

## Zoonoses and Australian Aboriginal and Torres Strait Islander populations *Implications for One Health*

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### Outline

- Background
- Indigenous One Health research program
- Studies and results
- Recommendations
- Acknowledgements

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## Aboriginal and Torres Strait Islander Australia

Approx. 3.8% of the population is Aboriginal and Torres Strait Islander  
 Over 250 language groups  
 Disproportionately high rates of disease and health disparities  
 20% Aboriginal and Torres Strait Islander people live in remote areas with poorer access to health care → health risks

## One Health and Indigenous communities

Risk factors for many health risks at the interface between human, animal and environmental health  
 Aligned with Indigenous views of health and wellbeing  
 Limited Australian and Indigenous examples – large gaps in the evidence base

<https://doi.org/10.3390/ijerph182111303>



Design by Tamara Riley and Dr Erin Walsh

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*Walu-win mayiny balugan mawang (well people and animals all together):*

**Indigenous One Health Research program**

International, national and community studies  
Indigenous-led, interdisciplinary and One Health approaches

Research aims:

1. Explore and understand evidence on One Health and Indigenous populations
- 2. Investigate the epidemiology of zoonoses among Aboriginal and Torres Strait Islander populations.**
3. Develop an Indigenous community One Health data framework

Connection to animals

*"They reckon they're mans best friend and I believe that" (Ma 2020)*

Preventable disease  
Population management  
Risk of exotic zoonotic disease  
Interaction with wild and feral animals

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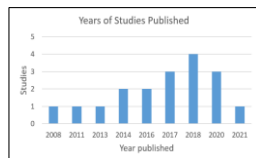
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**Zoonoses and Aboriginal and Torres Strait Islander populations: A One Health scoping review**

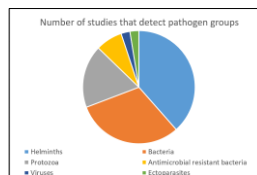
To understand the evidence base on zoonoses within Aboriginal and Torres Strait Islander populations

Assessed studies using a One Health framework and Indigenous viewpoint

Analysis of 18 studies that detected a zoonotic pathogen in animals, people or the environment



**Results**



Detected 22 zoonotic pathogens – Helminths, bacteria, protozoa most common

North of Australia (Queensland, Northern Territory, Western Australia)

Remote communities

20% of studies had an Indigenous viewpoint

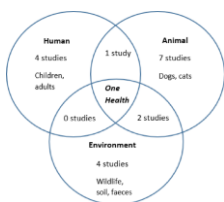
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### Implications

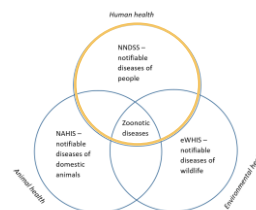
Gaps in environmental exposures, impact on human health and Indigenous viewpoint  
 Limitation in defining organisms as zoonotic between health sectors  
 Need for interdisciplinary research on prevalence and impact of zoonoses to inform policy and practice  
 Promote Indigenous engagement and leadership

<https://doi.org/10.1371/journal.pgph.0000921>



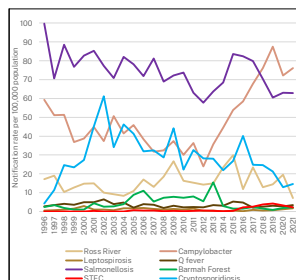
### Data analysis of Zoonoses Notifications in Aboriginal and Torres Strait Islander populations: Implications for One Health

Australia's health systems managed separately with limited capacity for One Health approaches  
 National Notifiable Diseases Surveillance System – Department of Health and Aged care with oversight from Communicable Diseases Network Australia  
 Analysing notifiable zoonoses in Aboriginal and Torres Strait Islander populations from 1996-2021



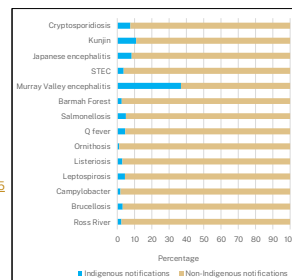
### Results

3.1% of all zoonotic notifications  
 Salmonellosis, campylobacteriosis and cryptosporidiosis had the highest annual notification rates  
 North Australia (Queensland, Northern Territory and Western Australia)  
 Remote and outer regional areas  
 Young children (0-4 years of age)



### Implications

Need to build the evidence base and data capability for greater understanding of zoonoses  
 Support for integrated health systems across sectors to inform management of zoonoses  
 Other zoonoses in communities  
<https://doi.org/10.3389/fpubh.2023.1175835>



## Recommendations

Strong conceptual foundations of One Health, yet evidence is lacking

Promote Indigenous leadership and engagement

One Health approaches needed at local, state and national levels

Future research:

- Strengthen evidence base
- Community-informed disease management
- Data completeness and capability
- Integrated health systems



Community One Health approach

## Community partnerships and reciprocity

AMRRIC and Indigenous Local Government Authorities community animal health programs improve animal health and welfare

(<https://doi.org/10.3390/ani10101790>;  
<https://doi.org/10.3390/ijerph20146416>)

## Acknowledgements

Research team

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AMRRIC and Indigenous Local Government Authorities

Community members and animals

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