

Food Borne Zoonosis and Control Strategies in India

Manoj Kumar Kalwaniya*¹, Manisha Doot², Narendra Singh³, Lokendra⁴

^{*1,2} Ph.D. Scholar, Department of Veterinary Public Health and Epidemiology, College of Veterinary and Animal Science, RAJUVAS, Bikaner (Raj.)

³ Ph.D. Scholar, Department of Veterinary Surgery and Radiology, College of Veterinary and Animal Science, RAJUVAS, Bikaner (Raj.)

⁴ M.V.Sc. Scholar, Department of Veterinary and Animal Husbandry Extension, College of Veterinary Science and A.H., Kamdhenu University, Junagadh (Gujarat)

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Foodborne zoonoses are diseases that can be transmitted from animals to humans through contaminated food. These zoonotic diseases can have significant public health implications if not properly controlled. In India, where close interactions between humans and animals are common, the risk of foodborne zoonotic diseases is noteworthy. Here are some important foodborne zoonotic diseases in India, along with details and control strategies:

1. Brucellosis

- ❖ Causative Agent: Brucella bacteria
- ❖ Transmission: Consumption of unpasteurized milk or dairy products from infected animals, direct contact with infected animals, or inhalation of contaminated aerosols.
- ❖ Clinical Symptoms: Fever, joint pain, fatigue, headache, and muscle pain.

2. Salmonellosis

- ❖ Causative Agent: Salmonella bacteria
- ❖ Transmission: Consumption of contaminated food, especially undercooked poultry, eggs, and dairy products.
- ❖ Clinical Symptoms: Diarrhoea, fever, abdominal cramps, vomiting.

3. Campylobacteriosis

- ❖ Causative Agent: Campylobacter bacteria
- ❖ Transmission: Consumption of undercooked poultry, unpasteurized milk, and contaminated water.
- ❖ Clinical Symptoms: Diarrhoea (often bloody), fever, abdominal cramps.

4. Taeniasis/Cysticercosis

- ❖ Causative Agent: Taenia solium (pork tapeworm)
- ❖ Transmission: Consumption of undercooked pork containing cysts, or through contamination from infected individuals.
- ❖ Clinical Symptoms (Taeniasis): Often asymptomatic, but can cause mild digestive issues.
- ❖ Clinical Symptoms (Cysticercosis): Neurological symptoms, seizures, and cyst formation in various body tissues.

5. Echinococcosis (Hydatid Disease)

- ❖ Causative Agent: Echinococcus granulosus (dog tapeworm)
- ❖ Transmission: Ingestion of eggs shed in the faeces of infected dogs or through contaminated food.
- ❖ Clinical Symptoms: Cyst formation in the liver, lungs, or other organs.

Control Strategies in India

- Surveillance and Monitoring: Establishing surveillance systems to monitor foodborne diseases and track outbreaks helps identify the sources and causes of infections.
- Food Safety Regulations: Strengthening and enforcing food safety regulations to ensure that food production, processing, and distribution follow proper hygiene standards.
- Improved Animal Husbandry Practices: Encouraging farmers and animal handlers to adopt better hygiene practices and disease control measures in livestock and poultry farms.
- Zoonotic Disease Awareness: Raising public awareness about the risks of foodborne zoonotic diseases and educating people on safe food handling and cooking practices.
- Vaccination Programs: Implementing vaccination programs in animals to prevent the spread of zoonotic diseases.
- Safe Slaughtering Practices: Ensuring that animals are slaughtered and processed under hygienic conditions to reduce the risk of contamination.
- Improved Food Testing: Enhancing the capacity for food testing to identify potential contaminants and take appropriate measures promptly.



- Cross-Sectoral Collaboration: Encouraging collaboration between the health, agriculture, and veterinary sectors to address zoonotic diseases more effectively.
- Proper Waste Management: Proper disposal of animal waste and effluents to prevent contamination of water sources and the food chain.
- International Cooperation: Collaborating with international organizations and neighboring countries to control the cross-border spread of foodborne zoonotic diseases.

It's essential to understand that foodborne zoonotic diseases are preventable through the implementation of effective control strategies, increased awareness, and collaboration between various stakeholders. However, the success of these efforts depends on the commitment and cooperation of all involved parties.

