Enhanced assessment of knowledge, attitudes and practices; and, intervention (KAP+) on antimicrobial resistance and antimicrobial use

	INTE	RVIEWEE IDENTIFICA	TION	
INTERVIEW	HOUSEHOLD NUMBER:		DATE OF VISIT	:
EE				
NUMBER:				
INTERVIEW			TIME OF VISIT:	
ER'S NAME:				
RECORD TIME	AT THE BEGINNING OF	RECORD TIME AT TH	IE END OF THE II	NTERVIEW:
INTERVIEW:				
RESULTS:	RESTULTS CODE:			
	1 = completed	4 = refused		7 = dropped out
	2 = not at home	5 = partially complet	ted	8 = other (specify)
	3 = postponed	6 = no eligible perso	n	

PRIORITY DEMOGRAPHIC

#	Question	Answers with choices	Code	
SD1	What is your	Finished Post-Graduate Studies	_post-graduate	7
	highest	Finished Graduate Studies	_graduate	6
	education level	Finished College/Bachelor	_college	5
	attained?	Finished Certificate/Polytechnic/Technical	_technical	4
		Finished High School	_high school	3
		Finished Elementary	_elementary	2
		Some schooling but did not finish	_some schooling	1
		elementary		
		Did not go to school	_none	0
SD2	What profession	Proprietor/business owner	_proprietor	0
	do you consider	Company sales representative	_rep	1
	yourself in?	In-store salesperson/staff	_staff	2
		Veterinary pharmacists (employee)	_vet pharm	3
		Others (Please specify):	_*input*	4
SD3	Age		*input age*	
SD4	How many years	Less than 1 year	_less than 1 yr	0
	of experience do	1 year to 2 years	_1-2 yrs	1
	you have in your	More than 2 years to 5 years	_2-5 yrs	2
	work?	More than 5 years to 10 years	_5-10 yrs	3
		Over 10 years	_ 10+ yrs	4
SD5	As (please refer	large-scale business	_large-scale	2
	to how the	medium-scale business	_medium_scale	1
	respondent	small-scale business	_small-scale	0
	classified			
	himself/herself			
	professionally),			

			ı	
	how would you			
	classify your			
	store/company?			
SD6	According to	a	_*input answer*	2
	your experience,	I don't know, I was not the in-charge of its	_not in charge	1
	how does one	application (skip the next question)		
	apply a permit to	I don't know, I/we did not apply for one (skip	_did not apply	0
	operate as an	the next question)		
	agricultural	·		
	supplier/store?			
SD7	Mainly, who does	Large farm owners	_large farm owners	6
	your	Medium farm owners	_medium farm owners	5
	store/company	Small farm owners/Backyard animal	_small farm owners	4
	cater? (Please	producers		
	check all that	Large agri-store retailers	_large retailers	3
	apply.)	Medium agri-store retailers	_medium retailers	2
		Small agri-store retailers	_small retailers	1
		Others (please specify):	_*input*	0
SD8	Gender	Male	_male	0
		Female	female	1
		Others (please specify):	_*input*	2
SD9	In addition to	Yes	_yes	1
000	your degree,	No	no	0
	have you			
	attended an			
	informal training			
	related to animal			
	production?			
	1- : - 515151111			

KNOWLEDGE-RELATED QUESTIONS

#	Question	Answers with choices	Code	
K1	Can you describe what antibiotics are?	Yes No Don't know (go to Q4)	_yes _no _don't know	1 0 0
K2	If yes, what do you think antibiotics are intended for? (Please select all that apply.)	As treatment of all types of diseasesAs treatment of specific types of diseasesAs prevention of all types of diseasesAs prevention of specific types of diseasesAs growth boosterDon't knowOthers (please specify):	_treatment all _treatment spec _prevention all _prevention some _growth booster _don't know *input*	0 1 0 0 0 0
К3	Please list three antibiotics that you know.	A B C D. Can't remember (Don't read out until the respondent cannot provide answer)	_*input name* _*input name* _*input name* _*input name* _can't remember	1 1 1 0
K4	Have you heard of antibiotic resistance?	Yes No (Go to Q6)	_yes _no	1
K5	Select in the list below, what best describes antibiotic resistance. (please select all that apply)	 Antibiotic resistance is dangerous but don't know how to describe When an infection cannot be treated because the medicine is ineffective When bacteria develop resistance to one or more antibiotics I'm not sure or don't know (Don't read out until the respondent cannot provide answer) 	_dangerous but don't know _medicine is ineffective _bacteria develop resistance _don't know	0
K6 (a- g)	Where did you hear about antibiotic resistance?	From TV, please specify channel or program: (K6a)From radio, please specify station or program: (K6b)From my friends (K6c)From a village seminar (K6d)From my drug supplier/drug company (K6e)Social media such as Facebook, Twitter or Instagram (K6f)Others (Please specify): (K6g)	_*input*/no _*input*/no _*input*/no _yes/no _yes/no _yes/no _yes/no _*input*/no	1/01/01/01/01/01/01/0
K7	Can you describe what antibiotics are?	Yes No Don't know	_yes _no _don't know	1 0 0

K8	Please list three	a	_*input name*	1
	antimicrobials	b	_*input name*	1
	that you know	c Can't remember (Don't read out until the	_*input name*	1
		· ·	_can't remember	0
		respondent cannot provide answer)		
К9	Which of the	Antibacterials (1)	(tally number of	
	following are	Antifungals (1)	correct answers)	
	considered	Antivirals (1)	_4 correct	4
	antimicrobials?(Antivenom (0)	_3 correct	3
	Select all that	Antiparasitics (1)	_2 correct	2
	applies)	None of the above (0)	_1 correct	1
			_none	0
K10	Which of the	I have no idea what is AMR	_no idea	0
	following best	I have a little idea about AMR but not sure	_little idea	0
	describes your	if correct		
	understanding of	I understand basic information on AMR	_basic info	1
	AMR?	I understand how AMR arises, and how it	_etiology	1
		spreads		
		I have an advanced understanding of AMR	_advanced	1
			understanding	
V11	All autiusianalaiala	Truce	+m	
K11	All antimicrobials	True	_true	0
	in humans are	False	_false	1
	also used in	Other responses:	_*input response*	1
	animals, and all			
	antimicrobials in			
	animals are also used in humans.			
K12	There is a	True	truo	1
N12	difference	False	_true _false	0
	between	Other responses:	_*input response*	0
	antibiotics and	Other responses		0
	antimicrobials?			
K13	Have you heard of	Yes	Voc	1
K12	antimicrobial	No (Go to Attitude section)	_yes	0
	resistance	NO (do to Attitude section)	_no	0
	(AMR)?			
K14	Where did you	From TV, please specify channel or	_*input*/no	1
(a-	hear about	program: (K14a)		1
g)	antimicrobial	From radio, please specify station or	_*input*/no	1
8/	resistance	program: (K14b)	_ IIIput /IIO	1
	(AMR)?	From my friends (K14c)	_yes/no	1
	(/ \(\frac{1}{2}\) \(\frac{1}{2}\)	From a village seminar (K14d)	_yes/no	1
		From drug supplier/drug company (K14e)	_yes/no	1
		Social media such as Facebook, Twitter or	_yes/no	1
		Instagram (K14f)	_,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	1
		Others (Please specify): (K14g)	_*input/no	1
				1

K15	Which of the following is true regarding the nature of antimicrobial resistance (AMR)? (please select all that apply)	 AMR is when infections cannot be treated because medicine lose their potency or effectiveness. (1) AMR is when bacteria develop resistance to antimicrobials such as antibiotics (1) AMR emergence is accelerated with overuse and misuse of antibiotics. (1) AMR occurs when microorganisms change in response to the use of antimicrobials. (1) AMR can occasionally be transferred from one organism to another. (1) Don't know (0) 	(tally number of correct answers) _5 correct _4 correct _3 correct _2 correct _1 correct _don't know	5 4 3 2 1 0
K16	Which of the following is true about AMR as health issue? (Select all that apply)	AMR is a health issue concerning both animals and humans. (1)AMR occurs in human pathogens only. (0)AMR in food animals is detected by determining the amount of antibiotic residue in meat sample. (1)AMR is a global health threat. (1)AMR can be eradicated. (1)Don't know (0)	(tally number of correct answers) _5 correct _4 correct _3 correct _2 correct _1 correct _don't know	5 4 3 2 1
K17	Which of the following practices can contribute to the emergence of AMR? (Select all that apply)	Overuse of antimicrobials in animals (1)Use of antimicrobials in humans when it is not necessary (1)Discontinuing antimicrobial use once the patient (animal or human) shows improvement (1)Practicing prudent use of antimicrobials in animal (0)Practicing prudent use of antimicrobials in humans (0)don't know (0)	(tally number of correct answers) _5 correct _4 correct _3 correct _2 correct _1 correct _don't know	5 4 3 2 1
K18	Which of the following practices can help control/prevent the development of AMR? (Select all that apply)	Good vaccination programs (1)Good husbandry practices (1)Use of antimicrobials as growth promoter (0)Farm hygiene, sanitation, biosecurity (1)Prudent use of antimicrobials (1)None of the above (0)	(tally number of correct answers) _5 correct _4 correct _3 correct _2 correct _1 correct _none	5 4 3 2 1

ATTITUDE-RELATED QUESTIONS

		Perceived Severity		
A1	From a scale of 1 to 5 (1 being the least serious and 5 being very serious) how would you rate your situation if one of your family members had an infection that cannot be treated with medicine?	Very SeriousSeriousModerately SeriousSlightly SeriousLeast Serious	_very serious _serious _moderately serious _slightly serious _least serious	5 4 3 2 1
A2	Are you worried or concerned about how prepared you are in handling AMR issues in the future?	Seriously concernedConcernedSlightly concernedNot concerned at allNo opinion (Do not read to respondent until you are sure that they don't have an answer)	_seriously concerned _concerned _slightly concerned _not concerned at all _no opinion	4 3 2 1 0

A3(a-l). The following statements are what other people feel about antibiotics and antimicrobials.

Please rate your opinion on the following statements whether you: 1 = Strongly disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; or, 5 = Strongly Agree:

Attitude Statements ²	1	2	3	4	5
(A3a) Antimicrobials such as antibiotics protect both					
humans and animals from diseases					
(A3b) Antibiotics are important to improve animal					
production					
(A3c) It is good to keep antibiotics at home in case					
there may be a need for the animals later. ²					
(A3d) When animals start to show signs of being					
ill, they should be given antibiotics to prevent					
them from getting a more serious illness ³					
(A3e) Antibiotics would help animals to get better					
more quickly ³					
(A3f) Anti-biotic should be stopped as soon as the					
animal gets better ³					
(A3g) Skipping one or two doses does not					
contribute to the development of antibiotic					
resistance ³					
(A3h) Antibiotics are safe; hence, they can be					
commonly used ³					

(A3i) I find it hard to refuse a customer who asks for antibiotics even without prescription especially when			
	ļ		
s/he highly needs it.			
(A3j) If the animals get side effects during a course of			
antibiotics treatment one should stop giving them as			
soon as possible. ²			
(A3k) There is no danger in giving antibiotics to			
animals if properly used			
(A3I) Antibiotics should be given with prescription			

² Modified from Jifar and Ayele (2018) ³ Modified from Ahmad et al., 2015

A4(a-j). How do you think the following factors would affect your decision when prescribing/administering antimicrobials?

	Norma	itive Expectat	ions		
	1	2	3	4	5
	No :fl	Limited	Moderate	Substantial	Very
	influence	influence	influence	influence	strong influence
(A4a) Opinions of my family					iiiidence
members					
(A4b) Laboratory data					
(A4c) Opinions of the					
private industry					
(A4d) Client/farmer					
expectations					
(A4e) Opinions of					
Veterinary Professional					
groups					
(A4d) Data in scientific					
journals					
(A4e) Data from online					
search engines such as					
Google, Yahoo, Bing					
(A4f) Potential earnings or					
financial gain					
(A4g) Opinions of other					
veterinarians					
(A4h) Adherence to laws					
and legislation					
(A4i)Other factors (please					
identify):(A4j)					

PRACTICE/BEHAVIOUR-RELATED QUESTIONS

P1	What are the three	A.	_*insert name*	1
	bestselling OTC	B	_*insert name*	1
	drugs in your store?	C	_*insert name*	1
		D. Can't remember	_can't remember	0
P2	What are the three	A	_*insert name*	1
	bestselling	B	_*insert name*	1
	prescription drugs	C	_*insert name*	1
	in your store?	D. Can't remember	_can't remember	0
P3 (a-h)	What do you do when a client wants	Ask for a veterinarian/animal health specialist's prescription first (P3a)	_yes/no	1/0
	to buy a prescription drug	Inquire about the animal's condition and vital information (P3b)	_yes/no	1/0
	from your store? (Please select all that apply.)	I refuse to sell prescriptive drugs to clients who cannot produce a vet's prescription (P3c)	_yes/no	1/0
	3.00.366.00	If the condition requires the medicine, I dispense the drug even without a veterinarian's prescription (P3d) (go to	_yes/no	0/1
		P5)I explain the dosage and duration of	_yes/no	1/0
		the drug to the client (P3e) I ask the client to closely monitor the health of the animal(s) (P3f)	_yes/no	1/0
		I ask the client to give me an update on the animal's health (P3g)	_yes/no	1/0
		Others (please specify): (P3h)	_*input*/no	1/0
P4	In P3, if you	It's not required by the law (P4a)	_yes/no/na	1/0
(a-f)	dispense	It is not required by my	_yes/no/na	1/0
	prescription drugs	organization/business (P4b)		
	without a vet's	I don't feel the need (P4c)	_yes/no/na	1/0
	prescription, please	The clients prefer not to get the	_yes/no/na	1/0
	tell us why? (Select all that apply)	prescription (P4d)I do not want to refuse a client in need (P4e)	_yes/no/na	1/0
		Others: (Please specify)	_*input*/no/na	1/0
P5 (a-d)	Where do you source the antibiotics you	From reputable suppliers/distributor/representative (P5a)	_yes/no	1
	prescribe/sell? (Sele ct all that apply)	Another animal feed store/animal pharmaceutical store (P5b)	_yes/no	1
		From human pharmacy store (P5c)	_yes/no	1
		Others: (please specify) (P5d)	_*input*/no	1
P6	Do you always	Yes (go to P8)	_yes	1
	advise	Sometimes	_sometimes	0
	clients/customers	No	_no	0
			L	<u> </u>

	how to use antibiotics for use in farms?			
P7 (a-f)	In P6, if you answer "sometimes" or "no", please tell us why? (Select all that apply)	It's not required by the law (P7a)It is not required by my organization/business (P7b)I don't feel the need (P7c)I assume the client knows how to administer the drug (P7d)I have to entertain other customers (P7e)Others: (Please specify)(P7f)	_yes/no/na _yes/no/na _yes/no/na _yes/no/na _yes/no/na _*input*/no/na	1/0 1/0 1/0 1/0 1/0
P8	When do you advise clients/customers to use/buy antibiotics for use in farms?		_yes/no _yes/no _yes/no _yes/no _yes/no	1/0
P9	How do you advise client/customer on the use antibiotics in farms/animals?	As prescribed or as per manufacturer's recommendationsMore than what was prescribed or manufacturer's recommendationsStop using before the end of the prescribed course or manufacturer's recommendationsFor as long as I feel suitableOthers (Please specify):	_as prescribed _more than prescribed _stop before prescribed _as suitable *input*	0
P10	Do you keep a record of number of prescriptions you issue to clients/customers?	Yes No	_yes _no	1
P11 (a-e)	Have you advised the use of antibiotics to treat any of the following diseases? (Select all that apply)	Highly Pathogenic Avian Influenza/Avian flu (P11a)Foot and mouth disease (P11b)Classical swine fever (P11c)Newcastle disease (P11d)Others (Please specify): (P11e)	_yes/no _yes/no _yes/no _yes/no _*input*/no	1/0 1/0 1/0 1/0 1/0
P12 (a-f)	What do you usually advise to clients/farmers when they have excess antibiotics (Select all that apply)	Throw in the garbage (P12a)Bury in the ground (P12b)Burn them (P12c)Give to neighbors/other farmers (P12d)Keep them for future use (P12e)Others (Please specify):(P12f)	_yes/no _yes/no _yes/no _yes/no _yes/no _yes/no _yes/no	1/0 1/0 1/0 0/1 0/1 1/0
P13 (a-f)	What do you usually advise to clients/farmers	Throw in the garbage (P13a) Bury in the ground (P13b) Burn them (P13c)	_yes/no _yes/no _yes/no	1/0 1/0 1/0

	when they have expired	Give to neighbors/other farmers (P13d)	_yes/no	0/1
antibiotics (Select		Keep them for future use (P13e)	_yes/no	0/1
	all that apply)	Others (Please specify):(P13f)	_*input*/no	1/0
	,			,
P14 (a-f)	Where do you store your prescription drugs and	In a closed shelf under room temperature and out of direct sunlight (P14a)	_yes/no	1/0
	antibiotics? (Please select all that apply)	In a close shelf but under direct sunlight (P14b)	_yes/no	0/1
		In an open shelf under room temperature and out of direct sunlight (P14c)	_yes/no	1/0
		In an open shelf under direct sunlight (P14d)	_yes/no	0/1
		In the fridge with regulated temperature (P14e)	_yes/no	1/0
		Other (please specify): (P14f)	_*input*/no	1/0
P15	How often do you	Once a week	_once a week	1
	check the	Twice a month	_twice a month	1
	expiration dates of	Once a month	once a month	1
	the drugs including	I don't check at all	_don't check	0
	antibiotics?	Other (please specify):	_ _*input*	1
P16	What do you do	Pull them out of the shelf	_pull out	1
	when the drugs including antibiotics	Pull them out of the shelf and give to others for free	give	0
have reached their		Keep them in the shelf	_keep	0
	expiration date?	Other (please specify):	_*input*	0
P17	Does anyone from	Yes	_yes	1
	the government	No	, no	0
	monitor the antibiotics you are selling?	Can't remember	_can't remember	0

POLICY, INFORMATION, AND SOCIO-CULTURAL ENVIRONMENT

		T		
E1	Can you describe	Yes	_yes	1
	your country's laws	No (Go to E3)	_no	0
	on using prescription	Don't know (Go to E3)	_don't know	0
	veterinary drugs?			
E2	If yes, please list		_*insert name*	1
	down the laws you		_*insert name*	1
	know or are familiar	_don't know	_don't know	0
	with:	_not applicable	_na	0
E3	Can you describe	Yes	_yes	1
	your country's laws	No (Go to E5)	_no	0
	on	Don't know (Go to E5)	_don't know	0
	dispensing/disposing			
	veterinary drugs?			
E4	If yes, please list		*insert name*	1
	down the laws you		*insert name*	1
	know or are familiar	don't know	_don't know	0
	with:	_not applicable	_ _na	0
E5	Have you heard	Yes	yes	1
	about government	No (Go to E7)	_no	0
	programs on	Not sure (Go to E7)	not sure	0
	antimicrobial use in			0
	your community?			
E6	Can you name these		*insert name*	1
	programs?		*insert name*	1
	programs.	don't know	_don't know	0
		_not applicable	_na	0
E7	Have you been to an	Yes	yes	1
L'	assembly where	No	_ycs _no	0
	antimicrobial use	Don't remember	_no _don't remember	0
	was discussed?		_don tremember	0
E8	Based on what you	a	*insert name*	1
LO	heard, please recall	b.	*insert name*	1
	the top three	C.	_*insert name*	1
	messages that you	don't know	don't know	0
	got from the		_na	0
	assembly.	_not applicable		0
E9	Have you	Yes	_yes	1
	encountered	No (Go to E11)	_ycs _no	0
	information on anti-	No (GO to E11) Don't remember (Go to E11)	_no _don't remember	0
	microbial use in the	Don tremember (Go to E11)		0
	media?			
E10	Please recall the top		*insert name*	1
E10	three messages that	a	*insert name*	1
		b	_*insert name*	
	you got from the	C		1
	media.	don't know	_don't know	0

		_not applicable	_na	0
E11	Are you a member in agri-vet suppliers/vendors' organizations in your	Yes No	_yes _no	1
E12	community? Do you join suppliers/vendors' assemblies or seminars?	All the timeOftenRarelyNot at all	_all the time _often _rarely _not at all	2 1 0
E13	Do you discuss business management practices with your peers?	Yes No	_yes _no	1

INTENTION TO LEARN MORE ABOUT ANTIMICROBIALS

11	Please rate your	Interested	_interested	2
	interest in learning	Neutral	_neutral	1
	more about	Not interested	_not interested	0
	antimicrobials such			
	as antibiotics.			
12	What information	A	_*input name*	1
	about antimicrobials	B	_*input name*	1
	such as antibiotics	Don't know	_don't know	0
	do you want to			
	know more?			
13	From whom do you	Health experts (I3a)	_health experts	1
(a-c)	prefer to learn	Government Authorities (I3b)	_gov authorities	1
	about antimicrobial	Others (please specify): (13c)	_*input*	1
	use such as			
	antibiotics?			

COMMUNICATION PREFERENCE QUESTIONS

C1. Please rank your top three most preferred source of news (Let respondent tell you the first three sources of entertainment. Rank in the table below). Please indicate on average your time spent seeking entertainment your top three sources of news. (Ask respondent how much time they spend for their top three sources. Complete table below)

		Average time (hours/per day)			
Source	Rank (1-3)	Less than 1 hour	1-2 hours	2-4 hours	More than 4 hours
Television					
Radio					
Newspaper					
Internet					
Social media					
Others:	· · · · · · · · · · · · · · · · · · ·				

C2. Please rank your top three most preferred source of entertainment (**Let respondent tell you the first three sources of entertainment. Rank in the table below**). Please indicate on average your time spent seeking entertainment your top three sources of entertainment. (**Ask respondent how much time they spend for their top three sources. Complete table below**)

		Average time (hours/per day)			
Source	Rank (1-3)	Less than 1 hour	1-2 hours	2-4 hours	More than 4 hours
Television					
Radio					
Newspaper					
Internet					
Social media	_				
Others:					

C3. Please assess the time you spent using the media on an average day. Which one do you tend to do more: watching the news or watching entertainment? Please indicate your preferred media consumption using the continuum below. (**Present table below to respondents and let them point how they would rate their media consumption purpose**)

Only News	Mostly News	Balanced	Mostly	Only
			Entertainment	Entertainment
0	0	0	0	0

C4	Which media/informational sources do	Television	_yes/no	1/0
	you usually seek information on animal	Radio	_yes/no	1/0
	health issues? (Select all that apply)	Internet	_yes/no	1/0
		Social media	_yes/no	1/0
		Animal health worker	_yes/no	1/0

Other:	_*input*/no	1/0

C5. From the following list, rank the top three information materials you find most useful for providing information on animal health/farm issues.

Source	Rank (1-3)
Vet School	
Symposia and conferences in university	
Online courses	
Online websites and links	
Documentary	
Television	
Newspaper	
Online blogs	
Social media	
Others (please specify)	

Coding Guide for C1 and C2 (column name | code input):

Rank (C1_news1-3, C2_entr1-3 | tv, radio, newspaper, internet, SNS, *input*)

Ave. time (C1_avenewstime1-3, C2_aveentrtime1-3 | less than 1 hr, 1-2 hrs, 2-4 hrs, 4+ hrs)

Coding Guide for C3 (column name | code input):

Rank (C3_uesgrats | mostly news = 2, only news = 1, balanced = 3, only entertainment = 1, mostly entertainment = 2)

Coding Guide for C5 (column name | code input):

Rank (C1_prefmedia1-3 | vet school, symposia, online course, websites, documentary, tv, newspaper, blogs, SNS, *input*)