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Table of Contents

p.	7	<i>The African Model</i> by Gian Stefano Spoto
	9	<i>From Zoonoses to One Health, Passing Through Professor Adriano Mantovani</i> by Arcangelo Gentile
	11	<i>Interviews From the Field. From Trauma to Healing: Building a Brighter Future for Mental Health in the Democratic Republic of Congo</i> by Mattia Albanese, Lorenzo Tarsitani, Ludovica Molina, Michele Nazzaro, Riccardo Serra, Laura Elena Pacifici Noja, Giancarlo Ceccarelli
	17	<i>The Use of Blockchain and Cryptocurrencies in Humanitarian Aid Management. The Conundrum Between Myth and Reality</i> by Giulia Tuccio, Mario Di Giulio
	23	<i>A Modern Paradigm of Teaching Scientific Disciplines to Health Professionals at Unicamillus: Connecting Innovative Education and Global Health Perspectives</i> by Gian Marco Contessa, Marco D'Arienzo, Franco Arcieri, Francesco Bartolozzi, Paolo Calligari, Eleonora Nicolai, Domenico Rocco, Monica Sane Schepisi, Silvia Tommasin, Luca Paolo Weltert
	33	<i>Promoting Mother-Child Health in Rural Sub-Saharan West Africa: A Sustainable Architectural Approach to Culturally Tailored Care</i> by Cecilia Ceccarelli, Francesco Branda, Marta Giovanetti, Mattia Albanese, Laura Elena Pacifici Noja, Fabio Scarpa, Massimo Ciccozzi, Giancarlo Ceccarelli
	57	<i>The Role of Antibiotic Resistance in African Developing Countries</i> by Matteo Botteghi, Caterina Martinotti, Maria Fortunato, Angela Linzalone, Stefano Martinotti, Elena Toniato, Pathosphere Consortium
	67	<i>Authors</i>

The African Model

by Gian Stefano Spoto*

Disastrous health-care systems, counterfeit drugs, excessive use of antibiotics, and much more. UGHJ's lens is focused on Africa, where in many countries the situation is beyond imagination.

But what if this continent were the testing ground for solving many of the problems affecting nations of *imperfect prosperity*? In Senegal, for example, researchers are designing innovative architectural structures for facilities that accommodate pregnant women and their children while also striving to develop holistic healthcare policies.

Isn't *One Health*, the very essence of our magazine, precisely about holistic health policies?

It's natural to think that before implementing these methodological advancements,

Africa should first focus on providing basic healthcare services. Especially in rural areas, the concept of healthcare for all – let alone everywhere – is still a distant reality.

One Health also means studying and simultaneously monitoring diseases in both humans and animals. To achieve this, well-organized networks are needed, and some even speculate that controversial cryptocurrencies could serve as a tool to curb the massive stockpiling of medicines.

In such a scenario, how can adequate attention be given to mental health care? In Congo, and across Africa, mental health patients are neglected, often hidden away and isolated without any possibility of external contact or treatment.

And what about individuals with Down syndrome? In many places, they are still seen

as a divine punishment and are therefore even more confined within their homes. In Ethiopia, the *Debora* organization is working to break through the barriers of this deeply entrenched stigma. A major event was organized at the end of 2024 following World Down Syndrome Day the previous year.

Unicamillus supports science education and the dissemination of scientific methods in countries where approaches to healthcare remain largely random.

Africa is a priority – an epicenter of urgent challenges that require action. And, as previously mentioned, it also serves as a testing ground for exposing the contradictions and dysfunctions of our own healthcare systems.

* Gian Stefano Spoto, UGHJ Editor-in-chief.

From Zoonoses to One Health, Passing Through Professor Adriano Mantovani

by Arcangelo Gentile*

Abstract

The importance of the awareness that animals, humans, and environment are interconnected and can no longer be approached separately has finally been receiving more and more consideration and is summarized in the term “One Health”. A visionary and staunch advocate of the One Health concept can be considered prof. Adriano Mantovani (1926-2012), professor of veterinary infectious diseases at the University of Bologna, that already in the 1950s promoted not only the necessity of interdisciplinary collaboration and unity between human and veterinary medicine, but also the importance of inserting the two medicines in the social and environmental global contests. Without doubt, he can be considered a pioneer of the “One Health”.

Keywords

Veterinary public health, One Health, professor Adriano Mantovani.

It is now clear: animals, humans, and the environment are so interconnected that they can no longer be considered separately. This intricate web involves health and disease, climate and natural disasters, human behaviour and social phenomena, local and global economies, wars and the unequal distribution of wealth, and even the lack of basic needs such as education, safe drinking water, food, housing, and healthcare services.

A forerunner of the One Health concept, although limited in scope, is the term *zoonosis*. The credit for coining this term goes to Rudolf Virchow (1821-1902), the first to give scientific value to the shared diseases between humans and animals.

Since ancient times, humans have been aware of the risk of “falling ill” due to animals and the environment, which has influenced prejudices, popular beliefs, and religious dogmas. It was evident in antiquity that

epidemics often struck both animals and humans simultaneously, perhaps as a form of divine punishment. With the advent of veterinary medicine and the development of comparative pathology (already in use during Aristotle’s time), connections between diseases and professions became apparent. Observations emerged that certain diseases primarily affected individuals who worked closely with animals or their products, or those engaged in specific types of labor – an

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issue that became even more pronounced during the Industrial Age.

With the rise of microbiology, the zoonotic link between certain etiological factors became clear, evolving from the concept of “poisonous agents” to microbial agents. A major breakthrough came with the acceptance that transmission could also occur in the reverse direction, from humans to animals.

Bruno Galli-Valerio (1867-1943), in *Zoonoses. Diseases Transmissible from Animals to Humans* (1894), and Alberto Ascoli (1877-1957), in the *Italian Veterinary Yearbook* (1935), revisited the term zoonosis, giving it nosographic significance. Ascoli classified the most important zoonoses, listing glanders, anthrax, and rabies at the top.

The term *zoonosis* was officially recognized by the World Health Organization (WHO) in 1951, when it provided the first formal definition (“infections in humans... shared in nature by other vertebrate animals”) and compiled a list of over 80 diseases transmissible to humans. With zoonoses now

well-defined, they paved the way for the advancement of public health. That same year, the WHO established the Veterinary Public Health Unit and the WHO/FAO Joint Expert Group on Zoonoses.

However, to transition from zoonoses to One Health, one crucial element was missing: the relationship between the animal-human duo and the broader environment. This concept aligns with the definition found in *Treccani*: “a complex system of physical, chemical, and biological factors, of living and non-living elements, and of relationships in which all organisms on the planet are immersed”, a concept now broadly referred to as the *biosphere*.

It was from this perspective that, in the 1950s, Professor Adriano Mantovani (1926-2012) emerged as a key figure. He was a professor of *Infectious Diseases, Prevention, and Veterinary Health Policies* at the Faculty of Veterinary Medicine in Bologna, Director of the Parasitology Laboratory at the Italian National Institute of Health, and Director of the WHO/FAO Collaborating Center for

Veterinary Public Health in Rome. A visionary and staunch advocate of what would later be established as One Health, he is rightfully considered a pioneer – indeed, the father – of veterinary public health.

Firmly convinced of the necessity of interdisciplinary collaboration, Mantovani had a clear vision of the unity between human and veterinary medicine. His approach spanned epidemiology, zoonosis and infectious disease control, urban veterinary hygiene, health education, and even veterinary intervention in emergencies and disasters. In this regard, driven by a strong political sense of participation and social commitment, in 1980 he actively coordinated veterinary services in areas affected by the Irpinia earthquake, laying the groundwork for WHO guidelines in cases of non-epidemic emergencies.

It is true that the One Health concept was simultaneously developing in other parts of the world. However, such a broad and forward-thinking interpretation was found only in this controversial and often debated, yet relentless pioneer: Professor Adriano Mantovani.