One Health and Pandemic prevention in an Asia context

Dr Angela Merianos
WHO-South Pacific | WHO Division of Pacific Technical Support
Why is focusing on human health not enough?

People who protect human, animal, and environmental health,

Coordinating

Communicating

Collaborating

To achieve the best health outcomes for people, animals, plants, and our environment.
From zoonosis to human adapted
~54 million confirmed cases of COVID-19
Over 1.3 million deaths
Predict, prevent and control zoonotic EIDs

- Priority actions:
  - Fully characterise the causative viruses
  - Understand mammalian viral persistence
  - Understand the conditions / stressors for host viral shedding and transfer pathways of spread
  - Conduct human, animal and environmental surveillance
  - Determine control options with clear measurements of outcomes and success
  - Conduct applied research to address the unknowns
Human behaviour drives epidemics

- Human encroachment into new ecological niches, including destruction of habitats
- Poor biosecurity practices in many countries
- Slaughter and consumption of wildlife e.g. bush meat (Ebola), civets (SARS)
- Multiple species under stress in wet markets
- Changes in food production e.g. BSE and vCJD
- Misuse of antibiotics
- Effects of climate variability and climate change
- **Health facilities as points of amplification** once efficient human transmission is established
Multidisciplinary, Multisectoral, Multilevel

- Locally acquired zoonotic diseases may be of low incidence in the Pacific island countries and areas BUT
- Establishing intersectoral relationships before the next BIG EVENT that requires a well-coordinated response
- Cross-sectoral surveillance, monitoring and data sharing across fields of ecology, human & animal health (public health, epidemiology, clinical medicine, laboratory sciences, mammology, sociology, economics etc.
- Livestock, wildlife, companion animals
- Central role of risk communication and community engagement
Examples

• Avian influenza (HxNy) and reassortant avian-swine-human influenza viruses
• Henipaviruses (Hendra, Nipah)
• Lyssaviruses (rabies, other)
• Coronavirus (SARS, MERS, COVID-19)
• Arboviruses (Zika, dengue, many others)
• Antimicrobial resistance (AMR)
• Food-borne diseases and intoxications (e.g. ciguatera)
• Water related diseases e.g. leptospirosis etc.