



# Prevalence of antimicrobial-resistant *Escherichia coli* and enterococcus species in pigs in the northern part of Malawi, and the knowledge, attitude and practices (KAP) among butchers.

ID:

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## Introduction

*Thanks for accepting to participate in this study that will enable us understand the resistance patterns of Escherichia coli and enterococcus species in pigs in the northern part of Malawi and the knowledge, attitudes and practices among butchers. Your answers will be **treated with confidentiality** and will be entirely **anonymous** such that they cannot be linked to you in any way.*

*Please answer the questions indicated below which are likely to take about **15 minutes**. You have been selected because you have pigs which were presented for slaughter. However, you may **discontinue participation at any time**.*

Epidemiological Information	
1. District	1. Chitipa 2. Karonga 3. Rumphi 4. Nkhata Bay 5. Mzimba
2. Location of the slaughter point	
3. GPS Coordinates	Lat.: ..... Long.:.....
4. Type of slaughter point	1. Abattoir 2. Slaughter house 3. Slaughter slab 4. Place without structures
5. How long have you been with the animals?	..... days

Socio-demographic Information	
6. Age Category	1. 18 – 35 2. 36 – 50 3. Above 50years
7. Level of education	1. Primary School and below 2. Secondary 3. Tertiary
8. Type of trade	1. Farmer 2. Butcher
9. How long have you been handling pigs	1. Less than 5years 2. 5 – 10 years 3. More than 10 years
10. Breeds presented for slaughter at the time of sampling and their quantities	1. Indigenous ..... 2. Exotics .....
11. Places of origin of the pigs	1. ..... 2. ..... 3. .....
12. Production system of the pigs	1. Extensive 2. Semi-intensive 3. Intensive
13. Condition of the sampled pigs	1. Healthy 2. Emaciated 3. Others? (Specify) .....
Knowledge of the Respondents towards Occupational hazards and AMR	
14. Do you know occupational health hazards	1. Yes 2. No
15. Do you know of any diseases which can be spread when handling carcasses	1. Yes 2. No
16. Mention any two diseases which can be spread at a slaughter place ?	1. ..... 2. .....
17. What do you understand by the term ‘antimicrobial resistance’?	..... ..... .....

19. Do you know how AMR can occur in pigs?	1. .... 2. ....
Attitudes of the Respondents towards Occupational hazards and AMR	
20. Do you think it's necessary to put on protective clothing when handling carcasses?	1. Agree 2. Disagree 3. Not sure
21. Do you think it's necessary to wash your hands after handling carcasses?	1. Agree 2. Disagree 3. Not sure
22. Do you think it's relevant to clean your slaughter equipment and hand tools?	1. Agree 2. Disagree 3. Not sure
23. How do you feel about adhering to withdraw periods when dealing with animals which were on treatment?	1. Important 2. Not Important 3. Not Sure
24. Do you believe your actions can spread diseases from animals to humans?	1. Agree 2. Disagree 3. Not sure
25. Do you think that AMR is a challenge?	1. Yes, both animals and humans 2. Yes, humans only 3. Yes, animals only 4. No
Practices of the Respondents towards Occupation hazards and AMR	
26. Do you put on protective clothing when handling carcasses?	1. Yes 2. No 3. Sometimes
27. Do you wash your hands after handling carcasses?	1. Yes 2. No 3. Sometimes
28. Do you hang the carcass during evisceration	1. Yes 2. No 3. Sometimes

29. Do you clean knives during slaughtering process?	1. Yes 2. No 3. Sometimes
30. Do you clean knives after slaughtering process?	1. Yes 2. No 3. Sometimes
31. If 'Yes/sometimes', what do you use to clean your knives during and after slaughter?	..... ..... ..... .....
32. If you have reared the pig(s) for at least 2 weeks, has it been on treatment during the period?	1. Yes 2. No 3. Others? (Specify).....
33. If "Yes", please provide the name of the medication used	1. .... 2. .... 3. ....
34. How can your actions contribute towards lessening the burden of AMR?	..... ..... ..... .....
<b>Thank you for taking time to complete this questionnaire</b>	