THE VALUE OF IMMUNIZATION IN THE CONTEXT OF ONE HEALTH

PROF MORITZ VAN VUUREN
Vaccination represents one of a broad spectrum of services in primary health care, and is a vital part of primary or preventative health care in all species.
Vaccination is the most successful medical and veterinary measure: More lives have been saved by immunization, more animal production safeguarded than through all other medical and veterinary activities combined.

Prof M. Horzinek, 1998
The World Without Rinderpest

2011
HOST RESPONSE TO VACCINATION

Percentage of Vaccinates

Degree of Response to Vaccination

average response

poor response

excellent response
One Health is the collaborative effort of multiple health science professions, together with their related disciplines and institutions – working locally, nationally, and globally – to attain optimal health for people, domestic animals, wildlife, plants, and our environment.
TRIPARTITE COLLABORATION

FAO-OIE-WHO Tripartite Agreement/Vision, Mexico October 2011

A world capable of preventing, detecting, containing, eliminating, and responding to animal and public health risks attributable to zoonoses, and animal diseases with an impact on food security, through multi- or inter-sectoral cooperation and strong partnerships.

WVA Position Statement on Animal Vaccination for Advancing Animal and Human Health

BACKGROUND
Vaccination plays an important role in preventive veterinary medicine, promotion of animal health and welfare, and in reducing the risk of human exposure to many zoonotic pathogens. Historically, immunization practices and vaccination protocols have contributed to significantly reduce the incidence of many life-threatening diseases.
Healthy Animals:
Healthy animals are well cared for, minimizing pain, stress & suffering, resulting in increased meat, milk & egg production from less resources. Helping pets live longer, healthier lives.

Healthy People:
Enabling people everywhere to live & thrive.

Healthy Planet:
Conserving resource use helps sustain a growing population.

Power of One Health:
- Preserve efficacy of tools used in human & animal medicine
- Limit disease spread
- Reduce livestock mortality & improve productivity
- Improve human nutrition
- Ensure people have food choices
- Conserve resources
- Boost economies & livelihoods
- Pets help improve health – decreasing anxiety, blood pressure & stress. They can also improve social skills & development in children.
- Combat diseases like obesity and diabetes with proper nutrition
Interactions and gaps of the vaccinations at the animal and human health interface: the example of leptospirosis

Eric BERTHERAT
Medical officer - World Health Organization

Controiling leptospirosis

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<th>Animal</th>
<th>Human</th>
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<td>Reducing infection source</td>
<td>Rats and farming</td>
<td>Water and sanitation</td>
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<td>Treating infected animals</td>
<td>Rodent control</td>
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<td>Treating infected animals</td>
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<td>Animal vaccination (pets and livestock)</td>
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<td>Interrupting transmission</td>
<td>Good farming practices</td>
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<td>Desinfecting at risk areas</td>
<td>(occupational, recreational)</td>
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<td>Protecting host</td>
<td>Vaccination</td>
<td>Chemoprophylaxis</td>
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Prioritization of Diseases for Which Vaccines Could Reduce Antimicrobial Use in Animals

World Veterinary Association Congress
San José, Costa Rica
27-30 April 2019

OIE ad hoc Groups

The OIE convened two ad hoc Groups to provide guidance on prioritisation of diseases for which the use of vaccines could reduce antimicrobial use in animals:

- Pigs, chickens and farmed fish (April 2015)

- Cattle, sheep and goats (May 2018)
  [http://www.oie.int/standard-setting/specialists-commissions-working-groups/scientific-commission-reports/ad-hoc-groups-reports/](http://www.oie.int/standard-setting/specialists-commissions-working-groups/scientific-commission-reports/ad-hoc-groups-reports/)
Widespread vaccination hesitation is messing with herd immunity
Incidences with fake or substandard vaccines make parents lose faith in vaccines

Veterinary vaccines against zoonotic diseases can control infections in animals, and thereby reduce transmission to people

- Rabies
- Brucellosis
- Leptospirosis
- Influenza
- Rift Valley fever
- Nipah and Hendra

- Japanese encephalitis
- Q fever
- Salmonella
- E. Coli
- ....
CONCLUDING REMARKS

Vaccination has greatly contributed to animal and public health and animal welfare and human wellbeing

Vaccines are key instruments in the veterinary tool box

The need for antibiotics can be diminished by vaccinating against bacterial, viral and parasitic diseases

Important challenges that remain are:
• Availability and access
• Correct transport, storage and administration
• Vaccine denialists and the vaccine hesitation movement