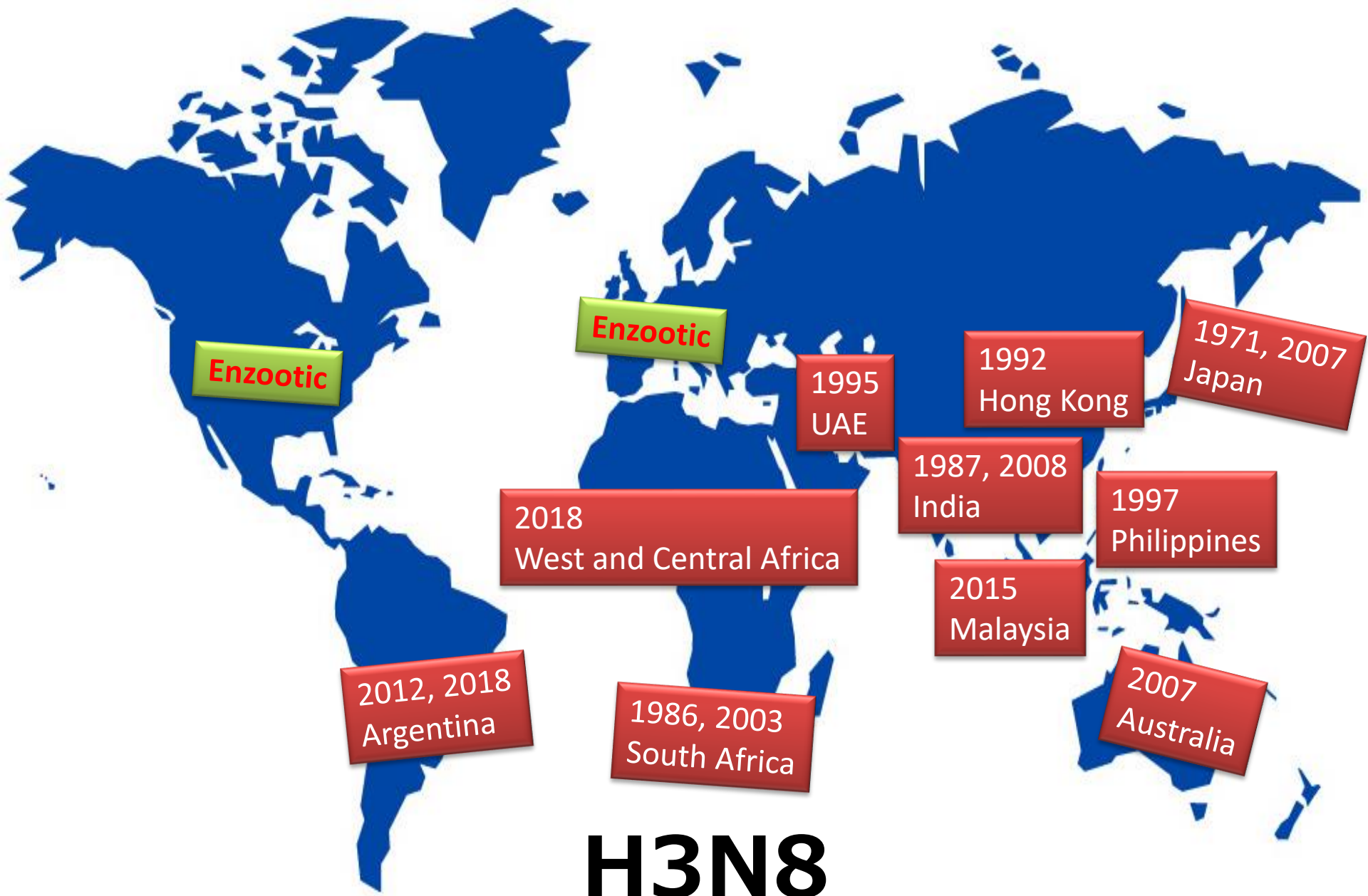


The importance of EI in the Asia and Pacific Region

example: Tokyo2020 Olympics/Paralympics

Takashi Yamanaka

the Japan Racing Association



Enzootic

Enzootic

2012, 2018
Argentina

1986, 2003
South Africa

2018
West and Central Africa

1995
UAE

1987, 2008
India

2015
Malaysia

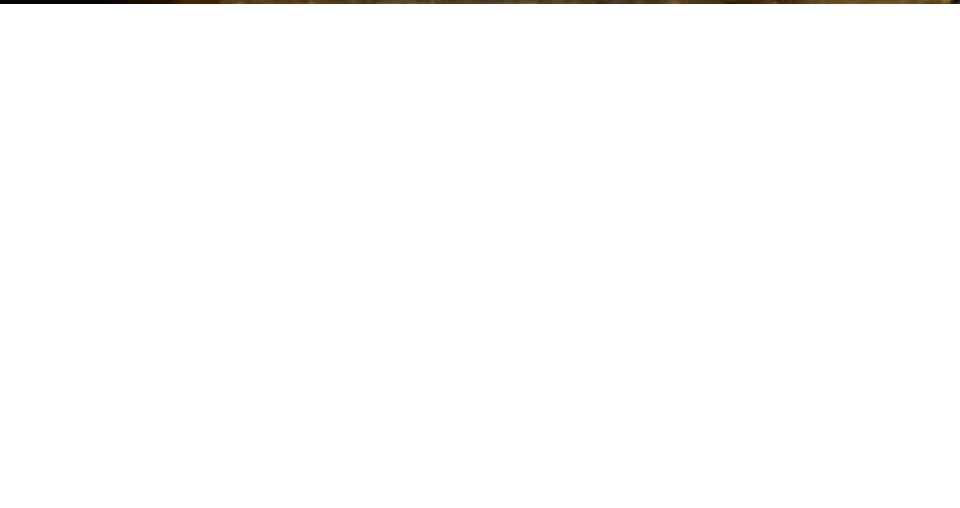
1997
Philippines

2007
Australia

1992
Hong Kong

1971, 2007
Japan

H3N8



Comparison of morbidities between the two outbreaks in Japan

| Disease onset ($\geq 38.5^{\circ}\text{C}$) | 1971-1972 | 2007 |
|---|---------------|---------------|
| | Unvaccinated | Vaccinated |
| Yes | 1799 | 530 |
| No | 56 | 3612 |
| Total | 1855 | 4142 |
| Morbidity ratio | $\doteq 97\%$ | $\doteq 13\%$ |

Thanks to vaccination, the risk of clinical onset was greatly reduced.

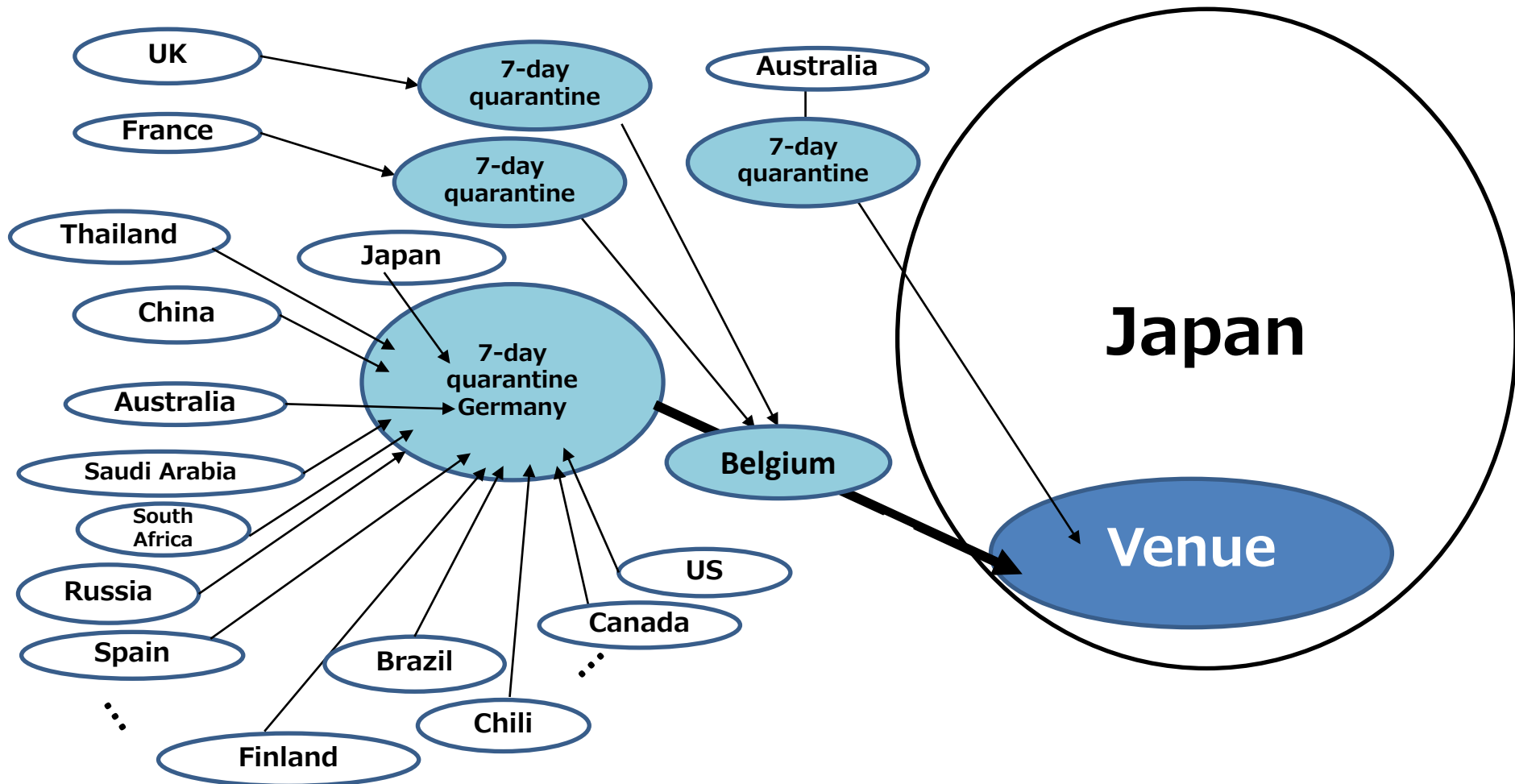
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Thanks to vaccination, the risk of clinical onset was greatly reduced.

We should bear in mind that 13% of total vaccinated horses developed fever and 19% of healthy horses shed virus from nostrils!!

Horse movements to Japan for Tokyo2020





Vaccination prior to shipment



Testing at pre-departure/post-arrival quarantine

Minimizing risk of EI intrusion to venues



Sanitation inside venue

Minimizing risk of EI spread inside venues

- Zoning
- Vaccination to local population

Minimizing risk of EI to local populations

Vaccination

- Requirements prior to shipment
- Requirements for local population

Testing

- Pre-departure
- Post arrival

Zoning and sanitary management

Survival of influenza viruses on environmental surfaces

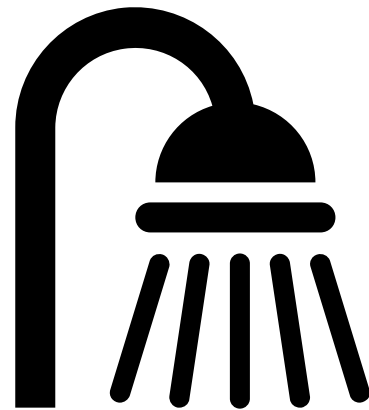
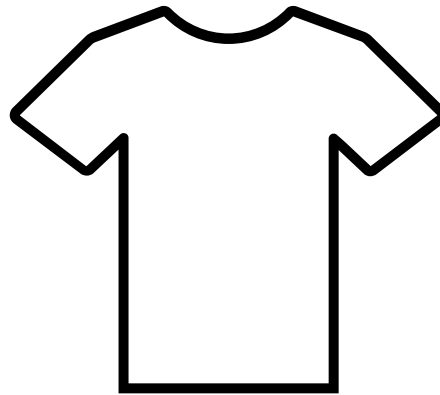
| Surface | Condition | Length of virus viability |
|----------------------------|----------------------------|---------------------------|
| Fabric/clothing | RH: 35-40% Temp: 28°C | 8-12 h |
| Stainless steel or plastic | RH: 35-40% Temp: 28°C | 24-48 h |
| Tap water (pH7.0) | <37°C | 2 days |
| Soil | In dark storage 18°C | 24 h |
| Soil | In direct sunlight 15°C | 8 h |

Bean et al. 1982, J. Infect. Dis.



Tools dedicated for individuals

Water trough





Contents lists available at ScienceDirect

Veterinary Microbiology

journal homepage: www.elsevier.com/locate/vetmic



Short communication

Interspecies transmission of equine influenza virus (H3N8) to dogs by close contact with experimentally infected horses

Takashi Yamanaka ^{*}, Manabu Nemoto, Koji Tsujimura, Takashi Kondo, Tomio Matsumura

Epizootic Research Center, Equine Research Institute, Japan Racing Association, 1400-4 Shiba, Shimotsuke, Tochigi 329-0412, Japan

Table 2

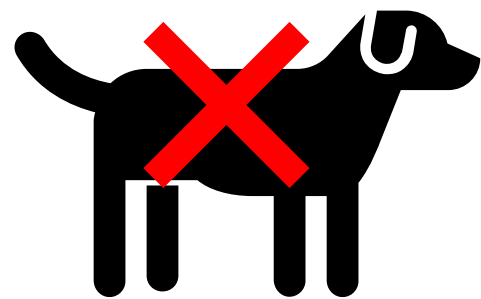
Virus detection by egg culture and titers (\log_{10} EID₅₀/200 μ l) of nasal swab specimens collected from horses and dogs.

| Animal | Days after inoculation (horses) ^b | | | | | | | | | | | |
|---------|--|---|-----|-----|------|------|------|-----|------|------|----|--|
| | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | |
| Horse 1 | – ^a | – | 3.7 | 4.5 | 3.4 | 3.5 | 2.5 | – | – | – | – | |
| Dog 1 | – | – | – | – | – | – | – | – | – | – | – | |
| Horse 2 | – | – | 4.3 | 3.7 | 2.7 | ≤1.4 | 3.0 | 1.5 | – | – | – | |
| Dog 2 | – | – | – | – | – | – | – | – | <0.7 | <0.7 | – | |
| Horse 3 | – | – | 3.5 | 1.5 | ≤1.4 | 2.7 | 2.4 | – | – | – | – | |
| Dog 3 | – | – | – | – | – | – | <0.7 | – | <0.7 | – | – | |

^a <0.7 (no EIV was isolated from four eggs inoculated with the nasal swab specimen diluted of 1:10).

^b No results after Day 11 are shown since they were all <0.7.





Stray dogs





Vaccination prior to shipment



Testing at pre-departure/post-arrival quarantine



Minimizing risk of EI intrusion to venues



Sanitation inside venue



Minimizing risk of EI spread inside venues



- Zoning
- Vaccination to local population



Minimizing risk of EI to local populations