

# Questionnaire for Australian Wildlife Rehabilitators About Knowledge, Attitude and Practices regarding Q fever

#### PARTICIPANT INFORMATION STATEMENT

The School of Veterinary Science at the University of Sydney is conducting an important public health survey of **Australian** <u>wildlife</u> rehabilitators. The survey is being conducted by Karen Mathews for the award of a PhD under the supervision of Associate Professor Katrina Bosward. The results of this study will allow us to **increase current knowledge and understanding of Q fever disease in wildlife rehabilitators**.

You have been invited to participate in this study because you are, or have been, a wildlife rehabilitator who specifically looks after **Australian mammals**. Survey participation requires you to be a rehabilitator who specifically looks after Australian mammals and 18 years or older.

The survey will involve answering a series of questions regarding your **knowledge** of, and **attitudes** towards, **Q fever disease** and **Q fever vaccination** and your **practices** while rehabilitating **Australian mammals**.

Participation will involve completing an anonymous online questionnaire which should take should take on average **30 minutes t**o complete.

This study is confidential and you cannot be identified from your responses.

After you submit the questionnaire you will be redirected to the prize draw for an iPad Air 2. You can choose whether or not you would like to enter this. Please note that this is done via a separate link which will not be linked to your responses to this questionnaire to ensure that your responses remain anonymous.

You may view and download a Participant Information Sheet containing further information on the study by clicking on the link below.

Thank you very much for participating in this research study on Q fever, your responses will greatly assist in increasing our understanding of this important disease.

Regards,

Associate Professor Katrina Bosward

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This study is being conducted with ethical approval from the Human Research Ethics Committee of the University of Sydney (protocol number XYZ). Any person with concerns or complaints about the conduct of a research study can contact the Manager for Ethics Administration, University of Sydney on -

Telephone: +61 2 8627 8176

email: <u>human.ethics@sydney.edu.au</u> Fax: +61 8627 8177

[INSERT link to detailed PIS]

\*I have read the Participant information statement and I would like to participate in this survey

- Yes (Granted Access to questionnaire)
- No You have selected an option that triggers this survey to end right now. To save your responses and end the survey, click the button below to do so. If you have selected the wrong option by accident and do not wish to leave the survey, you may click the other button below to continue, which will also remove the value of the option you just selected to allow you to enter it again and continue the survey.

## Important information before you start the questionnaire

- For each question, please click on the box(es) that best applies and follow instructions for questions where more than one box can be checked.
- Boxes can be un-checked if you want to change your answer.
- In this survey 'wildlife' refers only to Australian mammals.
- \* Indicates a question is compulsory

	Section 1: Questions a	bout you and where y	you look after wildlife
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1.1	*In your role as a wildlife rehabilitator have you looked after Australian mammals?
	□ Yes
	$\Box$ No $ ightarrow$ skip to page notifying the respondent they are ineligible to do the survey
1.2	*Gender
	Female
	Male
	Prefer not to say
	Prefer to self-describe
1.3	*What is your age?
1.4	*Highest level of education that you have completed
	Please check one box only
	□ High school level
	□ TAFE or Private Colleges
	University
	Postgraduate studies (PhD, Masters etc.)

#### 1.5 \*Postcode where you live?



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- 1.6 \*Are you currently an active wildlife rehabilitator?
  - □ Yes
  - $\Box$  No  $\rightarrow$  if no, which year <u>did you last look</u> after wildlife? Please estimate if unsure
    - (e.g. 1999)
- 1.7 \*How many years in total have you been /were you a wildlife rehabilitator, directly working with Australian mammals?

□ 1-5

□ 5-10

- $\Box$  more than 10
- 1.8 \*Are/were you associated with a licensed wildlife rehabilitation group?

□ Yes If yes, which one(s)? Please indicate in table below

🗆 No

Please check all boxes that apply

WIRES	Native Arc (WA)	
Wildlife Victoria	Fourth Crossing Wildlife	
Wildlife Rescue	FAUNA	
Wildlife Rescuers (VIC)	Brisbane Area Rescue Network	
Wildlife ARC	Native Animal Rescue (WA	
Wildcare NT	Native Animal Network Inc. (SA	
Wildcare Australia	LAOKO	
Wildlife Aid	AWARE	
WAWRC	Australian Animal Rescue	

Tweed Valley Wildlife Rehabilitators	ACT Wildlife	
SMWS	North Queensland Wildlife Care	
Snowy Mountains Wildlife Rescue	AWARE	
ONARR	Northern Rivers Wildlife Carers	
Northern Tablelands Wildlife Carers	Other Please specify below	
Qld Wildlife Carers & Volunteers Assoc		

#### 1.9 \*Where do/did you primarily look after Australian wildlife?

Check all boxes that apply

 $\Box$  private redidence

 $\Box$  private animal care facility not associated with a private residence, that is not open to the general public (eg. wildlife rescue and rehabilitation facility)

□ animal care and housing facility that is open to the general public (eg. zoo)

□ veterinary clinic

 $\Box$  other please specify below

- 1.10 \*What is the postcode at which most of your wildlife caring is/was undertaken?
- 1.11 \*Do/did you look after wildlife at your own property?
  - □ Yes
  - $\hfill\square$  No  $\rightarrow$  Please proceed to **Question 1.14**

- 1.12 \* If you rehabilitate wildlife on your own property, where are the animals housed? *Please check each box that applies* 
  - $\Box$  In the house where you live
  - □ In a separate building or outside enclosure (e.g. cage, shed, yard, aviary)

1.13 \*How many people live in your household?

- 1.14 \*Please indicate, how many animals you look after per year.
  - □ 1 10 □ 10-30 □ 30-50 □ more than 50

## Section 2: Questions about the wildlife you look after and nearby animals

2.1 \*What type of Australian mammal do you, or have you, look(ed) after in your role as a wildlife rehabilitator?

Please check boxes for <u>all</u> animal types and species that apply

Kangaroos	Possums	
Wallabies	Wombats	
Wallaroo	Koalas	
Pademelon	Flying-foxes	
Bandicoots	Echidnas	
Other native mammals Please specify		6

KAP Knowledge, attitude and practices of Australian wildlife renabilitators in relation to Q rever\_ 25-6-18 V5 \_2018/270 Karen Mathews 2.2 \*The following table of questions relates to animals <u>living on the same property</u> where you look after wildlife. This may be as pets, farmed animals or animals passing through.

Please answer to the best of your knowledge and check **YES** if the situation applies.

Animal species	Living on same property as the wildlife in your care	Have direct contact with the wildlife in your care	Have direct contact with you
Wildlife species	YES	YES	YES
Kangaroos	$\boxtimes$		
Wallabies			
Possums			
Bandicoots			
Flying-foxes			
Koalas			
Wombats			
Echidnas			
Birds			
Reptiles	eptiles 🗌		
Rabbits			
Mice and rats			
Other Please specify			
None of the above			
Domestic species	YES	YES	YES
Cattle			
Sheep			
Goats			
Horses			
Pigs			
Poultry			
Cats			
Dogs			
Pet rabbits			
Pet mice or rats			
Other Please specify			
None of the above			

#### 2.3 \*The following table of questions relates to <u>animals living outside of the property</u> <u>boundaries, but within 2km of that property where you look after wildlife</u>

Please answer to the best of your knowledge and click on **YES** if the situation applies. If you live in a suburban area you may only be able to answer regarding close neighbours.

Animal species	Living outside of but within 2km of the property where you look after wildlife	Have direct contact with the wildlife in your care	Have direct contact with you
Wildlife species	YES	YES	YES
Kangaroos			
Wallabies			
Possums			
Bandicoots			
Flying-foxes			
Koalas			
Wombats			
Echidnas			
Birds			
Reptiles			
Rabbits			
Mice and rats			
Other			
Please Specify			
None of the above			
Domestic species	YES	YES	YES
Cattle			
Sheep			
Goats			
Horses			
Pigs			
Poultry			
Cats			
Dogs			
Pet rabbits			
Pet mice or rats			
Other Please Specify			
None of the above			

- 2.4 \*If you have another occupation as well as being a wildlife rehabilitator, **in that occupation** do you have contact with any of the animals listed below?
  - □ I don't have contact with animals in any other occupation

Check all boxes that apply

Cattle	Kangaroos
Sheep	Bandicoots
Goats	Possums
Horses	Flying-foxes
Pigs	Koalas
Poultry	Wombats
Cats	Birds
Dogs	Rabbits
Horses	Rodents
Other	

If your answer was 'other' please specify

**2.5** \*Have you ever been present or assisted with the birth of any animal species other than humans?

□ Yes - If yes, which animal species

🗆 No

2.6 \*Have you ever been bitten by a tick while in your role as a wildlife rehabilitator?

- □ Yes
- 🗆 No
- □ Unsure

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## Section 3: Questions about your rehabilitation practices

3.1 \*Do you hand rear orphaned joeys (kangaroos, wallabies, koalas, bandicoots, possums and wombats) or juvenile flying-foxes?

□ Yes if yes, please indicate which type of joey or pup (e.g. kangaroo, possum)

□ No

\*Please indicate the **personal protection** you <u>typically</u> use in the following scenarios.

#### 3.2 \* When handling animals how often do you use:

Check all boxes that apply	Always	Frequently	Occasionally	Rarely	Never
Disposable gloves					
Safety glasses					
Face mask					
Overalls / protective outerwear					
Prompt hand washing					

#### 3.3 \*When cleaning enclosures how often do you use:

Check all boxes that apply	Always	Frequently	Occasionally	Rarely	Never
Disposable gloves					
Safety glasses					$\boxtimes$
Face mask					
Overalls / protective outerwear					
Prompt hand washing					

#### 3.4 \*How do you dispose of the following materials and wastes?

Check all boxes that apply	l don't do this activity	In the rubbish bin	In an uncovered compost heap	In a covered compost bin	Burn	Bury	Take to tip	Flush down the toilet	Other – please specify below
Dead animals									
Urine and faeces									
Pouch liners									
Soiled bedding if discarding									
Lawn clippings from animal living areas									

## 3.5 \*How often do you clean enclosures – that is, remove faeces, uneaten food and bedding?

Please check <u>one</u> box only

- $\Box$  Once a day
- □ More often than once a day
- □ Every second day
- □ Twice weekly
- □ Weekly
- □ Not applicable
- 3.6 \*Please check all the activities you undertake when cleaning enclosures, cages and aviaries etc.

Please check all the activities you do

- □ Roll any enclosure paper linings to capture faeces, urine and uneaten food?
- □ Hose out cages/enclosure
- □ Sweep or rake out faeces and urine in cages/enclosures
- □ Mow lawns or disturb the soil around cages/enclosures
- □ Wear the same clothes into your home afterwards
- □ Change your clothes before doing other activities

3.7 \*Do you use a disinfectant when cleaning enclosures or anywhere the wildlife under your care is living?

- □ Yes -> proceed to 3.8
- $\Box$  No  $\rightarrow$  proceed to Question 3.9
- 3.8 \*When do you use the disinfectant?
  - □ Before cleaning/hosing down
  - □ After cleaning/hosing down

#### 3.9 \*<u>How</u> do you usually wash the following items?

Check all boxes that apply	I don't do this activity	Cold water & detergent	Hot water & detergent	Soak in sanitizer before washing (e.g. Milton)	Other
Clothes you wear when handling wildlife					
Clothes you wear when cleaning enclosures					
Dirty washable bedding					
Dirty pouch liners					

#### 3.10 \*Please select the statement that describes your washing practices

Check all boxes that apply		No	Sometimes
The clothes that I wear while caring for wildlife and other clothing are washed in the same machine.			
The clothes that I wear while caring for wildlife are washed in the			
same machine but in different loads.			
I do not always separate my wildlife clothing from my other			
clothing			
Other family members are also involved in washing clothes and			
bedding.			
I care for wildlife in my day to day clothing.			

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## 4: Questions about what you know and how you feel about Q fever

- 4.1 \*Before this questionnaire, had you heard of Q fever?
  - □ Yes
  - $\hfill\square$  No  $\rightarrow$  proceed to Section 4.6 -
- 4.2 \*Where have you heard about Q fever?

Please check all boxes that apply

- $\Box$  Social media
- □ Web-based article
- □ Newspaper or magazines
- $\Box$  TV
- 🗆 Radio
- □ Doctor
- □ Veterinarian or Vet nurse
- □ Wildlife rehabilitation group
- □ Wildlife conference
- □ Family or friend
- □ Other wildlife rehabilitator
- □ Government agency
- □ Training session
- □ Other please specify below

- 4.3 \*What do you think are the most common way(s) a person can acquire Q fever?
  - Check all the ways you think apply
    - $\Box$  Contact with other infected people
    - □ Contact with infected animals, animal tissues or body fluids
    - □ Inhalation of Infected dust, including dust spread by the wind
    - □ Contact with environments and objects contaminated by infected animals
    - □ Tick bites
    - □ Mosquito bites
    - □ Animal bites
    - Drinking contaminated raw (un-pasteurised) dairy products such as milk and cheese
    - □ Unsure

#### Please answer true or false to the following questions: (Knowledge measure questions)

4.4 \*Animals that are infected with the causative agent of Q fever are usually obviously sick

	🗌 True	□ False	Unsure	
4.5	*Q fever in people i	s easily recognised an	d diagnosed	
	□ True	□ False	□ Unsure	
4.6	*Q fever can cause	serious long-term illne	ess in people	
	□ True	□ False	□ Unsure	
4.7	*The organism that	causes Q Fever is a		
	□ fungus	parasite	🗆 virus 🗌 bact	eria
4.8	*The main route of	infection for the orga	nism that causes Q fever is	S
	through cuts and	d open wounds on the	e skin	
	$\Box$ inhaling the airb	oorne organism		
	eating contamine	nated food		
	directly across t	he skin surface		

4.9 \*Please select <u>one</u> response that describes your feelings about the statement:

"Wildlife rehabilitators are at risk of Q fever from contact with Australian native mammals".

Please check only one box

- □ Strongly disagree
- □ Disagree
- □ Neither agree nor disagree
- □ Agree
- □ Strongly agree

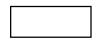
## Section 5. Questions about Q fever vaccination

5.1 \*Before this questionnaire, did you know that there is a vaccine available in Australia that protects people against Q fever?

□ Yes

 $\square$  No  $\rightarrow$  if no, please proceed to Question 5.7

- 5.2 \*Have you ever been vaccinated against Q fever?
  - $\Box$  Yes  $\rightarrow$  if yes, please proceed to **Question 5.3**
  - $\hfill\square$  No  $\rightarrow$  if no, please proceed to **Question 5.4**
  - $\Box$  Can't recall  $\rightarrow$  please proceed to **Question 5.5**
- 5.3 \*In which year were you vaccinated? Please estimate if unsure (e.g. 1999)



### ightarrow Please proceed now to Question 5.7

Participants answering NO to 5.1 will be directed to Q5.7 where they will answer Q1 and 2 in the matrix. Then they will be branched to Section 6

5.4 \*Please indicate any reasons for you *not* getting vaccinated to date.

Check as many boxes as apply

- $\Box$  The pre-vaccination screening process indicated I should not have the vaccine
- □ I have had medically diagnosed Q fever disease and was advised I am unable to be vaccinated
- □ The cost of getting vaccinated is too expensive
- □ It is too difficult to find a medical practitioner who gives the vaccine
- □ Vaccination is not provided by my employer or wildlife rehabilitation group
- □ Pre-screening and vaccination is too time consuming
- □ I think the Q fever vaccine may harm my health
- □ I think the Q fever vaccine may not be effective
- □ I don't think Q fever is serious enough to require vaccination
- □ I don't think I am at risk of acquiring Q fever
- □ I was told I was not at risk please specify by whom
- □ Haven't got around to doing it
- □ I was unaware I needed to
- □ Other please specify below

5.5 \*Would you consider being vaccinated against Q fever in the future?

- □ Yes
- 🗆 No
- □ Unsure

5.6 \*Has anyone recommended that you should be vaccinated for Q fever?

 $\Box$  Yes  $\rightarrow$  If yes, please indicate who made the recommendation:

□ No  $\rightarrow$  if no, please proceed to **Question 5.7** 

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Check as many boxes as apply

□ Doctor			
Veterinarian			
Veterinary Nurse			
□ Friend			
Other wildlife rehabilitator			
Speaker at a wildlife conference/workshop or training session			
□ Government			
Employer			
University/college			
Wildlife rehabilitation group			
Other Please specify below			

5.7 \*For the following 5 statements, we are interested in your *feelings* and would like you to indicate your level of agreement:

Check only one box	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly Agree	Unsure
1. "Vaccines against diseases are usually a good way to protect someone against the disease"						
2. "I worry that vaccines can do more harm than good"						
3."I am convinced of the importance of Q fever vaccination"						
4. "The Q fever vaccine is effective in preventing Q fever"						
5. "The Q fever vaccine is safe when administered appropriately"						

## Section 6: Questions about Q fever exposure and disease

6.1 \*In the time you have been rehabilitating wildlife, on average, what do you think your level of exposure to the Q fever causative agent may have been?

Please check <u>one</u> box only

- □ Unsure
- □ No Exposure
- □ Low exposure
- □ Moderate exposure
- □ High exposure

## 6.2 \*Have you ever had Q fever disease? *A positive skin or blood test on pre-vaccination screening is <u>not</u> confirmation of Q fever illness.*

- □ Yes
- $\Box$  No  $\rightarrow$  if no, please proceed to **Question 6.10**
- 6.3 In what <u>year</u> did you have Q fever disease? Please estimate if unsure
- 6.4 \*How were you diagnosed with Q fever disease? *Please check only one box* 
  - □ Medical Practitioner, with **no** laboratory testing
  - □ Medical Practitioner, confirmed with laboratory testing
  - □ I suspect I have had Q fever but have not had it medically diagnosed
  - □ Other Please specify

- 6.5 \*Were you hospitalised during your Q fever illness?
  - □ Yes
  - $\Box$  No  $\rightarrow$  if no, please proceed to **Question 6.7**
- 6.6 \*For how many <u>days</u> were you hospitalised? days
- 6.7 \*To what extent did you experience each of the following when you had Q fever disease?

Please check <u>one</u> box in each horizontal	Did not			
row	experience	Mild	Moderate	Severe
Fever and chills				
Sweats				
Headaches				
Muscle and joint pains				
Endocarditis (heart valve disease)				
Hepatitis (liver disease)				
Fatigue				
Pneumonia				
Other – please describe below and indicate severity				

Please specify 'Other' as indicated above

6.8 \*Have you experienced pregnancy complications that were attributed to Q fever?

- □ Yes
- 🗆 No
- 6.9 \*Have you been medically diagnosed as having Post Q fever fatigue syndrome?
  - □ Yes
  - 🗆 No

6.10 \* How many people living in your household, apart from yourself, have been diagnosed with Q fever disease?

- □ 0
- □ 1
- □ 2
- □ 3
- □ ≥4

#### Section 7: Additional Information

To help us with the interpretation of our data and make it more meaningful we would like you to answer the following two questions

- 7.1 Are you completing this questionnaire as a result of attending the Australian Wildlife Rehabilitation Conference?
  - $\Box$  Yes  $\Box$  No
- 7.2 If yes had you heard of Q fever prior to attending this conference?

□ Yes □ No

#### **Section 8: Survey completion**

We greatly appreciate your help with this study and thank you for taking the time to complete this questionnaire.

After you submit the questionnaire you will be redirected to a link that will give you the option to register to receive a summary report of the findings and/or enter the prize draw for an iPad Air 2

Your participation in the is important in aiding our understanding of Q fever disease within the Australian wildlife rehabilitator community. If you would like to be contacted about future studies in this area, please indicate your preference after submitting of this survey.

Please note that this is done via separate links which will not be linked to your responses to this questionnaire to ensure that your responses remain anonymous.

Thank you once again for your participation in this important work.



#### Section 8: Additional links

Thankyou your questionnaire has been submitted.

Please indicate your preference by checking the box(es)

Would you like to enter the draw to win an iPAD?	□Yes	🗆 No
Would like to receive the summary of findings of this study	□Yes	□ No
Are you interested in being contacted about future studies?	□Yes	🗆 No

If you answered **yes** to any of the above, please provide your contact details below. Please note your personal details will be separated and de-identified from your survey responses, preserving your confidentiality and anonymity.

Please indicate how you would like to be contacted

🗆 Email:	
Postal:	

If you would like to obtain further information about Q fever we recommend the following websites:

Health NSW Fact sheet

http://www.health.nsw.gov.au/infectious/factsheets/pages/q-fever.aspx

SafeWork NSW Factsheet

http://www.safework.nsw.gov.au/health-and-safety/safety-topics-a-z/diseases/q-fever

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#### Australian Immunisation Handbook 10th Edition 2013 - Chapter on Q fever

http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/Handbook10home~handbook10part4~handbook10-4-15

Wildlife Health Australia – Q fever in Australian wildlife fact sheet

https://www.wildlifehealthaustralia.com.au/Portals/0/Documents/FactSheets/Mammals/Q%20Fever%20in%20Australian%20Wildlife%20Jun%202013%20(1.4).pdf

\*If you have any concerns surrounding Q fever infection, with regards to yourself or someone you may know, please contact your GP as soon as possible to discuss these concerns and potential Q fever testing.