

Conference Paper

Global Health Challenges in ASEAN Economic Community Era

Leonardo Alfonsius Paulus Lalenoh

Faculty of Medicine, Universitas Gadjah Mada Yogyakarta, Jalan Kesehatan No. 1, Yogyakarta, 55281, Indonesia

Abstract

ASEAN Economic Community (AEC) requires high human migration from one country to another within Southeast-Asia region. AEC creates an atmosphere where people can meet together at the same time in the same place. At the same time, the world is struggling to combat the emerging infectious disease transmission across nations. Therefore, there will be a high risk of infectious disease transmission as the result of frequent human interaction. The medical tourism in AEC also plays important role as in transferring the ill and infected patient from one hospital to another hospital in another country. Standardization of the hospital within countries in South East Asia is vary from another, particularly in urban and remote areas. In addition to the quality health service assurance, health insurance system is another important issue in terms of universal health coverage. This is a descriptive study to explain the potential health problems as the consequence of AEC. In the context of AEC, there are some crucial gaps that could lead to a pandemic infectious disease. There should be a specialized committee in AEC responsible for health problems. Further advocacy is also considered mandatory in creating comprehensive and adequate health system and regulations.

Keywords: Asean, Community, Economic, Global, Health, Population

1. Introduction

ASEAN Economic Community (AEC) requires high human migration from one country to another within Southeast-Asia region. AEC creates an atmosphere where people can meet together at the same time in the same place. At the same time, the world is struggling to combat the emerging infectious disease transmission across nations. Therefore, there will be a high risk of infectious disease transmission as the result of frequent human interaction. In addition to the quality health service assurance, health insurance system is another important issue in terms of universal health coverage. This is a descriptive study to explain the potential health problems as the consequence

Corresponding Author:
Leonardo Alfonsius Paulus
Lalenoh
leonardo.a.p@mail.ugm.ac.id

Received: 2 April 2018
Accepted: 17 April 2018
Published: 23 May 2018

Publishing services provided by
Knowledge E

© Leonardo Alfonsius Paulus
Lalenoh. This article is
distributed under the terms of
the [Creative Commons](#)
[Attribution License](#), which
permits unrestricted use and
redistribution provided that the
original author and source are
credited.

Selection and Peer-review
under the responsibility of the
1st ICSEAS 2016 Conference
Committee.

 OPEN ACCESS

of AEC. The objective of this study is to highlight the potential global health strategic approaches in the context of AEC. This study is limited to a review using the approaches of one health concept.

2. ASEAN Economic Community

Participating in the ASEAN Economic Community (AEC) meaning a country should welcome foreigners to come to their country [1]. AEC creates an atmosphere where people can meet together at the same time in the same place [2]. At the same time, the world is struggling to combat the emerging infectious disease transmission across nations. Therefore, there will be a high risk of infectious disease transmission as the result of frequent human interaction [3]. The objective of this paper is to describe the challenges for Indonesia in terms of AEC in managing health problems globally and strengthen its system structurally.

Some of the key achievements of AEC 2015 including free trade, which will eliminate the restrictions in services sector and provide the people with greater opportunities in trading and doing business within the region [1]. Another key element is enhanced mobility of skilled people, a movement of people and professionals across nations. These key elements are the reflection of the impressive human transfer within the south-east Asia region. However, the risk of infectious disease transmission is also increasing along with the human movement.

3. One Health Approach

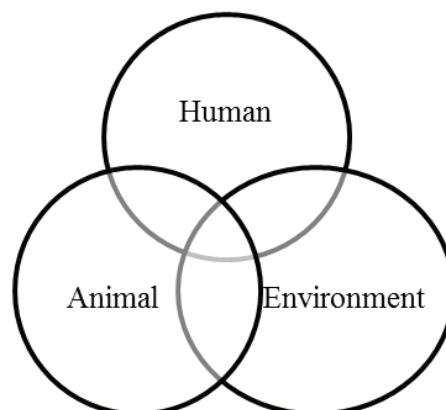


Figure 1: Diagram illustrating of The One Health concept [4].

One health is a new approach for integrating multi-disciplinary approach for widespread public health issues [4]. South-east Asia region has dramatically experienced epidemic problems in last 10 yr [5]. In 2016, Singapore stated for Zikavirus outbreak within the region. The Zika outbreak case is a major showcase to build mutual understanding for health universal precaution. The rapid human and good transfer increase the possibilities for another infectious disease and emerging pandemic threat.

One health approach utilizes the holistic workforce to anticipate the disease transmission form animal and environment [4]. This, in future will expand wide range of action to eradicate infectious disease spread within the region. In addition, the concept will help the decision maker, i.e. regional ministerial level to build capacity building and support through policy-making and raise the awareness to the public. However, the thorough management for health problem is very costly, one health approach is one of the most cost-effective solution for disease outbreak [4].

4. Potential Global Health Challenges in AEC

Given to the complexity of the economic community system, South-east Asia region still has several health issues that could inhibit the progress of the human and goods transfer within the region. These challenges are the representatives of the real health phenomenon in the field.

4.1. Quality of health care

Supporting the health care service in the trans-cultural setting, we have identified seven most important pillars that will help the health care provider to provide excellent and universal health services [6]. These are based on our experience in health services and reflecting on what are still missing from the current health service platforms in Indonesia. We identified the pillars corresponds to the four basics of bio-ethical principles.

The seven pillars are the suggested points particularly for the related stakeholders to apply appropriate policy making. The ASEAN Economic Community has many promising values in the future [1]. It could rise the sector of health services as well as health tourism in Indonesia. But, without adequate surveillance and monitoring system, the ASEAN Economic Community is very potential in spreading the pandemic infectious disease in Indonesia. All we need to do is to be prepared and establish strategic mapping for Indonesian health service platform in the globalization era.

TABLE 1: Important Pillars for Better Health Care in AEC.

Components
Good Interpersonal Relations
Communication Skills
Understanding Culture, Beliefs & Preferences
Health-Seeking Behavior
Health Insurance System
Health Risk Management
Personalized Medicine
Source: Lim et al [5].

4.2. Health worker qualification

As the medical education curricula is different from one country to another, it is therefore important for Indonesian medical school to apply high standard and qualifications for its students. In the AEC, medical professionals and health worker will be able to work transnationally around countries within Southeast-Asian [5]. There will be a strict competition within health care provider from one country to another. Everybody has to be able to compete based on their competency, skills and standard qualification. The situation will also imply to the health care quality as it reflects the medical professionals working in. It is therefore important for the developing countries to get prepared a World Health Organization (WHO) standardization for medical equipment and setting that apply internationally [7]. Well standardized and accredited medical education system will help the health worker to work freely within the Southeast-Asia region.

4.3. Travel health

Everybody now can travel to almost all the part of the world, including the society within Southeast-Asia region. However, the world is nowadays struggling to combat the infectious disease transmission, which include the emerging and re-emerging infectious diseases [8]. Since the early 1990s, several tuberculosis transmission cases had been reported through air travel [9]. Data had described strong evidence of the pattern of air circulation in the cabin during the flight, as well as the ventilation system

[8]. This is a single evidence of one disease transmission that represents the enormous health threat from travel activities. Avian influenza, MERS, Zika, swine flu and Ebola are just some diseases that have been reported transmitted from the passengers travel from endemic areas [2]. In 1 h to 2 h flight, someone could travel within countries in Southeast-Asia region that could at the same time transmitted the infectious disease to the other passengers onboard and transit time in the airport. In the AEC, double-triple folds human could transfer from one country to another within a day. It is a new global health threat to the society.

4.3.1. Health security (Bioterrorism)

In relation to the increase of human transfer and migration, health security is also another prominent issues in accordance with the travel health alert [9]. Even up to now there is still no adequate evidence of bioterrorism through the flight, everything has to be anticipated in advance [10]. The raising political issues in the world could potentially impact the health security. Dangerous bacteria, virus and microbes could potentially spread in a moment. Despite of its direct or indirect impact, bioterrorism could harm not only one specific country but a whole region or territory as the proximity and aerial factors as well as the high human transfer [9]. Mobile and internet reporting system could be an alternate to promote early warning system for public health workers and stake-holder.

4.3.2. Communicable disease

As it lies under the eclipse solar line, Southeast-Asia region is quite closed to the communicable (infectious) disease prevalence that will spread from one person to another rapidly[11]. Indonesia in particular is struggling for several highly infectious diseases namely tuberculosis, malaria, HIV/AIDS and elephantiasis (filariasis). In addition the emerging and re-emerging infectious diseases (Ebola, Zika, MERS), Indonesia has double its homework to fight the communicable disease. Highly contagious and rapidly to spread are just some reasons to describe the danger of these diseases. Beside the high expense for medical treatment and examination, these diseases raise social and community stigma to the patient and care provider resulting in secondary mental problems. Up to now, robust community supports are always promoted to engage societal support and participation in infectious disease elimination. Good policy and advocacy for health are important as the part of the local government action

and commitment to elevate the health status of the population [9]. Another issue is most of the patients live in rural or slum area with inadequate health facility and support. Many patients are late to diagnosed and referred to hospital responsible for high morbidity and mortality of the disease. Health expense and additional cost are also rising given to the complicated conditions of patients and unexpected emergency situation. Law enforcement is required to ensure equal distribution of health facilities and professionals to every corner of the nation according to their level of competencies [8]. The AEC open the opportunity for the transmission of the disease rightly start the travel until the arrival to the destination. Through surveillance health system has to be put in priority for emergency preparedness in emergency situation.

4.3.3. Non-communicable disease

Indonesia is struggling for double burden diseases: the communicable and non-communicable diseases. As the communicable diseases are raising along with the high human transfer, the metabolic diseases such hypertension, dyslipidemia and diabetes mellitus are rising [5]. Mental health problems are also rising in response to high level quotidian stress and pressure [12]. Unbalance and unhealthy lifestyle and diet have taken important role in contributing for the communicable diseases burden [13]. Many of the diseases should undergone for long-life therapy [14]. Non-communicable diseases are mostly chronic disease with a long impact the quality of life of the patients and care provider. Unlike the western countries, in some developing countries the non-communicable diseases occurred in the low-income society and in rural area as well. The burden of the country will be doubled as the same patient suffering from non-communicable disease could potentially at the same time infected by another communicable disease. Clinical study had showed significant co-relation between communicable and non-communicable disease, e.g. Diabetes Mellitus and Tuberculosis. As the result of high glucose level in the blood, someone could be infected by tuberculosis; and the diabetes mellitus will be comorbid factor for tuberculosis patients. In the AEC, non-communicable disease should be considered by the policy-maker in terms of build-up the health system and services through the clinics and hospital[2]. Again, arranging this policy in the umbrella of AEC will be linked to the diverse health professional's qualifications and health insurance system for payment within countries in Southeast-Asia.

5. One Health Approach in AEC

In dealing with the global health challenges in AEC requires interdisciplinary and multi-sector approach to create best strategy planning for health system strengthening as to reduce the disease transmission. One health alone is a part of global health approach to combat the emerging and re-emerging infectious disease in the world. As we consider the impact of the pandemic, ASEAN itself has to exercise call for actions and strategic planning to support the community and at the same time to control the transmission of disease. These approaches below are the first-line steps suggested for the regional health policy-maker to build adequate early prevention system within ASEAN countries.

5.1. Epidemiology and risk analysis

Health problem is related to many contributing factors. In terms of AEC, geographical distribution is a very crucial factor to consider for logistics problems. Some study are being developed to identify health problems with spatial analysis [15]. Geo-spatial analysis will help to draw an early warning system for potential disease outbreak in the region. Epidemiology analysis will help the clinician, public health worker and policy-maker to establish the risk factors for diseases in South-east Asia region. Risk analysis is also very crucial as well to assess the potential risk for each infectious disease [16]. Geographically, South-east Asia region located in the equatorial line with high humidity which is a contributing factor for vector-borne disease like malaria and dengue fever. The risk assessment will predict the current health situation and help to determine the proper strategy for disease eradication. In support for the AEC, comprehensive diagnostic center is mandatory to develop in the future [17]. Ecological approach should be considered to measure the impact of the risk analysis within the region [18]. Epidemiology is a determinant to describe to potential outcome within the region. One health offers systematic approach to understand the big umbrella of the disease.

5.2. Infectious disease early detection & management

A regional reference laboratory for infectious disease is a good concept in support to eliminate the transmission [19]. Continuous technical assistance should be provided by the organization to support sustainable infectious diseases early detection within the region using interdisciplinary approach [20]. One health integrated laboratory is a

robust innovation to support the regional policy to combat infectious disease through early detection and prompt treatment. Basically, in the perspective of public health, early detection is a major concern to shape the awareness of the health worker and society. Planning and organizing specific program is an effective strategy particularly for vector-borne disease [21]. Referral hospital for regional level also should be constructed to handle the regional health problems, ultimately with tendency to be pandemic within the region. As infectious diseases are still major problems in South-east Asia, the stakeholder should provide specific platform and agency specialized for infectious disease.

5.3. Continuous medical education and training

Medical updates are mandatory for every health workers to increase the capacity building. Training and conference are essentials to shape the knowledge of the professionals as well as to create mutual understanding and vision for global health action. As one health and global health concept are relatively premature, it is a good start for the stakeholder to provide adequate related training and courses for students, professionals and researcher.

6. Conclusions

The ASEAN Economic Community has many promising values in the future. It could rise the sector of health services as well as health tourism in Indonesia. But, without adequate surveillance and monitoring system, the ASEAN Economic Community is very potential in spreading the pandemic infectious disease in Indonesia. All we need to do is to be prepared and establish strategic mapping for Indonesian health service platform in the globalization era.

Given to the fact that there is a significant impact on infectious disease transmission in the era of AEC, however it is imperative to build up a mutual understanding and preserve the established previous cooperation and call for action. The WHO suggested several actions for air travel health and notably for tuberculosis transmission by reducing the risk of exposure, informing the passengers and crew of the possible exposures and to build responsibilities for informing whenever the exposure is suspected.

Anticipating the AEC, Indonesia has to build a better health system starting from the continuing medical education, holistic patients approach and applying the global health approach. It is clear for Indonesia to survive the era of global competition. However, a

thorough preparation and adequate multi-stakeholder partnership is imperative for a sustainable globally health care in Indonesia.

References

- [1] Kittrakulrat J, Jongjaturaporn W, Jurjai R, Jarupanich N, Pongpirul K. The ASEAN economic community and medical qualification. *Global Health Action* 2014;7(1):p. 1-6 <http://www.tandfonline.com/doi/full/10.3402/gha.v7.24535>
- [2] Guadamuz TE, Cheung DH, Wei C, Koe S, Lim SH. Young, Online and in the dark: Scaling up HIV testing among msm in ASEAN. *Journal PLOS One* 2015;10(5):1-12 <https://doi.org/10.1371/journal.pone.0126658>
- [3] Van Boeckel TP, Thanapongtharm W, Robinson T, Biradar CM, Xiao, Gilbert M. Improving risk models for avian influenza: the role of intensive poultry farming and flooded land during the 2004 Thailand epidemic. *Journal PLOS One* 2012;7(11):1-9 <http://journals.plos.org/plosone/article?id=10.1371/journal.pone.0049528>
- [4] Barrett MA, Osofsky SA. One health: Interdependence of people, other species, and the planet. In: *Jekel's Epidemiology, Biostatistics, Preventive Medicine, and Public Health*, 4th edition. Katz DL, Wild D, Elmore J, Lucan S (Eds.). Philadelphia, PA: Elsevier/Saunders. 2013. p. 238-251 <https://www.elsevier.com/books/jekels-epidemiology-biostatistics-preventive-medicine-and-public-health/katz/978-1-4557-0658-7>
- [5] Lim J, Chan MMH, Alsagoff FZ, Ha D. Innovations in non-communicable diseases management in ASEAN: A case series. *Global Health Action*. 2014;7:10. <http://www.tandfonline.com/doi/full/10.3402/gha.v7.25110>
- [6] Peltzer K, Williams JAS, Kowal P, Chatterji S. Universal health coverage in emerging economies: Findings on health care utilization by older adults in China, Ghana, India, Mexico, the Russian Federation, and South Africa. *Journal Global Health Action* 2014;7: p.1-9 https://www.researchgate.net/publication/267754594_Universal_health_coverage_in_emerging_economies_Findings_on_health_care_utilization_by_older_adults_in_China_Ghana_India_Mexico_the_Russian_Federation_and_South_Africa
- [7] World Health Organization (WHO). WHO guidelines on hand hygiene in health care: First global patient safety challenge clean care is safer care. Geneva 2009 <http://www.who.int/gpsc/5may/tools/9789241597906/en/>

- [8] World Health Organization (WHO). Infection prevention and control during health care for confirmed, probable, or suspected cases of pandemic (H1N1) 2009 virus infection and influenza-like illnesses. Geneva, WHO, 2009. http://www.who.int/csr/resources/publications/cp150_2009_1612_ipc_interim_guidance_h1n1.pdf (2009)
- [9] World Health Organization (WHO). Infection prevention and control of epidemic- and pandemic-prone acute respiratory infections in health care. Geneva, WHO, 2014. http://apps.who.int/iris/bitstream/10665/112656/1/9789241507134_eng.pdf(2014)
- [10] Van Minh H, Pocock NS, Chaiyakunapruk N. Progress toward universal health coverage in ASEAN. *Global Health Action*. 2014;7:10. https://www.researchgate.net/publication/269094680_Progress_toward_universal_health_coverage_in_ASEAN
- [11] Guinto RLLR, Curran UZ, Suphanchaimat R, Pocock NS. Universal health coverage in "One ASEAN": Are migrants included? *Global Health Action*. 2015;8:10. <https://www.ncbi.nlm.nih.gov/pubmed/25626624>
- [12] Yin Y, Zhang W, Hu Z, Jia F, Li Y, Xu H, et al. Experiences of stigma and discrimination among caregivers of persons with schizophrenia in china: A field survey. *PLoS ONE* 2014; 9(9):1-11 <https://www.ncbi.nlm.nih.gov/pubmed/25626624>
- [13] Yang LH, Anglin DM, Wonpat-Borja AJ, Opler MG, Greenspoon M, Corcoran CM, et al. Public stigma associated with psychosis risk syndrome in a college population: Implications for peer intervention. *Psychiatric Services* 2013; 64(3):284-288 <https://www.ncbi.nlm.nih.gov/pubmed/23450386>
- [14] Piza PET, Luís BS. Public stigma and schizophrenia in São Paulo city. *Revista Brasileira de Psiquiatria* 2011; 33(2): 130-136. http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1516-44462011000200007
- [15] Dom NC, Ahmad AH, Latif ZA, Ismail R, Pradhan B. Coupling of remote sensing data and environmental-related parameters for dengue transmission risk assessment in Subang Jaya, Malaysia. *Geocarto International*. 2014; 7(23):258-272 <http://www.tandfonline.com/doi/abs/10.1080/10106049.2012.696726>
- [16] De Man H, Bouwknecht M, van Heijnsbergen, EJT. Leenen, F. Van Knapen, De Roda Husman AM, et al. Health risk assessment for splash parks that use rainwater as source water. *Water Research* 2014;54:254-261 <https://www.sciencedirect.com/science/article/pii/S0043135414001201?via%3Dihub>
- [17] Suwancharoen D, Chaisakdanugull Y, Thanapongtharm W, Yoshida S. Serological survey of leptospirosis in livestock in Thailand. *Epidemiol Infect* 2013;141:2269-2277 <https://www.cambridge.org/core/journals/epidemiology-and-infection/>

article/serological-survey-of-leptospirosis-in-livestock-in-thailand/
9A742A735C981C105A17284F305ACE54

- [18] Murray KA, Daszak P. Human ecology in pathogenic landscapes: Two hypotheses on how land use change drives viral emergence. *Environmental Virology* 2013;3:79-83 <https://doi.org/10.1016/j.coviro.2013.01.006>
- [19] Chaturongkasumrit Y, Techaruvichit P, Takahashi H, Kimura B. Microbiological evaluation of water during the 2011 flood crisis in Thailand. *Science of the Total Environment*. 2013; 463(464):959-967 <https://doi.org/10.1016/j.scitotenv.2013.06.071>
- [20] Daszak, P., Zambrana-Torrel C., Bogich, T.L., Fernandez, M., Epstein, J.H, Murray KA, et al., 2013. Interdisciplinary approaches to understanding disease emergence: the past, present, and future drivers of Nipah virus emergence. *Proceedings of the National Academy of Sciences*, 110 (Supplement 1), pp.3681-3688. http://www.pnas.org/content/110/Supplement_1/3681
- [21] Townsend SE, Sumantra IP, Pudjiatmoko, Bagus GN, Brum E, Cleaveland S, et al. Designing programs for eliminating canine rabies from islands: Bali, Indonesia as a case study. *Plos Neglected Tropical Disease* 2013;7(8):1-6 <http://journals.plos.org/plosntds/article?id=10.1371/journal.pntd.0002372>