)

I have ensured that health promotion materials about antibiotic use were available to my patients/customers and referred to these when necessary (e.g. leaflet in bag/displayed posters)

In the last week when dispensing antibiotics, I have ensured the patient has no known allergies to the medication (either verbally or by checking patients records)

End of Block: Behaviour

Start of Block: Capability

Q11 Where 0=strongly disagree and 10=strongly agree - to what extent do you score the following questions?

I am aware of World Antimicrobial Awareness Week (WAAW) which takes place every November

In the last year, my workplace team displayed health promotion material about antibiotic use/safety

Health promotion resources provided by agencies such as Public Health England are useful when providing intervention/counselling to patients/customers about antibiotic use

My workplace team has produced its own health promotion material regarding appropriate antibiotic use

Page Break

Q12 Does your place of work have an antimicrobial stewardship action plan in place?

o Yes, I am aware of the content

o Yes, but I am not aware of the content

o No

o I am not sure

Q13 Since pledging to become an Antibiotic Guardian, I have completed further training in antibiotic resistance, antibiotic use or infections

☐ Yes ☐ No ☐ I am not sure

Q14 Did you share your Antibiotic Guardian certificate on social media?

☐ Yes, on Facebook (1)

☐ Yes, on Twitter (2)

☐ Yes, on LinkedIn (3)

☐ Yes, on more than one social media channel (4)

☐ No (5)

End of Block: Capability

Start of Block: Motivation

Q15 Which of the following was the MAIN reason you chose to pledge to become an Antibiotic Guardian? (select one)

☐ I have personal experience with antibiotic resistance

☐ I have professional experience with antibiotic resistance

☐ Personal choice through general interest in stewardship or for professional development

☐ It was mandatory for me (as part of my work place training/expectations)

☐ The Covid 19 pandemic drew attention to the importance of antibiotic resistance and I wanted to play my part in supporting the campaign

Q16 Are you aware of the Pharmacy Quality Scheme?

☐ Yes (1) ☐ No (2)

Skip To: End of Survey If Q16 = No

Page Break

Q17 Did you know that an Antimicrobial Stewardship criterion has been added to the Pharmacy Quality Scheme?

☐ Yes (1) ☐ No (2)

End of Block: Motivation

Debrief:

Many thanks for completing the questionnaire, service evaluation provides valuable feedback to help continually improve and support the Antibiotic Guardian campaign. If you would like more information on the evaluation or the results of the survey, please email donna.seaton@postgrad.manchester.ac.uk or the project supervisor roger.harrison@manchester.ac.uk. Your feedback is highly valuable. Thank you.

Supplementary Table S1: Percentage (%) correct scores for true/false knowledge statements per pharmacy job role.

Knowledge Statement	Correct Answer	Community/ Primary Care Pharmacist	Pharmacy Technician	Hospital Pharmacist	Dispenser	Health Care Assistant	Academic Pharmacist	Pre- Registration Pharmacist	Manager/ Other*
Antibiotics are effective against viruses	FALSE	97	97	100	83	87	100	84	83
Antibiotics are effective against cold and flu	FALSE	97	97	100	83	87	100	95	100
Antibiotic resistant bacteria can spread from person to person	TRUE	77	56	90	50	49	100	95	58
Healthy people can carry antibiotic resistant bacteria	TRUE	91	92	98	84	82	100	100	83
Taking antibiotics has associated side effects such as nausea, diarrhoea and skin rashes	TRUE	99	95	98	98	96	100	95	100
Every person treated with antibiotics is at an increased risk of antibiotic resistant infection	TRUE	85	84	92	79	86	100	84	83
Taking antibiotics may have associated risks such as drug allergy or Colitis associated with Clostridium Difficile (C.Diff)	TRUE	93	83	100	67	79	100	100	83

Supplementary Table S2: Most common (by percentage %) responses per pharmacy job role for attitude and opportunity statements.

Table 5: Most common (by percentage %) responses per pharmacy job role for opportunity statements								
Knowledge Statement	Primary Care/ Community Pharmacist	Pharmacy Technician	Hospital Pharmacist	Dispenser	Health Care Assistant	Academic Pharmacist	Pre-Registration Pharmacist	Manager/ Other*
I know there is a connection between the prescribing of antibiotics and the emergence of antibiotic resistance	69.9% strongly agree	58.9% strongly agree	88.4% strongly agree	49.2% strongly agree	55.8% strongly agree	100% strongly agree	83.3% strongly agree	54.5% strongly agree
I know what information to give about prudent use of antibiotics and antibiotic resistance	58.1% strongly agree	38.7% strongly agree	62.8% strongly agree	46.5% agree	54.5% agree	75% strongly agree	50% agree	54.5% agree
I have sufficient knowledge about how to Use antibiotics appropriately for my current practice	55.7% strongly agree	46.4% agree	48.8% strongly agree	47.2% agree	46.6% strongly agree	100% strongly agree	55.6% agree	54.55% strongly agree
I have a key role in helping control antibiotic resistance	49.5% strongly agree	48.8% strongly agree	73.8% strongly agree	42.4% agree	39% agree	50% strongly agree	55.6% strongly agree	45.5% agree
I have access to and utilise local antibiotic prescribing guidance	35.8% agree	33.1% agree	79.1% strongly agree	42.5% agree	26.3% agree	50% strongly agree	33.3% strongly agree	60% agree