The value of prevention

Javier Y. Marcos
AMR & Veterinary Products Head of Department

26th Conference of the WOAH Regional Commission for Africa
Addis Ababa, Ethiopia,
4 - 7 February 2025

World Organisation for Animal Health
Founded as OIE

Organisation mondiale de la santé animale
Fondée en tant qu'OIE

Organización Mundial de Sanidad Animal
Fundada como OIE

ANIMAL HEALTH AND WELFARE AND ANTIMICROBIAL RESISTANCE AND USE

Information note of the Global Leaders Group on Antimicrobial Resistance.
November 2022.

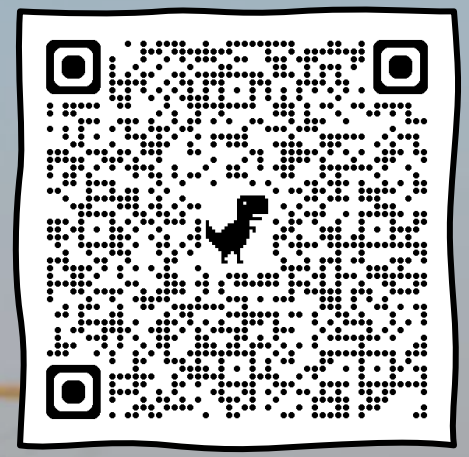
GLOBAL LEADERS GROUP
ON ANTIMICROBIAL RESISTANCE

KEY MESSAGES

1. Robust animal health systems, including resilient **biosecurity, prevention, infection control** measures and **good husbandry** practices are fundamental prerequisites to maintain and **improve animal health and welfare.** When properly designed and implemented, these measures can **reduce the burden of infectious disease** in animal populations and therefore dependency on antimicrobials and the risk of emergence and spread of antimicrobial resistance.

BIOSECURITY – Chapter 4.1 Aquatic Animal Health Code

- **Biosecurity** is a set of **management and physical measures** which, when used together, cumulatively **reduce the risk of infection** in aquatic animal populations within an aquaculture establishment. Planning and implementation requires identification of risks and cost-effective measures.
- The measures required will vary among aquaculture establishments, depending on factors such as likelihood of exposure to pathogenic agents, the species of farmed aquatic animal, the category of aquaculture production system, husbandry practices, environmental conditions and geographical location.
- **Chapter 4.1 (updated in 2021)** describes recommendations on biosecurity to be applied to aquaculture establishments, including semi-open, semi-closed and closed systems



Article 4.1.5.
Categories of aquaculture production systems

Article 4.1.6.
Area management

Article 4.1.7.
Transmission pathways and mitigation measures

Article 4.1.8.
Risk analysis

Article 4.1.9.
Biosecurity plan development

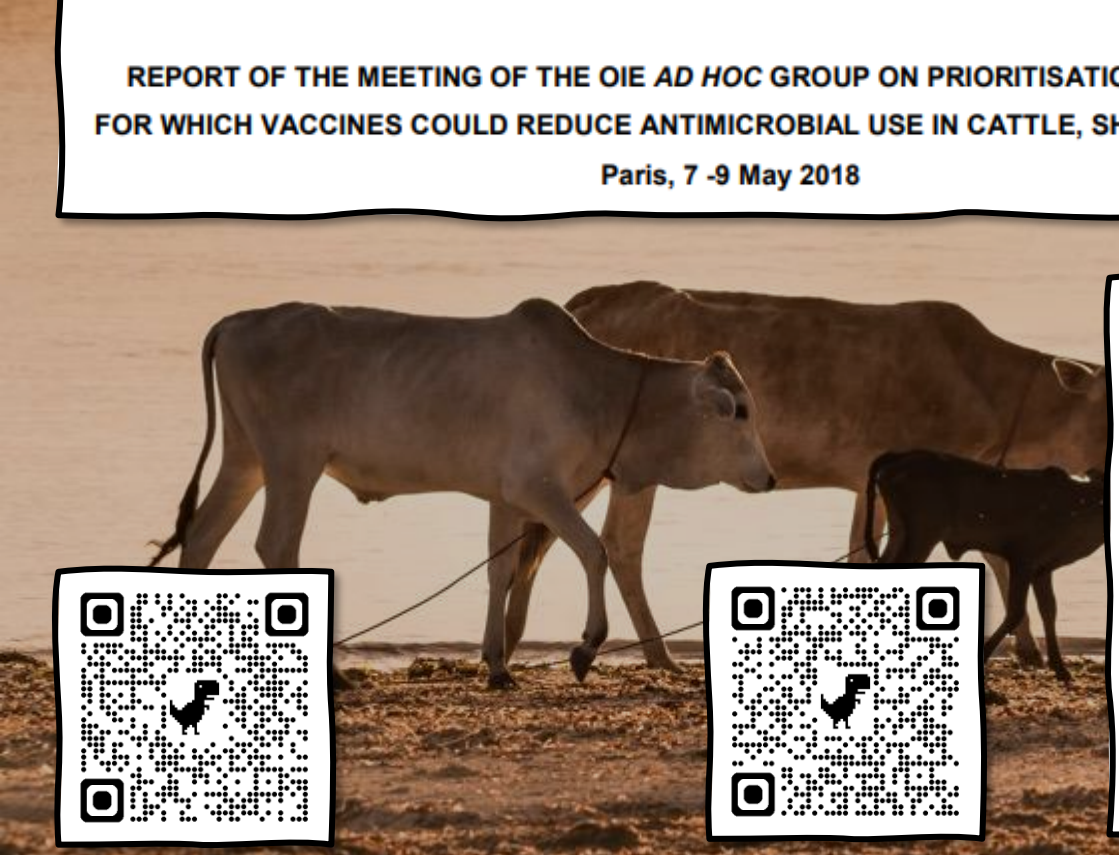
Prioritising prevention – the role of vaccines

WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

Original: English
May 2018

REPORT OF THE MEETING OF THE OIE *AD HOC* GROUP ON PRIORITISATION OF DISEASES FOR WHICH VACCINES COULD REDUCE ANTIMICROBIAL USE IN CATTLE, SHEEP, AND GOATS[1]

Paris, 7 -9 May 2018



WORLD ORGANISATION FOR ANIMAL HEALTH
Protecting animals, preserving our future

Original: English
April 2015

REPORT OF THE MEETING OF THE OIE *AD HOC* GROUP ON PRIORITISATION OF DISEASES FOR WHICH VACCINES COULD REDUCE ANTIMICROBIAL USE IN ANIMALS[1]

Paris, 21 – 23 April 2015

Priority diseases for cattle

Key syndrome / Disease	Primary pathogen(s)	Antimicrobial Use [High, Medium, Low]	Commercial vaccine exists* [Yes/No]	Major constraints to use of vaccine / vaccine development	Vaccine Research Priority [High, Medium, Low]
Lameness (interdigital and digital dermatitis)	*Fusobacterium necrophorum*	High	Yes	• Cost prohibitive • Limited efficacy • Limited availability	High
Enteric	*Fusobacterium necrophorum*	High	Yes	• No products labelled for this application. When used off-label, limited efficacy for enteric diseases/acidosis/liver abscess	High
	Salmonella enterica subsp. enterica	High	Yes	• Predominant serotypes (e.g. Typhimurium, Dublin) vary between geographic regions • Lack of cross-protection between serotypes • In dairy calves, exposure precedes onset of active immunity following vaccination • Limited availability	Medium
	Enterotoxigenic *Escherichia coli*	High	Yes	• Effective vaccines available for predominant strains	Low
	Rotavirus	High	Yes	• Reasonable efficacy of vaccine • Limited geographic availability	Low
Systemic	*Pasteurella multocida* (haemorrhagic septicaemia)	High	Yes	• Satisfactory vaccines, but issues with availability	Low
Vector-borne	*Anaplasma marginale*	High	Yes	• Vaccine production based on live animal infection • Limited availability • Difficult administration • Adequate efficacy	High
	Ehrlichia ruminantium (heartwater)	High	Yes	• Low production capacity • Lack of strain specificity • Vaccine production based on live animal infection • Limited availability • Difficult administration • Adequate efficacy	High
	Trypanosoma spp.	High	No	• Antigenic variation for African Animal Trypanosomosis (AAT)	High

Key syndrome / Disease	Primary pathogen(s)	Antimicrobial Use [High, Medium, Low]	Commercial vaccine exists* [Yes/No]	Major constraints to use of vaccine / vaccine development	Vaccine Research Priority [High, Medium, Low]
Respiratory	*Mannheimia haemolytica* (Bovine Respiratory Disease Complex, BRD)	High	Yes	• Timely delivery (time of vaccination in relation to natural challenge) • Onset of immunity (one dose versus two doses) • Differences in serotype • Potential lack of cross-protection • Leukotoxoid content in some vaccines is not controlled	High
	Pasteurella multocida (BRD)	High	Yes	• Timely delivery • Marginal efficacy • Potential lack of cross-protection	High
	Mycoplasma mycoides subsp. mycoides small colony (Contagious Bovine Pleuropneumonia, CBPP)	High	Yes	• Marginal efficacy • Short duration of immunity • Safety (live vaccine with residual virulence) • Access limited to official control programmes	High
	Histophilus somni (BRD)	High	Yes	• Timely delivery • Adverse reactions when used in large combinations • Basic research needed on epidemiology and pathogenesis	Medium
	Bovine Virus Diarrhoea Virus (BRD)	High	Yes	• Timely delivery • Maternal antibody interference • Not all vaccines protect against Type 1 and Type 2, and Hobi-like viruses	Medium
Mastitis	*Streptococcus agalactiae*	High	Yes	• Marginal efficacy • Strain variation • Lack of cross-protection • Multiple doses needed for efficacy	High
	Streptococcus uberis	High	Yes	• Marginal efficacy • Strain variation • Lack of cross-protection • Multiple doses needed for efficacy	High
	Coagulase negative *Staphylococci*	High	Yes	• Marginal efficacy • Strain variation • Lack of cross-protection • Multiple doses needed for efficacy	High
	Staphylococcus aureus	High	Yes	• Marginal efficacy • Strain variation • Lack of cross-protection • Multiple doses needed for efficacy	High

- Did you know about the existence of these lists?
- Have you seen any disease of concern to your situation?
- Are you already implementing vaccination strategies?
- If not, what is preventing you from doing it?

Thank you !
Merci !
Gracias !

12, rue de Prony, 75017 Paris, France
T. +33 (0)1 44 15 19 49
F. +33 (0)1 42 67 09 87

woah@woah.int
www.woah.org

Facebook
Twitter
Instagram
LinkedIn
YouTube
Flickr

World Organisation for Animal Health
Founded as OIE

Organisation mondiale de la santé animale
Fondée en tant qu'OIE

Organización Mundial de Sanidad Animal
Fundada como OIE