

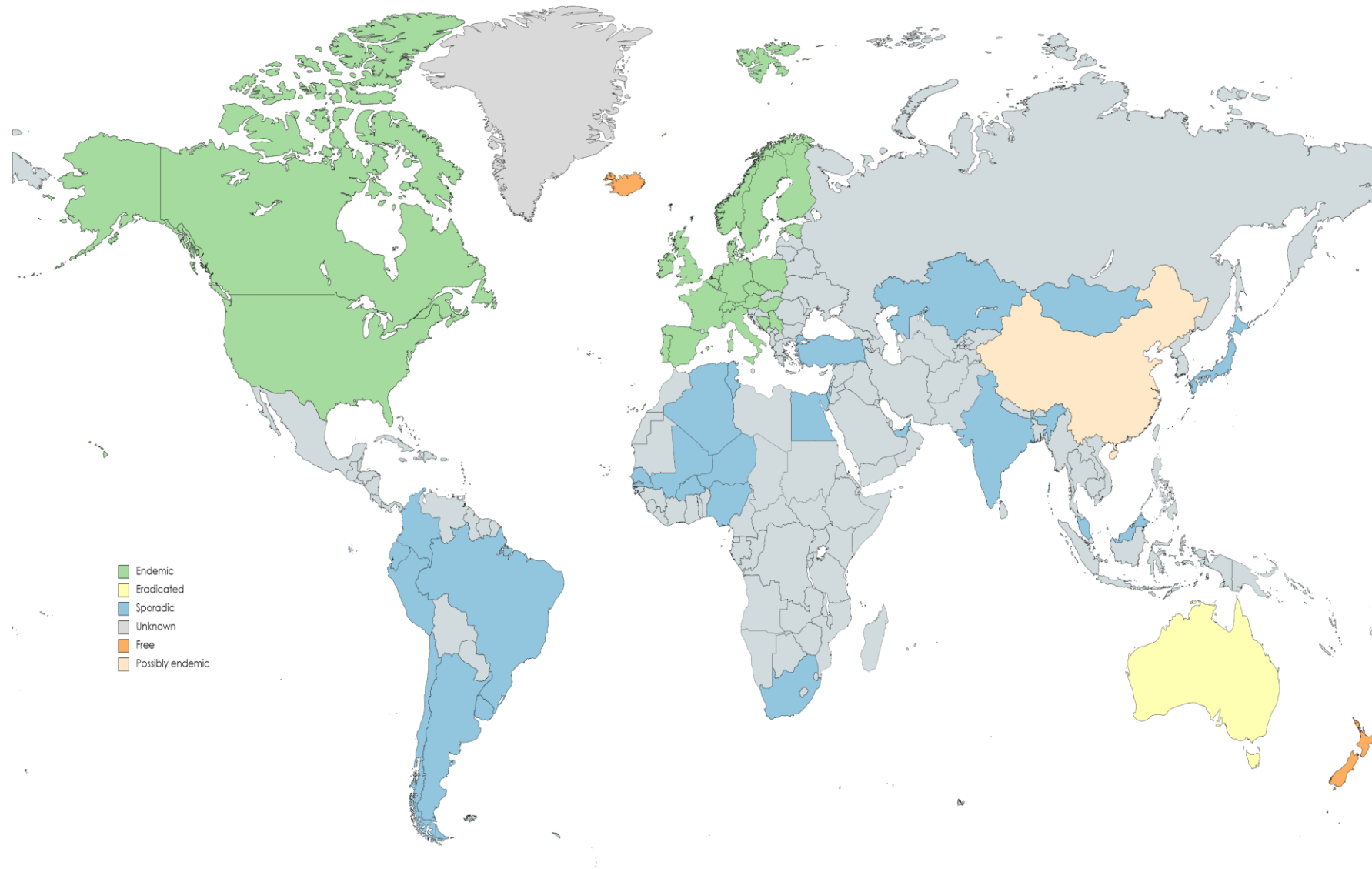
Epidemiology, geographical
distribution and recent outbreaks,
surveillance and control of equine
influenza

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World Organisation
for Animal Health
Founded as OIE

Geographical Distribution



International spread of Virus



- **Highly contagious virus**
- **Mobile equine population**
- **Subclinical vaccinated horses may shed virus**
- **Travel and new arrivals**
- **Short incubation period followed by coughing**
- **Explosive spread in naïve populations or high-density stocking in single air space**

Control by Vaccination

- **Naïve populations**
Quarantine and vaccination of imports
- **Countries with occasional incursions**
Quarantine and vaccination of imports
Vaccination of indigenous population
- **Endemic countries**
Vaccination –prevention and control
- **Highly mobile horses**
Mandatory vaccination for business continuity

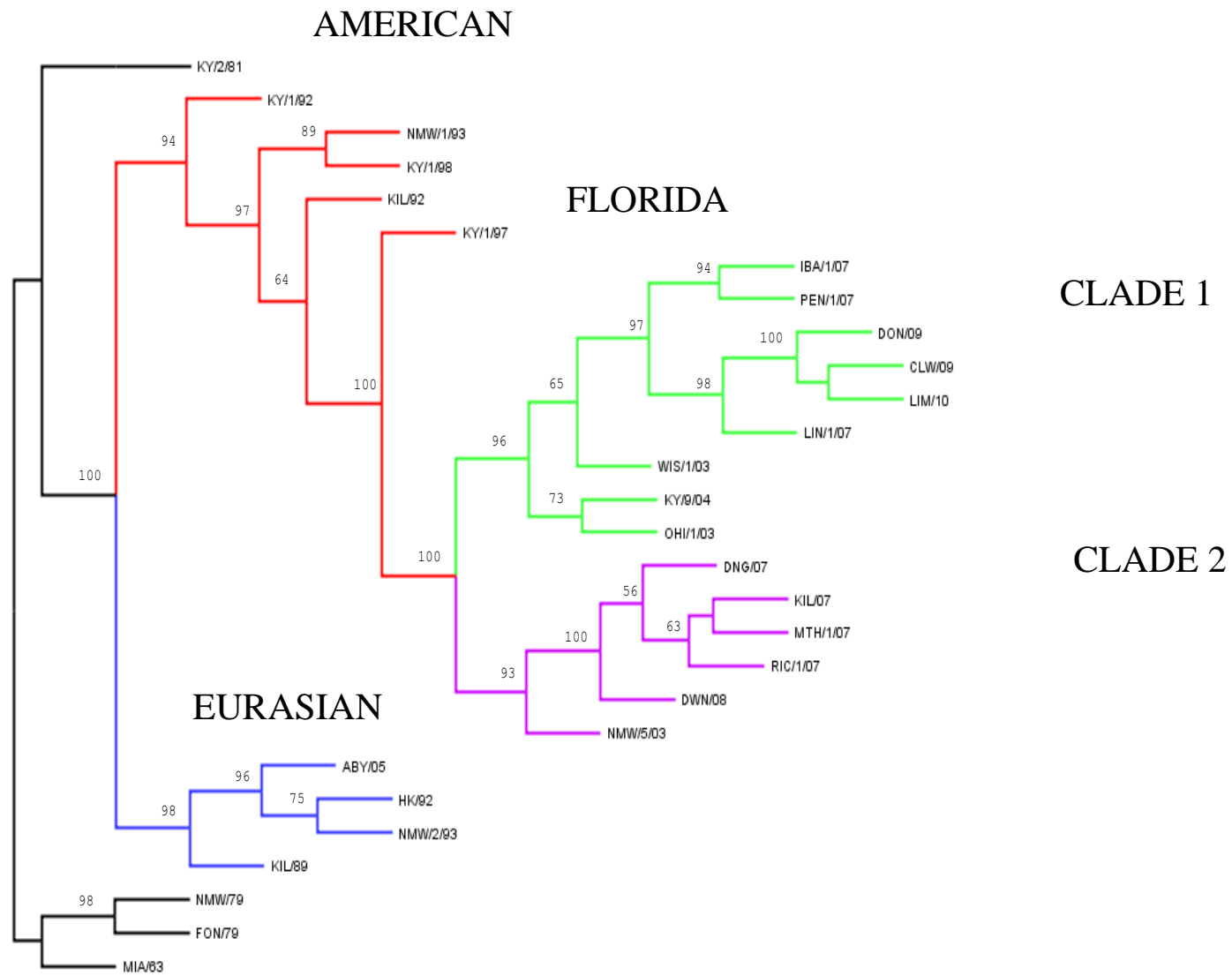


Drivers of Surveillance

- **Vaccine efficacy – assessment and update**
- **Rapid alert – precautionary measures**
- **Detection of new viruses**



Methodology: Nasopharyngeal swabs for virus detection and characterisation



Up to 2018

- Clade 1 viruses prevalent in the USA

South Africa (2003), Japan and Australia (2007)

Europe 2009/10 - sporadic

South America (2012)

Malaysia (2015)



- Clade 2 prevalent in Europe

Mongolia (2008/11), China (2007/08/10/15) and

India (2008/09), Turkey (2012)

North and South America 2018 / 2019

USA

- Clade 1 endemic with increased activity across states outbreaks throughout the year

South America

- January 2018 Clade 1 EI confirmed in Chile
- Spring 2018 Argentina confirmed cases at Andean crossing centres. Subsequently racecourses, polo and jumping clubs
- Many vaccinated and older horses affected
- Widespread outbreaks resulting in cancellation of racing were also reported in Colombia, Uruguay and Ecuador.



Africa 2018/19

- Nigeria - an extensive outbreak confirmed in late 2018.
- Primarily in donkeys (25% fatalities)
- Extensive outbreaks in Mali, Niger, the Sudan and Senegal
- Causal virus identified as belonging to Clade 1



Asia 2018/19

- India - No cases
- Japan – No cases
- China – several outbreaks with high prevalence in donkeys (Clade 2)



Europe 2018/2019



- Significant increase in EI activity
- First reported in France late 2018
- Multiple outbreaks in Germany, Ireland, Italy, the Netherlands, the UK and Sweden.
- Also confirmed in Belgium and Denmark.
- All Clade 1 similar to USA strains – first major clade 1 outbreak since 2009/10

Europe 2018/19

- Classical clinical signs
- All sectors affected leisure horses, showjumpers, racehorses, polo horses, hunters, trotters and breeding stock
- Primarily unvaccinated
- Outbreaks in horses vaccinated with all available vaccines
- Vaccinated less severely affected



2020-2023



- USA- Clade 1 endemic
- Europe – sporadic outbreaks of Clade 1 primarily in unvaccinated horses. Appears to have displaced Clade 2.
- Argentina, India, Nigeria, Japan - no influenza activity reported
- China – Clade 2

Thank you



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