Farmsafe AUSTRALIA

Toolbox Talks

A Practical Guide

Zoonotic Diseases

Zoonotic diseases are infectious diseases that are naturally transmissible from vertebrate animals to humans. This includes infections acquired by humans through direct contact with infected animals as well as indirect exposures such as environmental (soil, dust, animal enclosures), vector-borne (mosquito or tick), water, and food systems.

We all need to remember

- If you are unsure of anything or feel that something you have been asked to do is dangerous, DO NOT begin the task. ASK for assistance or more information and we will work together to find a safe way to do the job or solve the problem.
- Ensure you are aware of the location of the nearest First Aid Kit.
- Make sure everyone is fit for work, free from signs of fatigue, drugs or alcohol. If in doubt, ask or talk to your manager.
- This farm is a workplace, but may also be a place of residence for the owner, their managers and employees. Be vigilant for children and bystanders at all times. Refer to *Child Safety on Farms*.
- The safety, health and wellbeing of all who live on, work on and visit this farm is the most important responsibility we all share.

Even if we are busy and under time or financial pressures, safety MUST come first.

Zoonotic diseases are caused by harmful microorganisms such as viruses, bacteria, parasites, and fungi. These pathogens can lead to a range of illnesses in both humans and animals, varying from mild to severe, and in some cases, they can be fatal.

Categories of Zoonotic Diseases

Zoonotic diseases can be categorised based on the type of pathogen causing the infection and the mode of transmission. The primary categories of zoonotic diseases are:

Bacterial Zoonoses
These diseases are caused by bacteria and can be transmitted from animals to humans. Examples include Anthrax, Brucellosis, Leptospirosis, Q fever, Salmonella, Psittacosis.

Viral Zoonoses
Viral zoonoses are caused by viruses and are often transmitted through direct contact with infected animals or their bodily fluids. Examples include Australian Bat Lyssavirus (ABLV), Hendra virus, exotic diseases such as Ebolavirus and Rabies.

Parasitic Zoonoses
Parasitic zoonoses are caused by parasites and are usually transmitted through vectors like insects or through contact with contaminated water or soil. Examples include malaria (transmitted through infected mosquitoes), Giardia, Cryptosporidiosis, and toxoplasmosis (from contact with infected cat faeces).

Fungal Zoonoses
These diseases are caused by fungi and can be transmitted from animals to humans. Examples include ringworm, which can be transmitted from infected animals to humans.

Prion Zoonoses
Prions are abnormal proteins that can cause diseases in both animals and humans. An example of prion zoonosis is variant Creutzfeldt-Jakob disease (vCJD), which is linked to the consumption of contaminated beef products from cattle affected by bovine spongiform encephalopathy (BSE), commonly known as mad cow disease. Prion Zoonoses in Australia are rare.

How Zoonotic Diseases are Spread

Zoonotic Diseases can be transmitted through various routes, primarily from direct or indirect contact with infected animals. Farm workers are at risk when they work closely with infected livestock, exposing themselves to pathogens present in the animals' bodily fluids such as saliva, blood, or urine. Household pets, exhibition animals, and wildlife can also carry these diseases, and contact with them can lead to transmission. Indirect contact occurs when individuals come into contact with soil or water contaminated by animal waste. Insect bites, especially from ticks and mosquitoes, can introduce zoonotic pathogens into the human bloodstream. Additionally, the consumption of contaminated, unpasteurised dairy products, such as milk and cheese, can also lead to infection.

The Hazard and Risk

There are over 50 types of zoonotic diseases present in Australia. Symptoms can range from mild to severe. Some zoonotic diseases are fatal to humans.

EMERGENCY CONTACTS

In case of emergency, CALL 000 or your local emergency service provider, then call your manager or supervisor.

POISONS 13 11 26
Poisons Information Centre

AS AT NOVEMBER 2023

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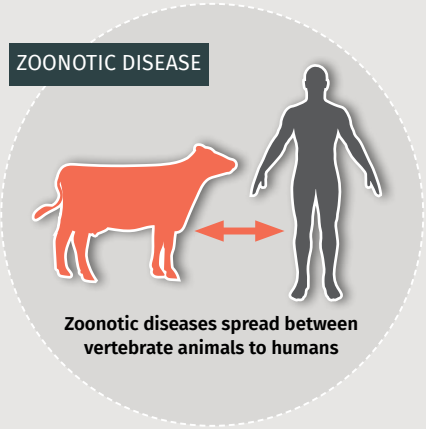
Reducing the Risk

Bacterial Zoonoses

Practicing good personal hygiene is the first step in reducing the risk of contracting a disease caused by bacteria. This includes thorough handwashing with soap and water after handling animals or animal products. Wearing appropriate personal protective equipment (PPE) such as gloves and masks can provide an additional barrier against direct contact with potentially infected animals or their bodily fluids. Regular cleaning and disinfection of farm equipment and facilities is essential to prevent the spread of bacteria. Vaccination, where available, is a highly effective preventive measure for specific bacterial zoonoses like Q fever. By following these precautions, the risk of bacterial zoonotic infections can be significantly reduced.



Zoonotic diseases spread between vertebrate animals to humans

Links and Resources

Zoonoses – Animal Diseases that can Infect People
dpi.nsw.gov.au*/biosecurity/animal/humans*

Animal Pests and Diseases
agriculture.gov.au*/biosecurity-trade/pests-diseases-weeds/animal*

Worksafe Queensland – Diseases from Animals
worksafe.qld.gov.au*/safety-and-prevention/hazards/hazardous-exposures/biological-hazards/diseases-from-animals*

Viral Zoonoses

Protection against viral zoonoses involves avoiding direct contact with infected animals and their bodily fluids. Appropriate PPE, such as gloves and face masks, should be used when handling animals, especially those showing signs of illness. In the case of diseases like avian influenza, which can spread through the air, wearing protective clothing and masks becomes crucial. Regular handwashing and the use of hand sanitisers is highly recommended after handling animals or being in animal environments.

Vaccination, where available, is essential for preventable viral zoonoses.

Parasitic Zoonoses

Reduce the risk of parasitic zoonoses by avoiding direct contact with animal faeces and contaminated water or soil. Wearing gloves and other protective gear when handling animals and cleaning enclosures is essential. Regularly cleaning and disinfecting animal living spaces, as well as providing clean, uncontaminated water sources, can minimise the risk of parasitic infections. Proper food handling practices, including washing fruits and vegetables thoroughly and ensuring that meat is cooked to the recommended temperature, can prevent the ingestion of parasites. Additionally, caution should be taken when handling and cleaning cat litter, as toxoplasmosis can be transmitted through contact with infected cat faeces.

Fungal Zoonoses

Fungal zoonoses can be prevented by maintaining a dry and clean environment. Ensuring that animal living spaces are well-ventilated and free from excessive moisture, which can promote fungal growth, helps to reduce the risk. Wearing appropriate protective clothing, including gloves and masks, when handling animals or cleaning enclosures can prevent direct contact with fungal spores. Regular cleaning and disinfection of farm equipment and facilities, especially in areas prone to fungal contamination, are crucial. Walking barefoot in areas where animals have been, should be avoided as fungal infections can enter the body through small cuts or abrasions on the skin. If fungal contamination is suspected, it should be promptly reported and professionally cleaned to prevent the spread of the infection.

Prion Zoonoses

The best way to protect against Prion Zoonoses is to prepare and cook animal products carefully. Be aware of the presence of these diseases when visiting overseas countries and avoid visiting areas where an outbreak is occurring or consuming high-risk animal products. Follow biosecurity procedures when returning to Australia to prevent introducing new Zoonotic diseases to Australian animals.

Prevention

Preventing zoonotic diseases on farms in Australia involves a combination of strategies, including proper hygiene practices, the use of personal protective equipment (PPE), vaccination where available and appropriate, and regular health checks for farm workers. It's also essential to stay informed about the latest guidelines and recommendations from local health authorities to reduce the risk of zoonotic disease transmission in agricultural settings.

Farmsafe AUSTRALIA

Toolbox Talks Facilitator Guide

A Practical Guide

Zoonotic Diseases

Introduction

- Welcome everyone.
- Explain the reason for having a Toolbox Talk on Zoonotic Diseases.
- Emphasise the importance of being aware of Zoonotic Diseases.

Icebreaker Consider starting with a brief question or scenario related to Zoonotic Diseases to engage participants. For example, "Have you ever encountered a situation where zoonotic diseases posed a challenge on the farm? How did you handle it, and what measures were taken to ensure the safety of everyone involved?"

Distribution of Resources
Handout printed Toolbox Talk Information Sheets and any other resources.

INSTRUCTIONS

The information sheet is background information ONLY. Be sure to customise your talk to your operation and facilities.

How to deliver an effective Toolbox Talk

- Know your Topic. If you don't understand the material it will be hard to explain and make it relevant.
- Print copies of the Toolbox Talk Info sheet for yourself and each of the participants.
- Hold the talk in a location relevant to the topic being discussed.
- Explain why the Toolbox Talk is being held.
- Stay on topic and keep it simple.
- Encourage conversation and participation.
- Be sure to give real life examples whenever possible.
- Be open to questions.
- Read through the provided cases studies.
- After each study ask attendees what could have been done to prevent this situation.
- Conclude with a brief review of the main points or a summary based on the discussion.
- Record the details of the Toolbox Talk including the location, date and names of attendees.

Note: *This Facilitator Guide is intended to provide a basic structure for conducting a Toolbox Talk. Customise it as needed to suit your specific audience and objectives. Always prioritise safety and ensure that participants have a clear understanding of the information presented.*

Key Points

Understanding Zoonotic Diseases

- **Definition and Explanation**
  What are Zoonotic Diseases?
- **Types of Zoonotic Diseases**
  Bacterial, Viral, Parasitic, Fungal and Prion.
- **Common Zoonotic Diseases on Farms**
  Q Fever, Leptospirosis, E. coli Infections, etc.

How Zoonotic Diseases Spread

- **Routes of Transmission**
  Direct and Indirect Contact, Vector-Borne, Foodborne, Waterborne.

Prevention Strategies

- **Personal Hygiene**
  Handwashing, Proper Clothing, and PPE (Gloves, Masks, Goggles).
  - Discuss making PPE available in vehicles and worksites around the farm to ensure that it is readily available when needed.
- **Animal Handling Practices**
  Safe Handling Techniques, Quarantine Protocols.
- **Environmental Hygiene**
  Cleanliness of Living Spaces, Waste Disposal, Water Sources.
- **Importance of Vaccination**
  Available Vaccines and their benefits.

Creating a Safe Farm Environment

- **Farm Biosecurity**
  Restricted Access, Visitor Guidelines, Vehicle Sanitation.
- **Awareness**
  Importance of remaining aware of Zoonotic Diseases and outbreaks.
- **Reporting Protocols**
  Establishing clear channels for reporting suspected cases.

Interactive Discussion and Case Studies

Encourage participants to share their experiences, challenges, or questions related to Zoonotic Diseases.

Use the Case Studies on the next page to prompt conversation. Read the case studies out loud and ask participants for their thoughts.

Q&A Session

Allow participants to ask questions and seek clarification on any topics covered.

Conclusion

Summarise the main takeaways from the talk.

Reiterate the importance of everyone's commitment to safety on the farm.

Closing Remarks

Thank participants for their time and attention.

Remind them to apply the knowledge gained from this Toolbox Talk in their daily work.

Feedback

Ask for feedback on the Toolbox Talk content and delivery to improve future sessions.

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Toolbox Talks Facilitator Guide

CASE STUDIES

CASE STUDY 1

Leptospirosis on a Mixed Berry Farm

Scenario

In 2018, an outbreak of leptospirosis was identified among raspberry workers from a mixed-berry farm in New South Wales, Australia. Over a 5 month period, 84 cases were reported. Investigations concluded that rodents were carrying the disease and workers were exposed to faecal matter while harvesting plants. The route of entry was believed to be through scratches and cuts on the worker's hands.

DISCUSSION	ANSWERS MAY INCLUDE
Discuss what could have been done to reduce the risk of this outbreak.	• Wearing gloves, long sleeves, and enclosed shoes. • Covering abrasions (scratches and cuts) or sores with waterproof dressings. • Hygiene practices. • Pest control.

CASE STUDY 2

Q Fever in a High-Risk Setting

Scenario

In September 2015, an outbreak of Q fever was identified among employees at an abattoir in south-western Sydney. The investigation revealed eight cases, with seven confirmed and one suspected, all occurring between November 2014 and September 2015. Tragically, one confirmed case resulted in a fatality. The infected individuals were all male abattoir workers. Despite multiple cases and a clear epidemiological link, 75% of the abattoir employees were found to be unvaccinated against Q Fever during the outbreak.

QUESTION	ANSWERS MAY INCLUDE
What could have been done to reduce the risk to these workers?	Vaccination is the most reliable way to prevent Q Fever infection. Use this case study to highlight the importance of vaccinations.

CASE STUDY 3

Hendra Virus

Scenario

In July 2008, a veterinary hospital in Redlands, a suburb of Brisbane, faced a severe Hendra Virus outbreak. The outbreak started when four horses displaying neurological symptoms were confirmed to be infected. While under quarantine, another horse developed clinical signs. Tragically, two staff members who had cared for the infected horses fell critically ill. One of these staff members subsequently died. Another case, exposed during a post-mortem examination of an infected horse, experienced symptoms after a possible 16 day incubation period.

DISCUSSION
Use this case study to discuss the identification of sick animals and the correct process for reporting sick animals to management. Highlight the importance of limiting contact with sick or deceased animals and using PPE if contact is necessary. There is currently no human vaccination available for Hendra Virus.

farmsafe.org.au

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Farmsafe AUSTRALIA

Toolbox Talks *Facilitator Guide*

A Practical Guide
Zoonotic Diseases

On-farm Toolbox Talk
Sign-off Sheet

INSTRUCTIONS

This sign-off template is available for you to use as part of your training packages. You will need to attach all evidence of all information given to the person that you have spoken with regarding this specific Toolbox Talk. This may include checklists, policies, safe operating procedures or notes about the conversations had, questions asked and other information provided.

Holding Toolbox Talks or safety meetings are not just about checking a box - they need to be tailored to your farming environment, meet the legislative requirements, and designed to support your employee, contractor, family member or visitor throughout the time that they spend living or working on your property. Inductions are only the first step in your WHS journey and it is important that you continue to create a safety culture on your farm by continuing to engage with your employees on any matters that may affect their health, safety and wellbeing.

The employee/contractor/visitor/family member that you have had this conversation with should acknowledge that they have received, discussed and understood all the relevant information that has been presented to them and attached and sign in the relevant space provided. A good practice is to ensure that the employee initials or signs each relevant piece of information that is attached and retains a copy of each for their own information. Records of WHS conversations should be kept alongside records of employment or in your work, health and safety management system and be updated as needed or as required by law.

Please list and/or attach all documents that have been provided including checklists, policies, safe operating procedures, etc.

On-farm Toolbox Talk Participants

EMPLOYER – DETAILS

☐ I confirm that I have provided a relevant safety meeting to our farming business and that the employee has received, discussed and understood the listed and attached information.

Given Name(s)	
Surname	
Property Name	
Date	
Signature	

1. EMPLOYEE / CONTRACTOR / VISITOR / FAMILY MEMBER – DETAILS

☐ I confirm that I have received, discussed and understood all information that has been listed and attached to this document.

Given Name(s)	
Surname	
Property Name	
Date	
Signature	

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On-farm Toolbox Talk
Sign-off Sheet

CONTINUED

2. EMPLOYEE / CONTRACTOR / VISITOR / FAMILY MEMBER – DETAILS

☐ I confirm that I have received, discussed and understood all information that has been listed and attached to this document.

Given Name(s)	
Surname	
Property Name	
Date	
Signature	

3. EMPLOYEE / CONTRACTOR / VISITOR / FAMILY MEMBER – DETAILS

☐ I confirm that I have received, discussed and understood all information that has been listed and attached to this document.

Given Name(s)	
Surname	
Property Name	
Date	
Signature	

4. EMPLOYEE / CONTRACTOR / VISITOR / FAMILY MEMBER – DETAILS

☐ I confirm that I have received, discussed and understood all information that has been listed and attached to this document.

Given Name(s)	
Surname	
Property Name	
Date	
Signature	

5. EMPLOYEE / CONTRACTOR / VISITOR / FAMILY MEMBER – DETAILS

☐ I confirm that I have received, discussed and understood all information that has been listed and attached to this document.

Given Name(s)	
Surname	
Property Name	
Date	
Signature	

Australian Government
Department of Agriculture, Fisheries and Forestry

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