

Editorial



Emerging zoonoses in Indonesia: implication for the future

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The World Health Organization (WHO) defines zoonotic diseases (zoonoses) as those diseases and infections which are naturally transmitted between vertebrate animals and humans.⁽¹⁾ More than 250 zoonoses have been described, over 60% of pathogens that cause diseases in humans are zoonoses, comprising 75% of emerging infectious diseases.⁽²⁾ Not all zoonotic diseases become pandemics, but most pandemics are caused by zoonoses and they have become characteristic of the Anthropocene era.⁽³⁾

Joint consultation on emerging zoonotic diseases was provided by WHO, Food and Agriculture Organization, and World Organization for Animal Health in Geneva in 2004, and defined an emerging zoonosis as a pathogen that is newly recognized or newly evolved, or that has occurred previously but shows an increase in incidence or expansion in geographical, host or vector range. Some agents causing such diseases may evolve further and become transmissible from human to human.⁽³⁾ Factors influencing zoonoses comprise ecological changes in the environment, intensive livestock farming and agriculture, international trade of exotic animals, the rapid increase in movements of humans and transportation, and urbanization that has disrupted the human-animal-environment interface.⁽⁴⁾

Pervasive evidence has shown that severe acute respiratory syndrome (SARS), Middle East respiratory syndrome (MERS) and severe acute respiratory syndrome coronavirus-2

(SARS-CoV-2) have a bat origin and are transmitted to humans via intermediate hosts.⁽⁵⁾

Contrarily, the recent pandemic of COVID-19 has shown the potential of microorganisms from animal reservoirs to adapt to human hosts, and evolve further and become effectively and essentially exclusively transmissible from human to human.⁽³⁾

As of 26 August 2020, the Government of Indonesia announced 160,165 confirmed cases of COVID-19, 6,944 deaths and 115, 409 recovered cases from 485 districts across all 34 provinces. As of 26 August, most confirmed cases were in Java: DKI Jakarta followed by East Java, Central Java, and West Java. South Sulawesi is the only province outside Java that is among the top five provinces in terms of the reported number of confirmed cases. Java contributed 58.4% of the total cases in Indonesia.⁽⁶⁾

Since COVID-19 was declared as a global pandemic on 11 March, 2020, social lives have been upended, and economic activities disrupted around the world, including in Indonesia. Key sectors such as the travel and tourism sector, and other services sectors have been affected.⁽⁷⁾ COVID-19 will presumably not be the last zoonotic pandemic,⁽³⁾ such that reducing the risk of zoonotic outbreaks should be prioritized at all levels. Therefore in 2005, the WHO Western Pacific Region and the South-East Asian Region created Asia Pacific Strategy for Emerging Diseases and Public Health Emergencies (APSED). There must be close multisectoral

cooperation, particularly between the health and agricultural sector at each level to prevent and control zoonoses.⁽⁸⁾ On the other hand, One Health is a concept that human and animal health are linked as important now as ever. The term One Health was first introduced in 2003–2004 and was associated with the emergence of severe acute respiratory disease (SARS) in early 2003 and by the spread of highly pathogenic avian influenza.⁽⁹⁾

In Indonesia, The Presidential Decree No 7/2020 on The Acceleration of the Country's COVID-19 Handling, through a Task Force Steering Council, and was amended by Presidential Decree, No. 9/2020. The new decree mandates governors as members of the Task Force Steering Council to form a task force at the provincial levels to monitor and evaluate the implementation of the control program.⁽¹⁰⁾

However, synergies in implementing the program and people's awareness to adhere to the health protocols are needed as well as law enforcement. The COVID-19 pandemic reminds us of the devastating effect that previous emerging diseases had in our history until the development of effective vaccines that greatly reduced the burden caused by those infections.⁽¹¹⁾ Indonesia must improve biosecurity measures and good hygiene at the human–animals interface and thus may impact the human health in the future.

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