



T20
INDONESIA
2022 THINK

Policy Brief

IMPLEMENTING AND FINANCING ONE HEALTH

Task Force 6

Global Health Security and COVID-19

Agus Suwandono, (Indonesia One Health University Network (INDOHUN), Depok, Indonesia)

Angus Campbell, (Nossal Institute for Global Health, Melbourne School of Population and Global Health, University of Melbourne, Victoria, Australia)

Alice Stevenson, (EcoHealth Alliance, New York, NY, USA)

Anita Lubis, (Center for Health Administration and Policy Studies, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia)

Ava Sullivan, (EcoHealth Alliance, New York, NY, USA)

Barbara McPake, (Nossal Institute for Global Health, Melbourne School of Population and Global Health, University of Melbourne, Victoria, Australia)

Chakrapani Chatla, (Regional Manager for Asia Pacific and Japan, Thermo Fisher Scientific)

Enkhtuvshin Shiilegdamba, (Country Director-Mongolia, Mongolia, Wildlife Conservation Society)

Euis Ratna Sari, (Co-responsence author Indonesia Health Economics Association, Depok, Indonesia)

Joko Pamungkas, (IPB University, Primate Research Center, Bogor, Indonesia)

Jonathan Epstein, (EcoHealth Alliance, New York, NY, USA)

Kevin Olival, (EcoHealth Alliance, New York, NY, USA)

Vipat Kuruchittham, (Southeast Asia One Health University Network (SEAOHUN), Chiang Mai, Thailand)

Abstract

Utilising a One Health approach can prevent and address risks emerging from the human-animal-environment interface thus improving global health resilience and cost-efficiency of the interventions. WHO described that zoonotic diseases are the source of many pandemics in the world, for instance, COVID-19, Ebola, SARS, MERS, HIV, and others. Sixty per cent of human infectious diseases are animal-origin diseases and 75 per cent of new and emerging diseases are transmitted from animal to human (UNEP & ILRI, 2020). Despite the negative effect of zoonotic disease and the benefits of a One Health approach and the clear and pressing need, there remains a lack of collaboration across sectors and disciplines within government, academia, and between health professionals. The Electronic States Parties Self-Assessment (e-SPAR) reported that the average global capacity in policy and normative communication for implementing International Health Regulation (IHR) in 2021 is moderate, 52 out of 100, which the Africa Regional Organization (AFRO) has the lowest scores (WHO, 2022).

Even though the various sectors involved in the public health emergency response, uneven resources distribution and allocation both across sectors and over time have happened, with resources and activities primarily focused on responding to acute disease outbreaks. Improved implementation and financing strategies and mechanisms are required to improve pandemic preparedness and overall global health security.

Keywords:

One Health, implementation challenges, health financing

Goals:

The One Health approach, which recognizes the interconnectivity between human, animal, and environmental health, provides a critical framework for preventing disease emergence. However, there are challenges in implementing and financing this approach. Thus, the objective of this policy brief is to highlight these challenges and provide policy recommendations that would eliminate barriers to successful implementation.

Challenges

While the value of working at the interface between humans, animals, and the environment to achieve global health resilience is increasingly being recognised, there are still many issues in implementing and financing a One Health approach.

Gaps in implementing global regulation

In 2005, 196 countries agreed upon a legally binding framework for preventing, protecting, and controlling risks related to public health events, particularly in light of increased globalization, including travel and trade. Despite the broad uptake of the IHR, self-reported scores of successful implementations tend to be low. The Electronic States Parties Self-Assessment (e-SPAR) Annual Reporting Tool reported that the average global capacity in policy and normative communication for implementing International Health Regulation (IHR) in 2021 is moderate, 52 out of 100, which the Africa Regional Organization (AFRO) has the lowest scores (WHO, 2022).

Decentralization governments in many countries have a potential disharmony in implementing One Health due to the fragmented management (Workie et al., 2022). In Indonesia, for instance, each government level would have its local regulation and development plan which refer to their sector-specific authorities. It is often developed without appropriate consideration of the synergies or interactions between the sectors and is based on different legal principles (Destoumieux-Garzón et al., 2018). It is resulting the siloed action to overcome the pandemic. Yet, the central commando from the President in governing the COVID-19 pandemic in Indonesia affects the big action from the multi-sector and multi-level institutions. Cross-sector teamwork results in excellent progress in handling COVID-19 transmission.

Hence, the unity of command from the national level is essential to prevent the stagnancy of One Health operationalization at the grassroots level (Ayobami et al., 2021). Furthermore, the flexibility and open-mindedness of the actors from cross-organizations in implementing One Health are fundamentally important to generate transboundary regulation. An equal understanding of this approach should be internalized for all.

Ineffective collaboration

A lack of collaboration across sectors and disciplines within government, academia, and health professionals remains to exist in many countries, particularly low-middle income countries (LMIC). Moreover, the various sectors involved in the prevention, detection, and response of diseases also face uneven distribution and allocation of resources both across sectors and over time due to most resources and activities primarily focused on responding to acute disease outbreaks.

Siloed efforts and a lack of interdisciplinary communication and collaboration at national and subnational levels further contribute to ineffective and cost-inefficient detection, prevention, and control of EIDs (World Bank, 2018). Government ministries often act within their isolated departments to address disease risk and rarely integrate and cooperate with One Health practitioners in other sectors, including academia.

Shifting the paradigm and understanding others' roles may be required in the development of a synergistic mechanism for One Health implementation. Increasing the number and distribution of well-educated and skilled human resources has been apparent as a big hurdle in operationalising One Health in national and sub-national organizations. Since zoonotic diseases include livestock-related diseases, the enrichment understanding of One Health needs to be allocated for officers, health professionals, veterinarians, and better extension services at the farm or community level (Gebreyes et al., 2014).

Siloed Surveillance and Data System

In many countries, such as Indonesia and Kenya, the Ministry of Health, Ministry of Agriculture and Livestock, Ministry of Forestry, and Ministry of Environmental have their independent surveillance system. Each of these systems has a different data collection flow, operational definitions, and management systems, which result in fragmented responses between sectors (Falzon et al., 2019; Ribeiro et al., 2019). The sectoral district office of ministry often acts within their isolated organization to overcome the disease risk and rarely integrates and cooperates (Johnson et al., 2018). In Indonesia, the environment and wildlife sectors are not resourced sufficiently and often lack a seat at the table when it comes to national priority settings for disease management.

Furthermore, the lack of detection capability, surveillance, as well as an early warning system in the country would drive the unprioritized disease management and delay the decision-making process to manage the cases. The E-SPAR reported that the global score of infectious

disease prevention and control capacity is low (60 out of 100), particularly the capability of healthcare-associated infection surveillance. Most WHO regions have a low score, below 70, except the Euro region (WHO, 2022). The global capacity in implementing biosafety and biosecurity system in laboratory systems is also low with only 64 out of 100 scores (WHO, 2022). Africa region has the lowest score of biosafety and biosecurity capability for laboratory systems.

Investments in coordinated surveillance and detection of human, animal, and environmental health are required to prevent future disease outbreaks, epidemics, or pandemics. In 2012, the World Bank estimated that investment for preventing and controlling zoonotic diseases in using the One Health Systems is around USD 1.9-3.4 billion each year would avert the losses globally (World Bank, 2012).

Inadequate financing capabilities

Funding for EID control currently follows a boom-and-bust cycle focused on response. Financing for responding to an adverse event after it has occurred is more costly (in terms of lives, economics, and livelihoods) than adequate financing of resources for One Health preventative measures. The global financing capability score for implementing IHR and public health emergency responses were 59 and 66 out of 100 in 2019 and 2021, respectively, which is considered low capacity (WHO, 2022). The e-SPAR report also showed that the AFRO has the lowest score of financial capacity for IHR and public health emergency response in 2021 (WHO, 2022). Only the European Region (EURO) had a higher capacity score compared to other regions (WHO, 2022). A collective effort from multi-actors should be gathered to overcome future pandemics (Shanmugaratnam et al., 2021).

Recent research has demonstrated that the sum of median cost estimates of primary pandemic prevention, calculated at around USD 20 billion, is less than one-tenth of the annualized economic losses due to a pandemic globally (Bernstein et al., 2022). However, the absence of incentivization arrangements has led to a lack of interest in countries to invest in Emerging Infectious Diseases preventive measures with a One Health approach. Even though, many empirical studies have explained the negative externalities of infectious diseases. Regarding COVID-19 cases control, globally, there is insufficient funding to provide vaccines for 20% of the world's population by end of 2021 (UNEP & ILRI, 2020). Furthermore, many countries faced huge challenges in providing adequate diagnostic tests, therapeutic, and personal protective equipment (PPE) and delivery of the supply to the grassroots (Shanmugaratnam et al., 2021).

As part of solidarity, multi-sources of funding should be pooled to end pandemics and prevent future pandemics globally. Currently, the G20 already initiated the Financial Intermediary Fund (FIF) to address pandemic prevention, preparedness, and response (PPR), particularly for LICs and LMICs countries. At least US\$75 billion over the next five years or US\$15 billion annual should be collected globally to support LICs and LMICs in country-level global public goods to address pandemic prevention, preparedness, and response (PPR) (Shanmugaratnam et al., 2021).

Recommendations

Regarding the challenges above, several recommendations are highlighted to enhance the implementation and financing of One Health:

1. Strengthen multi-sectoral collaboration

The operationalization of the One Health approach should be embedded in the national and sub-national governance system as a mandatory regulation. We recommend that ministries work to enable One Health by strengthening collaboration and communication mechanisms across sectors. Leveraging and intensifying flexible cooperation is needed to execute the One Health approach successfully across the national and sub-national levels. To ensure the One Health application would be executed at the grassroots level, a united command from the President is needed.

Enrichment of One Health's knowledge for all agents at the national to grassroots level through knowledge exchange and capacity building is needed. It results in the paradigm-shifting (sector-specific approach to One Health approach), which is an asset for successful methods of collaboration and team building across sectors to deliver the requisite skills and coordination for tackling problems at the human-animal-environmental interface. In this way, the university has a significant role in maintaining the capacity of current personnel and future leaders at multi-level governments about the One Health approach. A multi-year action plan is required to engage longstanding commitment from all actors to sustain the implementation of the One Health approach.

2. Integrated Data System and Real-Time Surveillance

Developing and expanding a global surveillance network and alert system across sectors is needed to prevent the spillover of disease from humans and animals around the world. This system should be interoperable, open, and updated in real-time using electronic and digital technologies. It must be a synergetic mechanism to avoid invalid and unreliable data. The data should be collected from the grassroots (e.g., primary health care), district, province, and national levels automatically. At national and sub-national levels, data sharing across sectors should be utilized to facilitate rapid decision-making to prevent and respond the disease transmission. Valuable and timely information is also essential to global stakeholders to augment pandemic preparedness strategies and leverage capacities across sectors. These data could be used for monitoring, evaluating, and policy-generating processes, which require intensive communication and collaboration. The advanced digital surveillance system should be

supported by capable human resources in disease surveillance including syndromic surveillance (early detection) and viral discovery (primary prevention) and application operations. The strong active and passive surveillance system should be linked with the high quality of laboratory networks.

3. Research and development

Epidemiology research and technological development have the potential to influence innovations in response and control the disease more effectively. This includes innovative preventive measures designed to reduce the risk of infectious disease transmission from agents and the environment worldwide, particularly in Low and Middle-Income Countries (LMIC). The leveraging of the innovation and technologies program could be financed by FIF. The role of academia, international organization, Non-Government Organizations (NGOs), and private organizations is important in improving innovation and technology development. This initiative should be moved from academic research agenda to policy-oriented research which owns by the government (Okello et al., 2014). The research findings would be the main reference in navigating the strengthening of the system and resources allocation, as well as becoming a global public good, which all countries have equal rights to adopt.

4. Sustainable financing systems

Prevention, preparedness, and response to a pandemic are widely recognized in managing public health emergencies. Hence, the One Health financing mechanisms should incentivize a multi-sectoral approach and address current barriers to operationalisation. Cost-based funding should be calculated and allocated to finance pandemic preparedness, prevention, and action. Financing and thus incentivization is a critical point in creating and maintaining One Health systems with an orientation towards sustained, preventative actions undertaken outside of emergency response. Collective funding from multi-actors across the nations is needed to support the LICs and LMICs in handling future zoonotic and pandemics. The purpose of the Financial Intermediary Fund (FIF), which is under development, should be allocated more for cross-sectoral upstream prevention work through the One Health framework. The use of an additional source of funding from international donor agencies or Non-Government Organizations (NGOs) also should be coordinated by the national government to ensure the allocation is effective without overlap sources of funding.

The action against future pandemics obligates the strong collaboration of multi-actors across sectors. A long-time investment in adequate prevention, preparedness, and response is required through capacity building of One Health, surveillance and detection

system, comprehensive financing, and innovative research as well as technologies. All of those would be comprehensively managed under resilient health systems. The role of the next G20 presidency is also essential in maintaining intensive coordination as well as monitoring and evaluating the progress of One Health implementation in each country member.

References

- Ayobami, O., Mark, G., Kadri-Alabi, Z., Achi, C. R., & Jacob, J. C. (2021). COVID-19: an opportunity to re-evaluate the implementation of a One Health approach to tackling emerging infections in Nigeria and other sub-Saharan African countries. *Journal of the Egyptian Public Health Association*, 96(1). <https://doi.org/10.1186/s42506-021-00085-y>.
- Bernstein, A. S., Ando, A. W., Loch-Temzelides, T., Vale, M. M., Li, B. v, Li, H., Busch, J., Chapman, C. A., Kinnaird, M., Nowak, K., Castro, M. C., Zambrana-Torrel, C., Ahumada, J. A., Xiao, L., Roehrdanz, P., Kaufman, L., Hannah, L., Daszak, P., Pimm, S. L., & Dobson, A. P. (2022). The costs and benefits of primary prevention of zoonotic pandemics. *Sci. Advances*, 8(5), 4183. <https://doi.org/10.1126/sciadv.abl418>.
- Destoumieux-Garzón, D., Mavingui, P., Boetsch, G., Boissier, J., Darriet, F., Duboz, P., Fritsch, C., Giraudoux, P., Roux, F. le, Morand, S., Paillard, C., Pontier, D., Sueur, C., & Voituren, Y. (2018). The one health concept: 10 years old and a long road ahead. *Frontiers in Veterinary Science*, 5(14). <https://doi.org/10.3389/fvets.2018.00014>.
- Falzon, L. C., Alumasa, L., Amany, F., Kang'ethe, E., Kariuki, S., Momanyi, K., Muinde, P., Murungi, M. K., Njoroge, S. M., Ogendo, A., Ogola, J., Rushton, J., Woolhouse, M. E. J., & Fèvre, E. M. (2019). One Health in Action: Operational Aspects of an Integrated Surveillance System for Zoonoses in Western Kenya. *Frontiers in Veterinary Science*, 6. <https://doi.org/10.3389/fvets.2019.00252>.
- Gebreyes, W. A., Dupouy-Camet, J., Newport, M. J., Oliveira, C. J. B., Schlesinger, L. S., & Saif, Y. M. (2014). The Global One Health Paradigm: Challenges and Opportunities for Tackling Infectious Diseases at the Human, Animal, and Environment Interface in Low-Resource Settings. *PLoS ONE*, 8(11), 1–6. <https://doi.org/10.1371/journal>.
- Johnson, I., Hansen, A., & Bi, P. (2018). The challenges of implementing an integrated One Health surveillance system in Australia. *Zoonoses and Public Health*, 65(1), e229–e236. <https://doi.org/10.1111/zph.12433>.
- Okello, A. L., Bardosh, K., Smith, J., & Welburn, S. C. (2014). One Health: Past Successes and Future Challenges in Three African Contexts. *PLoS Neglected Tropical Diseases*, 8(5). <https://doi.org/10.1371/journal.pntd.0002884>.

- Ribeiro, C. dos S., van de Burgwal, L. H. M., & Regeer, B. J. (2019). Overcoming challenges for designing and implementing the One Health approach: A systematic review of the literature. *One Health*, 7. <https://doi.org/10.1016/j.onehlt.2019.100085>.
- Shanmugaratnam, T., Summers, L., Okonjo-Iweala, N., Botin, A., El-Erian, M., Frenkel, J., Grynspan, R., Ishii, N., Kremer, M., Mazum-Shaw, K., Moreno, L. A., Reichlin, L., Rottingen, J.-A., Songwe, V., Suzman, M., Thiam, T., Trichet, J.-C., Woods, N., Min, Z., ... Farrar, J. (2021). A Global Deal for Our Pandemic Age: Report of the G20 High Level Independent Panel on Financing the Global Commons for Pandemic Preparedness and Response. www.pandemic-financing.org.
- UNEP, & ILRI. (2020). Preventing The Next Pandemic: Zoonotic diseases and how to break the chain of transmission. <https://www.un.org/Depts/Cartographic/>
- WHO. (2022, July 22). e-SPAR Public. <https://extranet.who.int/e-spar>
- Workie, N. W., Harimurti, P., Thio, F., Maulana, A. N., Pambudi, E. S., & Olam, S. J. (2022). Indonesia - Health Security Financing Assessment (English). <https://documents.worldbank.org/curated/en/099915006032234706/P166489019124c06d0998d0b195a0455c92>.
- World Bank. (2012). People, Pathogen, and Our Planet Vol 2: The Economics of One Health. www.worldbank.org.
- World Bank. (2018). One Health: Operational Framework for Strengthening Human, Animal, and Environmental Public Health Systems at Their Interface. <http://documents.worldbank.org/curated/en/703711517234402168/Operational-framework-for->