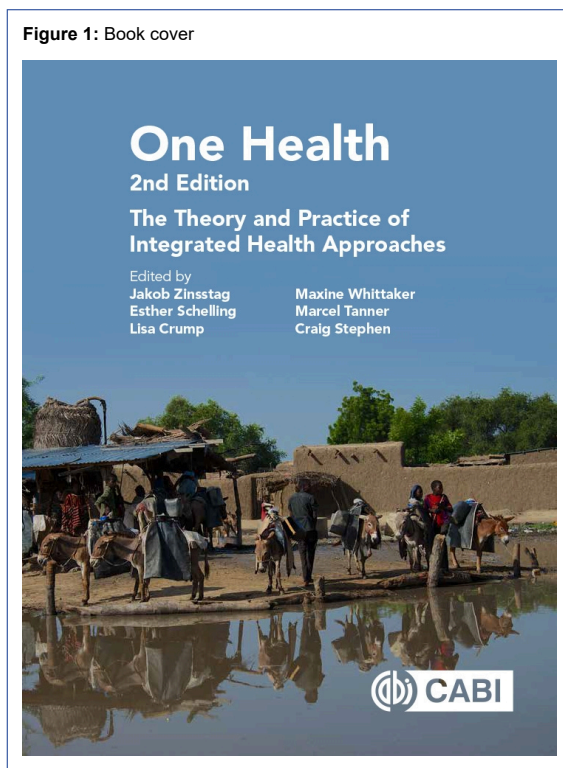


Jakob Zinsstag, et al. (editors): One Health. The theory and practice of integrated health approaches

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Figure 1: Book cover



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The development and continuation of our planet depends on a symbiotic interrelationship between humans, animals and the environment we share – we are interconnected. However, in the past century, humans have increasingly dominated the biosphere (“anthropocene”), as evidenced by technological innovations, accelerated mobility and transformed ecosystems through industrialisation, globalisation and urbanisation. These developments have promoted the health of individuals in unprecedented ways. However, they also make us increasingly vulnerable to current global health problems, such as re-emerging infec-

tious diseases (current example, the coronavirus pandemic). About 70% of emerging diseases are zoonoses, i.e., diseases transmitted from animals to humans. Major and increasing health problems arise from antimicrobial resistance and the increasing burden of non-communicable diseases. These challenges are further exacerbated globally by climate change, poverty, conflict and migration.

The obvious dominance of the human species must be accompanied by a great responsibility. We must take into account the complex interconnectedness and interdependence of all living species and the environment in our quest to ensure the health and continuity of humanity in a new concept: “One Health” – Health as Interaction and Interplay offers synergistic added value in a closer collaboration between human, animal and environmental health sciences, which enables and requires the dismantling of disciplinary and professional silos. Interfaces are wounds – they need to be put back together as seams (as every surgeon knows). The “One Health” concept is recognised and promoted by the United Nations (UN), G20, World Health Organization and various other organisations. The UN Sustainable Development Goals are the practical applications of a “One Health” strategy for healthy people on a permanently habitable planet.

Under the leadership of Jakob Zinsstag and his colleagues at the Swiss Tropical and Public Health Institute in Basel, the standard work on the subject has been re-issued in its second edition, with around 80 co-authors from a wide range of competencies, but obviously extending and surpassing too narrow professional limits: a great and rewarding read, truly vital in its practical application! Theoretical foundations, including historical aspects, are described in detail, especially in the second chapter “Why One Health?” and the presentation of a “healthy concept of health”, as well as perspectives on ecology and species conservation and the invitation to face the complexity of reality. The second section of the book provides guidance in ten detailed and extensively referenced chapters on the methods, necessary skills and perspectives for implementing “One Health” in practice: the importance of transdisciplinary research, the role of social sciences, economics and legislation, as well as model representations of disease transmission. A very important point is the type of leadership and team building needed for the practical implementation

of the concept. One of the primary competencies for “One Health” leadership is working successfully across disciplines and cultures by fostering teams and using system-based problem solving. The need is for cultural competency and personal integrity to provide effective and economically viable solutions. Large-scale sustained experiential leadership training programmes in the field are necessary. Furthermore, climate change is described as the ultimate challenge. Section 3 is devoted to diseases: a careful and knowledgeable account of the emergence of antibiotic resistance and the interactions between humans, animals and the environment. This is followed by examples of infectious diseases that pose serious public health problems, such as how rabies therapy can be tackled efficiently and more cost effectively with an integrated approach to humans and animals. Diseases such as brucellosis, trypanosomiasis or bovine tuberculosis with interactions of domestic and wild animals present major problems in developing countries. Animals accompanying humans also play an important role in non-communicable diseases such as obesity, depression and other mental or cardiovascular illnesses, which in these circumstances are usually rather favourable. The “One Health” concept should also be advantageous in disaster management, building on modern concepts of resilience that have been developed in psychiatry and psychology, but which here are applied in this most important wider context. The disaster management cycle is described in detail, from mitigation preparedness to recovery response. There is always an order of effects of a disaster: primary effects (human and animal deaths, physical damage to infrastructure and property, flooding), secondary effects caused by the primary ones (e.g., contam-

inated drinking water, outbreaks of waterborne diseases, crop and food supply damage), and tertiary long-term or permanent effects (e.g., post-traumatic mental health problems, economic decline due to loss of workforce, healthcare costs, rebuilding costs, food shortage, migration of people; ecosystem damage and biodiversity loss). Ensuring sufficient nutrition (and disposal of leftovers) is also crucial for health, and is a non-trivial requirement everywhere, albeit to varying degrees. An entire chapter of this work is dedicated to the spiritual dimensions of health in a very differentiated manner, as an integrated dimension in human life and its relation to health, and across the approaches by the various religions and different world views. Life and death are seen as parts of a greater entity called creation. The different views unite in the understanding that there is purpose and meaning to what has been created. This is followed by practical examples of instructions and wishes for the implementation of the “One Health” concept in academic and political areas, and how the added value of such integrative approaches can be measured.

It is a very important book on a forward-looking concept that integrates human, veterinary and environmental health sciences. This great book is worthwhile reading for every physician and healthcare worker trying to see Health in its wider context and to acting accordingly.

Further reference

Amuasi JH, Lucas T, Horton R, Winkler AS. Reconnecting for our future: The Lancet One Health Commission. *Lancet*. 2020;395(10235):1469–71. doi: [http://dx.doi.org/10.1016/S0140-6736\(20\)31027-8](http://dx.doi.org/10.1016/S0140-6736(20)31027-8). PubMed.