



Department
of Health

Why is Responsible Use so important from a One Health perspective?

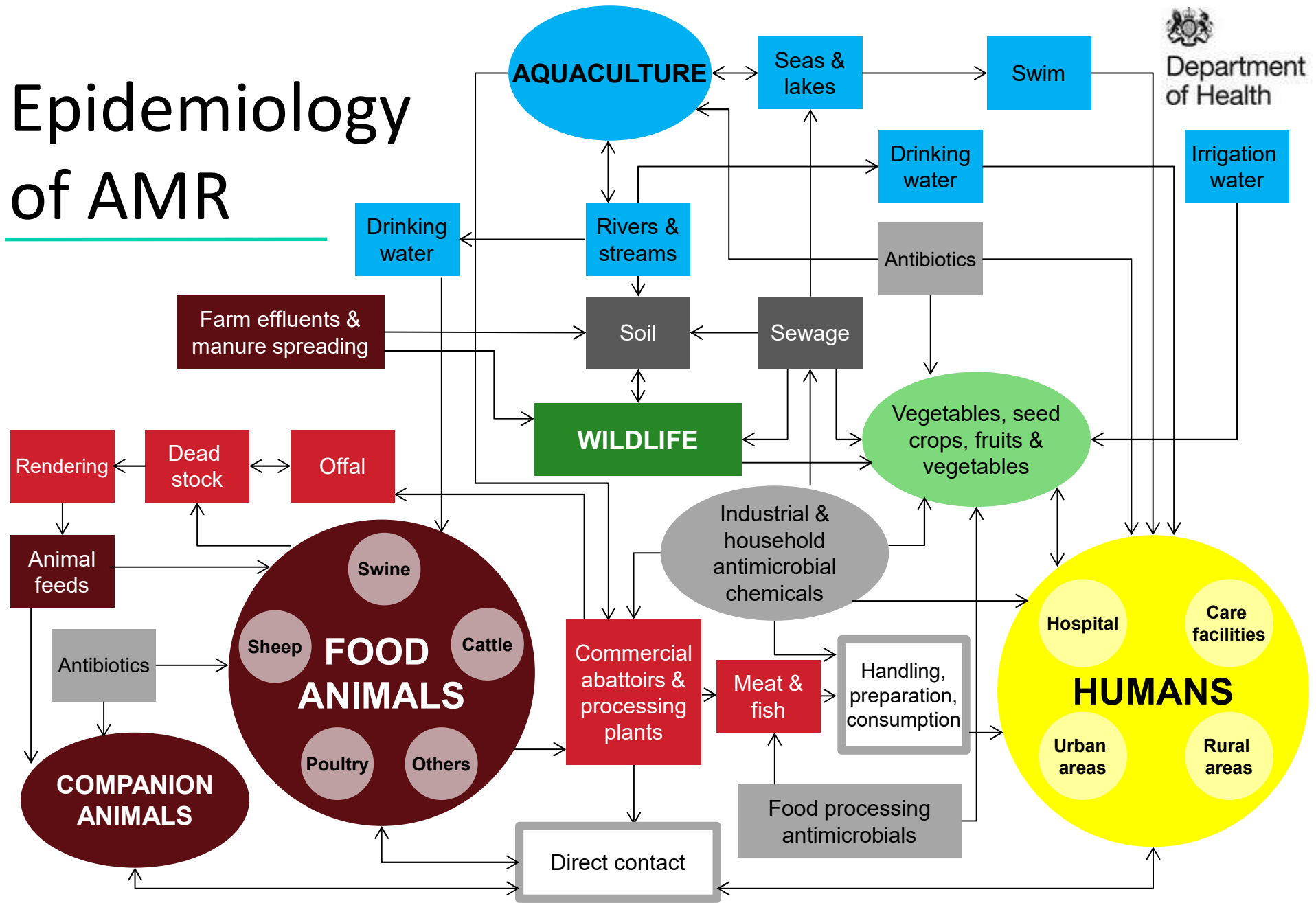
Professor Dame Sally C Davies, FRS
Chief Medical Officer for England



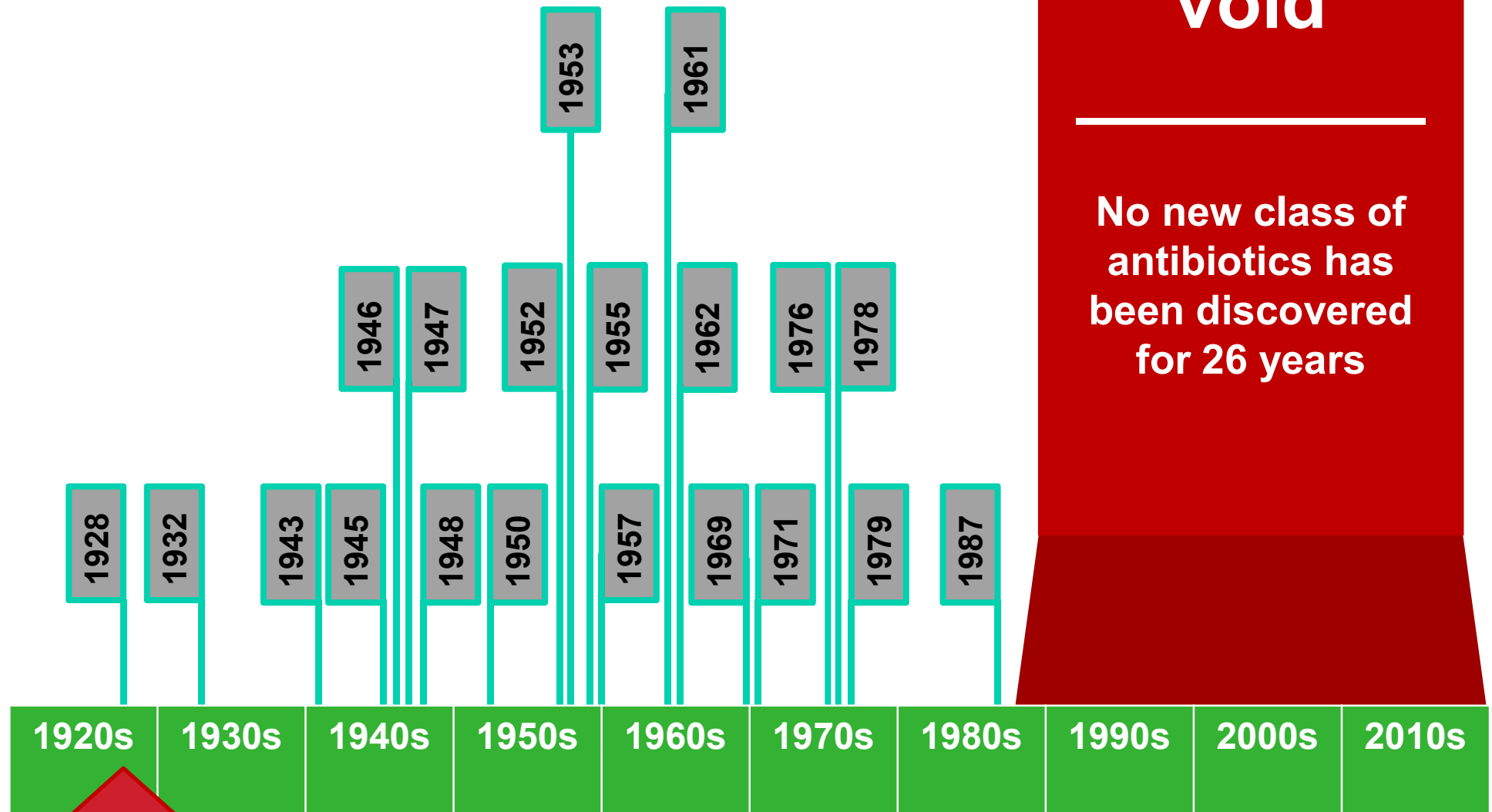
It is not difficult to make microbes resistant to penicillin in the laboratory, and the same has occasionally happened in the body.

**Alexander Fleming, 1945
Nobel Prize Acceptance Speech**

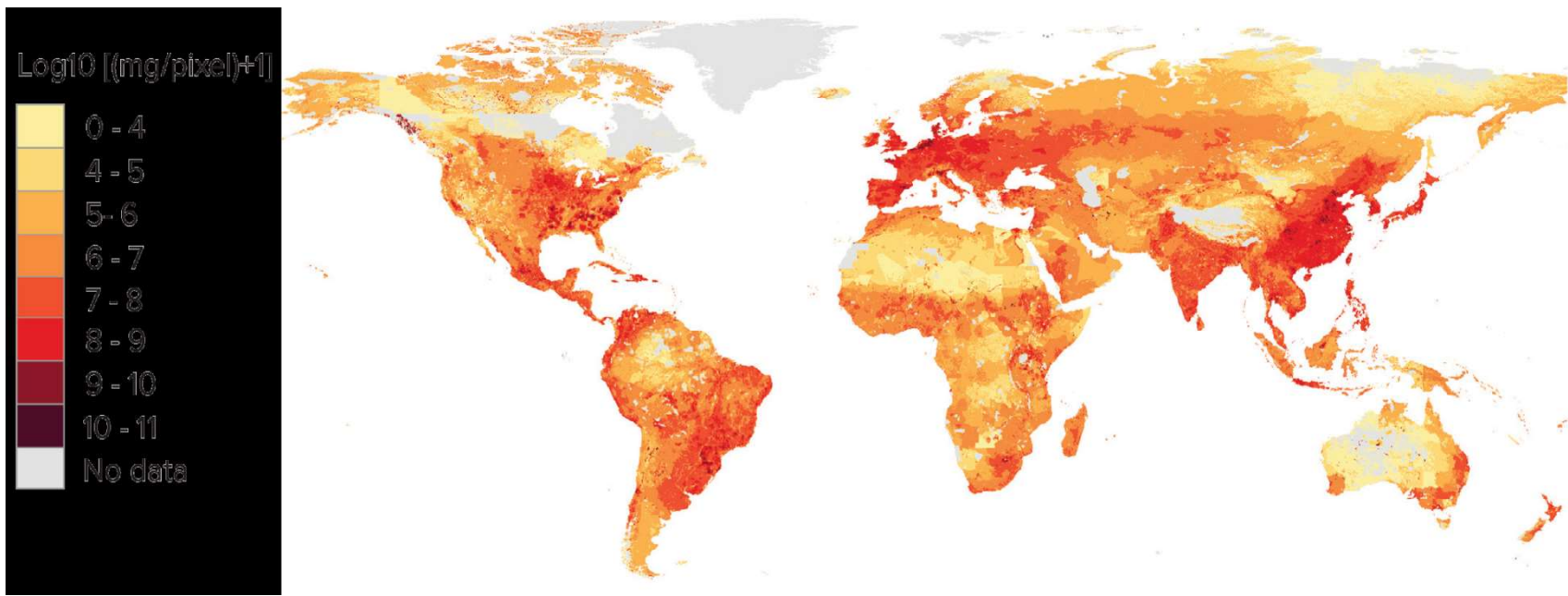
Epidemiology of AMR



Years of Discovery of New Classes of Antibiotics

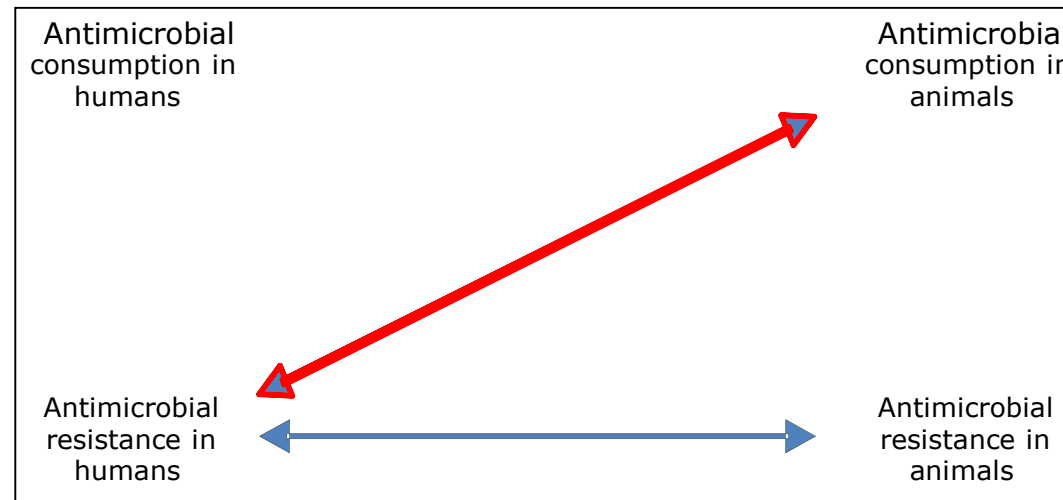


Global Antibiotic Consumption in Livestock



Crossing the Human/Animal Border

JOINT INTERAGENCY ANTIMICROBIAL CONSUMPTION AND RESISTANCE ANALYSIS



- Positive associations for consumption of **fluoroquinolones** in food-producing animals and occurrence of resistance in *E. coli* from humans
- Positive associations for consumption of **macrolides** in food-producing animals and occurrence of resistance in *Campylobacter* spp. from humans.
- Positive associations for consumption of **tetracyclines** in food-producing animals and occurrence of resistance in *Salmonella* spp. and *Campylobacter* spp. in humans.

Challenges

- Sanitation and hygiene
- Clinician knowledge + Patient/public demand
- Scientific – drugs, vaccines, diagnostics, surveillance
- Economic – pipeline, business models in animal husbandry and agriculture
- Geographical – access vs excess, global spread



International Action

- Successes so far:
 - WHO, FAO and OIE resolutions, 2015
 - Global Health Security Agenda – AMR action package
 - Increasing International support at the highest levels
 - UK Fleming Fund
 - Independent AMR Review
 - Diagnostic Prizes
- Looking ahead:
 - Implementing the GAP
 - WEF
 - G20
 - G7
 - UNGA

