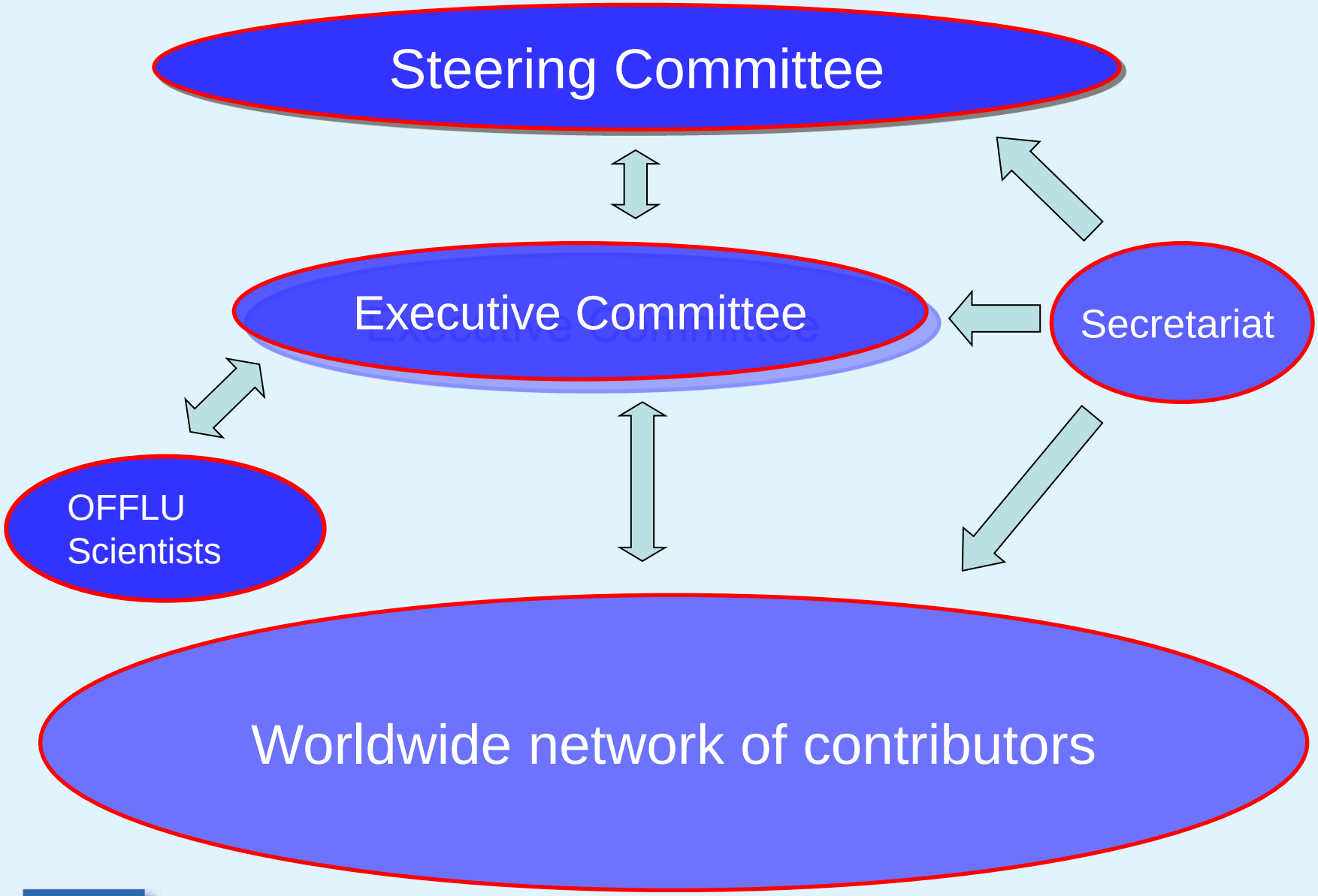
How animal influenza surveillance can contribute to the WHO VCM

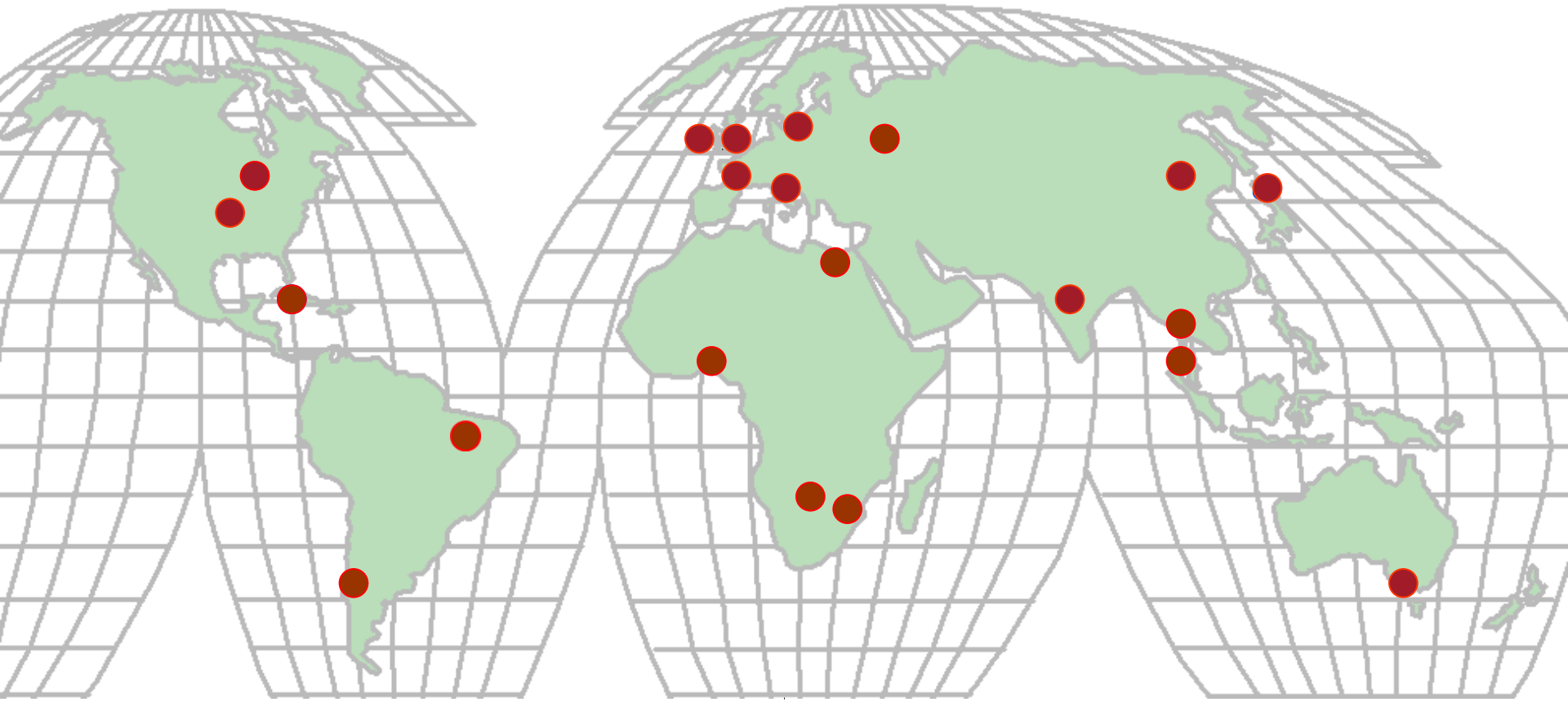
OFFLU network

OFFLU objectives

- To exchange scientific data and biological materials (including virus strains) within the network, to analyse such data, and to share information with the wider scientific community.
- To offer technical advice, training and veterinary expertise to Member Countries to assist in the prevention, diagnosis, surveillance and control of animal influenza.
- To collaborate with the WHO influenza network on issues relating to the animal-human interface, **including early preparation of human vaccine.**
- To highlight influenza research needs, promote their development and ensure co-ordination


Steering Committee
Executive Committee
Secretariat
OFFLU
Scientists
Worldwide network of contributors

OFFLU network animal influenza laboratories



OFFLU laboratories include OIE Reference Laboratories for avian influenza and for equine influenza, FAO Reference Centres for avian influenza, and OFFLU regional laboratory contacts for swine influenza and avian influenza

Why do we do influenza surveillance in animals?

Drivers for influenza surveillance in animals

- **Economics, food production, and trade (NAI, equine influenza)**
  - Reduce losses and ensure food security - early detection and rapid containment/control
  - Reduce risk of international spread - transparency of global disease situation, import/export surveillance
  - Provide evidence to self declare disease freedom – trade status, access to int. markets
  - Protect horse racing and leisure industries, and associated businesses
- **Animal health (AI, equine influenza, SIV)**
  - Varying impacts in different species - drivers are stronger where impacts are greater
  - Early detection of mutations, reassortants and increased risks
  - Calibration/development of diagnostics
  - Better understanding of influenza and its characteristics
  - To inform vaccination strategies and vaccine preparation
- **Public health (animal influenzas)**
  - Early detection and rapid response to control disease in animal source for zoonotic (H5N1)
  - To inform vaccine strategies
  - Early detection of mutations, reassortants and increased risks
  - Better understanding of zoonotic risks
- **International responsibility**
  - Global public good

Challenges to sustainable influenza surveillance in animals

- ‘Drivers’ for non-notifiable influenzas
- Weak veterinary services in many countries
- Industry ‘buy in’ – balancing incentives against disincentives
- Communication e.g. ‘swine influenza’
- Sustainable funding
- Overcoming apathy
- Legislation

In a nutshell….
the added value that OFFLU can provide VCM

- To speed up production of human vaccines against zoonotic influenza, or pandemic viruses that have emerged from animals

- When known zoonotic viruses are ‘evolving’ in animal populations (H5N1, H9N2)
- When public health sector do not have access to human isolates of viruses also circulating in animals (H5N1)
- Long term goal, to identify animal influenza viruses with zoonotic potential, before they make the jump

Progress on OFFLU contribution to VCM

Progress since last meeting

Improved contribution to WHO's efforts

- **Clarity on data needs**
  - Integrating WHO data requirements into the OFFLU annual survey report

  Done
- **Develop a formal mechanism**
  - To allow timely collection and analysis of data by OFFLU

  Done
- **Coordination**
  - With WHO labs receiving animal influenza viruses and on presentation at WHO vaccine strain selection meeting

  On-going
- **Broader animal influenza surveillance**
  - Identify drivers, objectives, and resources
  - **Sustainability**

  Lots of discussion

OFFLU-WHO agreement

- Signed January 2011 (for 3 years)
- Participation
- Defines roles of WHO and OFFLU
- Defines data needs for WHO

World Health Organization

– 9 DEC 2010

OIE FAO network of expertise on animal influenza

OFFLU swine influenza group

Swine influenza surveillance exists globally in farmed pigs but is patchy (SIV is not considered a significant animal health risk)

- Group includes leading animal health and public health researchers
- To coordinate globally targeted influenza surveillance in pigs, harmonise approaches, and provide a platform for data exchange
- Activities:
  - Twice yearly meetings to coordinate surveillance and share data informally
  - Provision of informal expert advice to OIE, FAO, and to WHO
  - Advocate for increased targeted surveillance in pigs
  - Identify priority areas for surveillance
  - Meeting to discuss H3N2 in December 2011/ next annual meeting March 2012

http://www.offlu.net/fileadmin/home/en/news/pdf/SIV-Summary_final.pdf
http://www.offlu.net/fileadmin/home/en/resource-centre/pdf/SIV-Generic-slides-072011.pdf

OFFLU sources of information for VCM

Genetic data

- OFFLU avian influenza laboratories (Reference laboratories/centres)
- Publicly available databases
- FAO national and regional offices

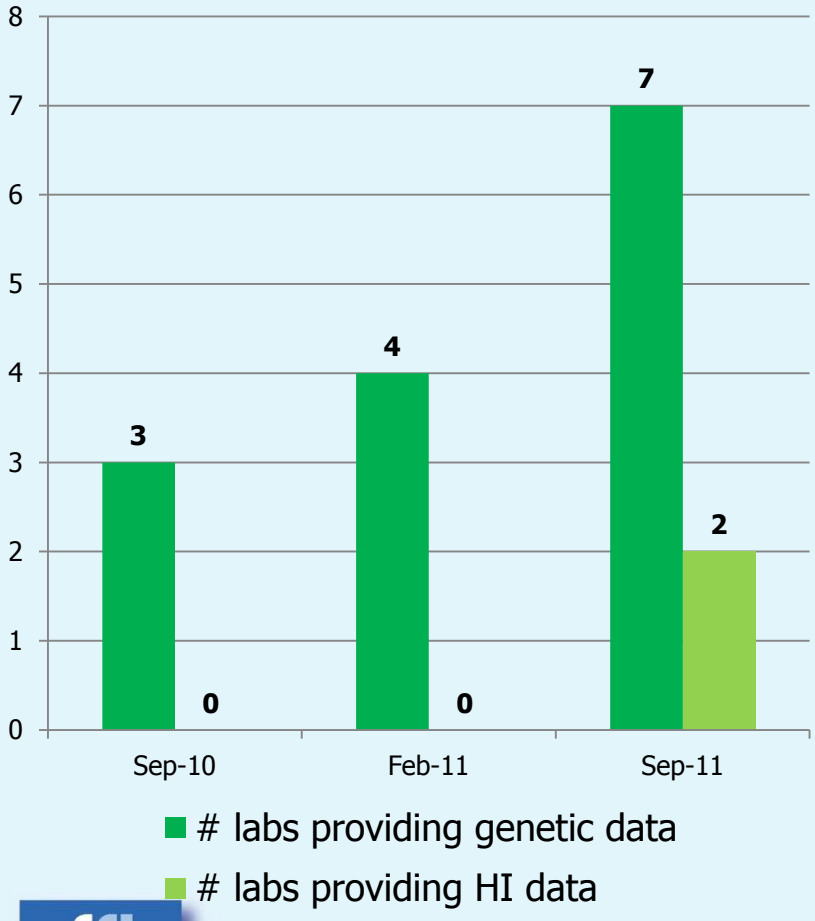
Antigenic data

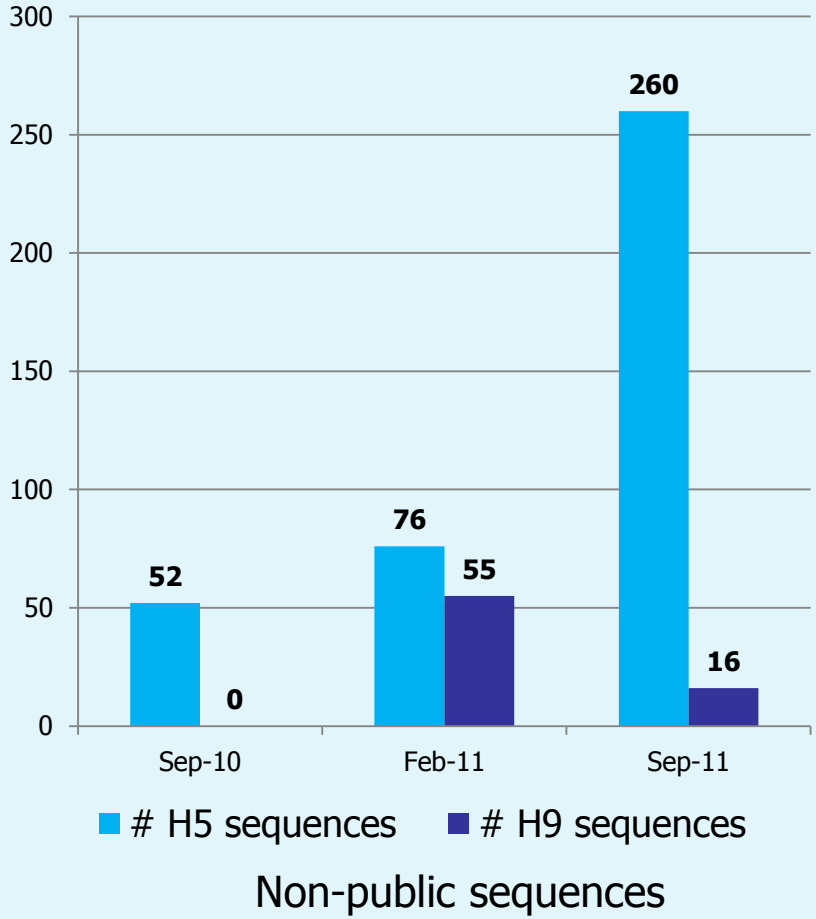
- HI data in collaboration with WHO CC St Jude's Children's Hospital

Epidemiological data

- FAO (empres i) and OIE (WAHID) databases

Increasing OFFLU contribution to VCM





Outcomes of latest VCM (Sep-11)

- One H5 ‘animal’ virus selected as a potential vaccine candidate [Bangladesh]
- Provision of more comprehensive data from OFFLU network
- Discussions between OFFLU and WHO on PIP framework

Looking ahead

- Advocate for sustainable broader animal influenza surveillance
- Improve data on avian influenza H9 subtypes
- Consider providing information for other animal influenzas
- Discuss data presentation (linking genetic-epi data, human-animal data etc)
- Provide expert input for development of risk assessment frameworks (EFSA and CDC)
- Consider integrating risks to animal health in risk assessment frameworks…….

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