History of and introduction to One Health

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Early integrative thinking in cultures and medicine

- Ancient healers, India (transmigration and reincarnation), China, Arab world
- Greek philosophers, doctors and thoughts influenced thinking until the 17th century in Europe
- Humoralism → strong environmental and lifestyle components → really ‘One’
- Physician Vicq d’Azyr (1749-1794): "Considerations on the diseases which attack man are applicable without any exception to those which attack animals. Medicine is one: and its general principles, once set out, are very easy to apply to different circumstances and species". 

Bresalier, Cassidy & Woods: One Health in History. In One Health: The Theory and Practice of Integrated Health Approaches. 2015. CABI, Oxfordshire, London
The germ theory may have hampered cooperation; continued separation – to find each other again

- 1830: recognition of zoonoses → Veterinary Public Health 1948 WHO
- 1860/70ies Germ theory
- Laboratory animals, more competition over research funds and policy
- 20th / 21st century: human-pet relations, food-borne zoonoses, emerging zoonoses
- One Health still evolving conceptually

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Calvin Schwabe’s work started among Dinka of Sudan

- Colonial and post-colonial settings: infectious diseases remained a problem, but the role of the environment could not be ignored → Investigations drawing on entomology, medicine, veterinary medicine and agricultural science
- Many roots of present-day One Health lie in earlier veterinary thought and practice; deeply entangled with development and international health
- Comprehensive One Medicine book showing human-animal interactions, but little testing of hypothesis

Neighbouring concepts with focus on health
- Humans as part of ecosystems

Gaia Hypothesis
Ecosystems
Societies
Economies
Peace
Institutions
"Syndrome approach"

Ecosystem Approach to Health
One health
Agroecosystem

One Medicine
Human health
Veterinary Public Health
Animal health

Swiss TPH
One Health Research - show added value and its position in Global Health

- Added value in terms of better health and well-being for humans and animals, financial savings and improved environmental services
- \( \rightarrow \) needs exchange of information and ideas
- \( \rightarrow \) underlying theory, practical methods and case studies

E.g. Cost effective zoonosese control
Proposed cost-sharing scheme

Veterinarians without Borders Canada, 2010

Pet-assisted therapy

Roth et al., 2003, Bulletin WHO

Zinsstag et al., 2009, PNAS
One Health: Improving the effectiveness of actions at the human – animal interface

Joint surveillance, preparedness and contingency planning
→ reduce time to control of epidemics, cancers, antibiotic resistances → national intersectoral task forces and platforms, regional networks; shared laboratories; response capacity of sectors;

Simultaneous assessment of human and animal health
→ epidemiologic links, evidence for cooperation; better use of the human-animal bond for the control of non-communicable disease like depression or obesity

Joint services
→ Sharing of limited logistics in remote zones, e.g. vaccination
Convergence of Ecohealth and One Health

- Ecohealth and One Health both emphasize an holistic understanding to health beyond the biomedical; human health depends on health and divers ecosystems
- Comparative operational research for translation into feasible strategies and settings where One Health could make a real difference
- Should not become an “own” global health entity → an essential prerequisite for a comprehensive, integrated approach to health and well-being

Zinsstag and Tanner, 2015, In One Health: The Theory and Practice of Integrated Health Approaches. 2015