Received 1 May 2017
Accepted 1 July 2017

International leadership for the control of disease outbreaks relating to "One Health"

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Abstract

Purpose – In view of the current global challenge of infectious diseases transmitted from animal to man, this is a complimentary piece of paper to promote, in particular, the inter-sectorial and multi-disciplinary coordination and cooperation in their prevention and control, among all concerned agencies/organizations at both policy and operational levels, with special emphasis on the importance of leadership development within the socio-cultural context of health, and with particular reference to the concept of "One Health" that implies the intimate interaction between man and animal within their own environments/ecosystems. The paper aims to discuss these issues.

Design/methodology/approach – This is a commentary piece.

Findings – The paper directly and indirectly suggests lacunae in several areas of concern for further research and development to fill the knowledge gap in such a prevention and control.

Originality/value – This is a commentary piece.

Keywords Multi-disciplinary, Multi-sectorial, Multiple stakeholders and partners, Networking approach, Partnership development

Paper type Commentary

The world community started paying serious attention on the issue of new emerging and re-emerging infectious diseases (IDs) in early 1990s[1]; from where there have been several evolutions.

The current issue is known as emerging infectious diseases (EIDs); numerous new pathogens and IDs had been emerging and re-emerging, such as Ebola, Leptospirosis, Avian Influenza, whereas some are in decline, such as Measles, Tetanus, Poliomyelitis[2]. Some IDs had been put under control, became re-emerging, such as Tuberculosis (TB) and Malaria.

EIDs are a serious threat to global health security and also a global public health challenge in the twenty-first century[4, 5]. More than 75 percent of EIDs are coming from zoonosis – diseases transmitted from animal to man, and the majority of these diseases originates in wildlife[3].

The emergence is determined or driven by socio-cultural, economic, environmental and ecological factors, among others, strongly related to anti-microbial resistance of micro-organisms which is due to indiscriminate use of antibiotics by human beings, whereby the infectious agents undergo a genetic change or genetic modification as a defense mechanism for their survival[2]. EIDs are significant burden on global economies and public health.

Journal of Health Research
Vol. 32 No. 2, 2018
pp. 106-110
Emerald Publishing Limited
2586-940X
DOI 10.1108/JHR-12-2017-011

Prevention and control of zoonosis (diseases transmitted from animal to man)
Prevention and control of zoonosis broadly involves:

- human health;
- animal health – domestic and wildlife; and
- environmental health.

For the prevention and control of diseases transmitted from animal to human beings, these three aspects of health should be considered together as "One Health."

Control of disease outbreaks relating to One Health
It requires efficient and effective interventions through:

- multi-spectral and multi-disciplinary coordination/collaboration and actions, whereby several sectors and disciplines are involved – multiple-stakeholders and multiple-partners;
- networking of multiple stakeholders/partners, such as WHO's Global Outbreak Alert and Response Network (GOARN), linking and involving more than 100 existing networks worldwide which are used to identify, coordinate and mobilize available resources supporting the control; and
- such coordination/collaboration and actions among concerned stakeholders and partners are indeed very complex and often complicated that need support from strong leadership at both national and international levels.

Concerned sectors/disciplines

- Due to the importance of food processing issue, number of involving sectors is considering health, agriculture (animal husbandry, fishery and plants), environment/ecosystems as well as industrial sectors.
- Disciplines, e.g. IDs, public health, epidemiology/ecology, laboratory, information management, telecommunication, informatics, and international field experience and the importance of ecology, the study of interaction between living organism and its environment, are specially underlined.
- In order to develop and implement programs related to the disease control and prevention, socio-cultural context and locality must be particularly taken into consideration. In addition, this process also requires cooperation and participation among shareholders.

International organizations/network
Effective coordination for prevention and control of EIDs is needed at all levels of intervention – global, regional and national.

Under United Nations (UN), World Health Organization (WHO) and Food and Agriculture Organization (FAO) are responsible for global coordination in global policy, strategy, program development, development of global technical standards and guidelines, and providing technical back up to their members.

There is also a coordination body recently established at UN in New York to coordinate all concerned agencies, both within and outside the UN system. Thailand One Health University Network was established to coordinate the work of concerned institutions in the country, while South-East Asia One Health University Network was established at the regional level.

International legal instrument for dealing with "One Health"

Application and enforcement of legal instrument or regulations are necessary in public health intervention for the prevention and control of diseases, which are provided as follows:

- The most important legal instrument now is International Health Regulations (IHR)[6], successor of IHR in 1969 which was dealing particularly with only three dreadful diseases in the past, i.e. cholera, plague and yellow fever. IHR in 2005 was responsible for worldwide prevention and control of "any public health emergencies of international concern."
- IHR 2005 is an international legal system contributing to global defense against "SHOCKs – CRISIS" from, among other things, EIDs.
- Supporting the preparedness, surveillance and effective response to disease outbreaks and other acute public health emergencies, including disasters (natural or man-made) and humanitarian crisis (displaced population and refugees).

WHO's GOARN was established in 2000[7] to ensure rapid deployment of technical resources worldwide for contributing to long-term epidemic preparedness, response and capacity building, in addition to dealing with any acute or emergent public health events. The management of a big global network, like WHO GOARN, is indeed a real challenge that requires an extraordinary coordination under a strong leadership.

Current leadership priorities of WHO (WHO GPW)

Overall, WHO recognizes the importance of leadership in its development and management programs. WHO accords high priority in disease prevention and control, and a strong leadership can ensure success in the following:

- implementing the provision of IHR 2005;
- addressing associated determinants of health – socio-cultural, economic, environmental and political factors;
- ensuring coordinated, well-prepared and well-equipped public health systems that deal particularly with the development of preparedness, surveillance, response and capacity building, including community resilience;
- promoting political commitment and ensuring adequate resources to address underlying socio-economic and managerial, as well as logistics factors; and
- promoting effective international collaboration and communication.

Need leadership in dealing with One Health

The important role of leadership in prevention and control of EIDs is summarized as follows:

- facilitates and supports coordination and collaboration among stakeholders/partners;
- facilitates and supports the development and management of "Teamwork or Network";
- in a nutshell, role of a leader includes coordination, facilitation, promotion support, and he/she acts as the head of agency and a catalyst; and
- coordination during the period of Tsunami in Indian Ocean in 2004 was very difficult, and international level coordination was needed to mobilize global resources to support the affected area; thus, coordination at the country level is essential to ensure the efficient use of resources in the relief operations.

Effective leader

A strong leader should have the following abilities:

- create an inspiring vision or goal of the future for the growth and development of his or her organization;
- motivate and inspire people to dedicatedly engage with that vision or goal;
- manage effectively the delivery of that vision or goal;
- use management skills to guide his/her people to the right direction and to the desired destination;
- always create something "new" (creative and innovative);
- should possess leadership skills required for sustainable development in the multi-sectorial and multi-disciplinary environment particularly through working together, partnership or networking of multiple stakeholders/partners which will help in planning and management, gathering information, coordinated communication, dealing with negotiation and enhancing technical, political and psychosocial skills; and
- another two important areas of leadership skills are analytical skills, i.e. the ability to pursue systematic analysis of situations and risks (risks may be of disease outbreaks or of disaster strikes), planning for risk reduction and for preparedness and effectively coordinated response, and conceptualization skills, i.e. the ability to conceptualize and formulate solutions to effectively tackle the problems.

Variety of leaderships

- Political.
- Community.
- Technical.
- Public health.
- "One Health."

Our particular concern is public health/one health leadership whereby a capable leader is needed for effective development of public health policies, strategies and programs for public health interventions, and for effectively managing the implementation of those policies, strategies and programs. Leader decides the direction and pathway for the team to move forward and works by group solidarity or consensus among the members.

Leadership models

There are a number of leadership models which are as follows:

- Transformational – the ability to empower others to effect change.
- Collaborative – the ability to coordinate with others for action.
- Conflict management – the ability to solve all conflicts of interest in the group or organization.

Interests may be related to economy or public health, e.g. issue related to trade and health, such as patent right and compulsory licensing (CL). Protecting patent right is in the interest of economy, while getting access to patent right through CL is in the interest of public health.

Another important area of conflict of interest is the reporting of disease outbreaks. Few countries are reluctant to report disease outbreaks occurred in their territories due to fear of the negative impact on trade and tourism. Protecting trade and tourism is in the interest of economy, while reporting outbreaks of diseases is beneficial public health:

- Shared leadership model – democratic, decentralized and good governance – transparency and accountability, free from any conflicts of interests.
- Results oriented – achieving the vision or goal through teamwork or network approach by motivation and encouragement of people, avoiding bureaucratic style in management.

Conclusions

Effective leadership is vital for successful control of disease outbreaks. We can learn leadership skills, but it is more important to earn them through practice.

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