

Emerging and Zoonotic Viruses

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Emerging Zoonoses

Pathogens from animal reservoirs or hosts

70%
of emerging infectious
diseases we share with
animals

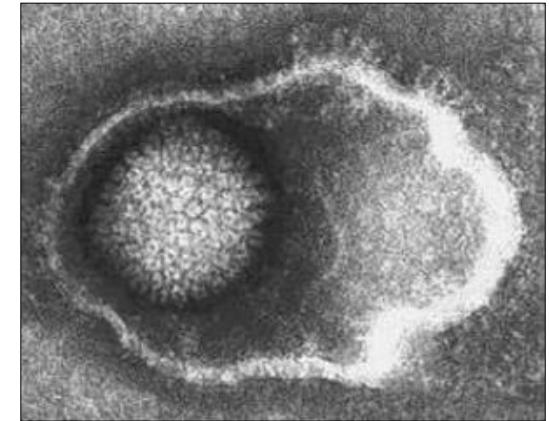


Pathogen discovery

State of the art techniques

- Pre-genomics era
 - Pathogen culture / isolation
 - Animal infection experiments
 - Electron Microscopy
 - Standard antigen detection methods

- Molecular NA targeting techniques
 - (RT)-PCR, specific and generic
 - Microarray
 - Metagenomics, NGS/WGS



Development and implementation will increase the success rate of pathogen discovery

Top 20 zoonotic pathogens (EZIPS ranking)

EZIPS rank (2015 update)	Pathogen
1	Crimean-Congo haemorrhagic fever virus
2	Influenza A virus H5N1
3	Japanse encefalitis virus
4	<i>Streptococcus suis</i>
5	Rift Valley fever virus
6	<i>Anaplasma phagocytophilum</i>
7	<i>Leptospira interrogans</i>
8	Dobrava-Belgrade hantavirus
9	<i>Echinococcus multilocularis</i>
10	BSE
11	Eastern equine encefalitis virus
12	<i>Cryptosporidium parvum</i>
13	<i>Yersinia pestis</i>
14	<i>Francisella tularensis</i>
15	<i>Campylobacter</i> spp.
16	<i>Toxoplasma gondii</i>
17	<i>Coxiella burnetti</i>
18	<i>Capnocytohaga canimorsus</i>
19	Seoul hantavirus
20	Louping ill virus



Signalling Forum Zoonoses, Netherlands

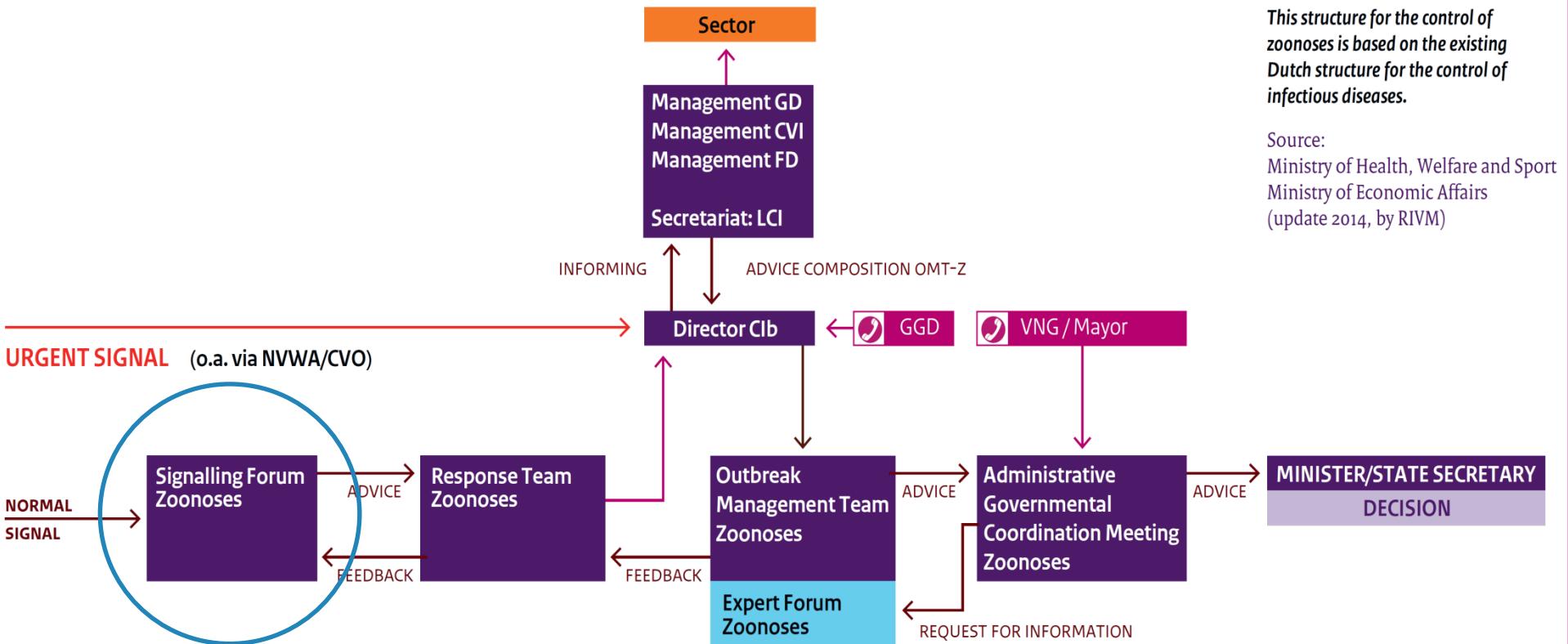
Who:

- National Institute for Public Health and the Environment (RIVM)
- Community Health Services (GGD)
- Netherlands Food and Consumer Product Safety Authority (NVWA)
- Wageningen Bioveterinary Research (WBVR)
- Animal Health Service (Royal GD)
- Faculty of Veterinary Medicine of University of Utrecht (FD)
- Dutch Wildlife Health Centre (DWHC)



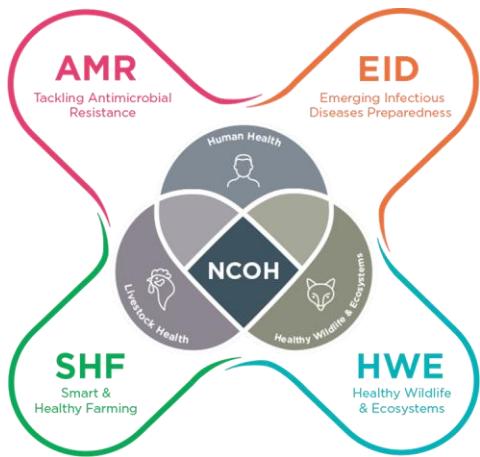


Netherlands Zoonoses structure



One Health approach

Need for all inclusive collaborations between physicians, veterinarians, and other scientific health related disciplines



NCOH



GOHRP



EJPOH

Thank you

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