Appendix: Content Summary of Selected Best Paper Published in 2022 for the IMIA Yearbook, Section Informatics for One Health

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Operationalizing “One Health” as “One Digital Health” Through a Global Framework That Emphasizes Fair and Equitable Sharing of Benefits From the Use of Artificial Intelligence and Related Digital Technologies


In this paper, the author focuses on the urgent need for significant changes in human activities to combat climate change and its impact on biodiversity, human and animal health, and geopolitics. The potential of digital tools in various domains such as healthcare, agriculture, and conservation biology is discussed, emphasizing the centrality of data in the One Health approach. The current challenges in data access, curation, and sharing and the need for fairness and equity in data governance are addressed. Therefore, the lack of a unifying framework for data in the One Health approach is a contributing factor to data gaps. The importance of sharing disease surveillance data and information for disease detection and response is emphasized, suggesting that data federation could be a viable approach. In this regard, the importance of high-quality data and digital technologies, including artificial intelligence, in monitoring health and environmental concerns is discussed, and their role is explored for what concerns the operationalization of the One Digital Health framework, along with the rising challenges in data integration and the uptake of digital technologies. Furthermore, the article explores the role of data-driven science in generating massive datasets for biodiversity and environmental indicators. It emphasizes the need for ethical considerations and suggests implementing the FAIR principles for data management. The author eventually proposes the idea of a global framework on “Open Data” for Health to address data accessibility, fairness, and equity concerns, along with the challenges of data sharing in the context of the so-called Access and Benefit Sharing (ABS) framework, which integrates biodiversity and health data while addressing ethical and legal concerns.