

Developing Countries Need a National Strategies and Policies of Vaccine Development, Supply and Self-Manufacturing

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I am honored to be invited to join the Editorial Board of Journal of Vaccination & Immunogen Techniques. This is an exciting time for vaccine development since emerging infectious diseases and chronic diseases such as cancer and autoimmune urgently need safe, cheap and effective treatments. As Nelson Mandela once wrote, “life or death for a young child too often depends on whether he is born in a country where the vaccines are available or not”, this may be regarded as a political description of the current global health care problems. Vaccine manufacturing capability has been used as an index to profile whether a country is developed or not. Despite having the economic wealth, Asian governments now recognize that they do not have access to sufficient vaccine supplies, leaving their populations at high risk. Asian governments are looking to Biotechnology for accelerating their food supplies and healthcare improvement, and some are even thinking about the economic growth through manufacturing valuable biological products. Companies and government agencies in Asia are closing the gaps in regulatory compliance in manufacturing biologics in the last few years. However, countries such as China, Korea and India still lag behind in vaccine R&D and production techniques due to a lack of financial support and technology transfers from foreign companies.

Tropical neglected infectious diseases, new and reemerging infectious diseases (SARS, pandemic avian influenza and enterovirus 71) and the 2001 anthrax attack in the United States had enormous impact on each national security, global economy and health care systems. Out-breaks of new emerging diseases will continue around the world. It could happen to some Asian countries that cannot find the vaccines and drug against the diseases. In addition, these events also have raised new challenges and changed the landscape of vaccine industry. From the standpoint of vaccine industry, this provides a golden opportunity to communicate to colleagues, lawmakers, and the public the central importance of a National Strategies and Policies of Vaccine Development, Supply and Self-manufacturing.

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To manage the cost required for diseases control and elimination in Asian country, a national strategic plan for drugs and vaccines R&D against tropical neglected infectious diseases, new and reemerging diseases should be initiated and implemented according to priority. National Security Council who will be the best agency to organize a National Vaccine Advisory Committee to develop and implement National Strategies and Policies of Vaccine Development, Supply and Self-Manufacturing.

The major goals of this Advisory Committee thus are

1. To establish National Vaccine Center (NVC) and assist NVC in
 - (a) The prioritization of vaccine research and development activities to meet national needs
 - (b) Establishing vaccine emergency production capabilities
 - (c) Developing vaccine quality control and disease surveillance laboratory
2. To provide recommendations that help Ministries of Health set priority for
 - (a) Managing their immunization services and controlling of vaccine-preventable diseases
 - (b) Executing the cGMP regulations compliance and guidelines for vaccine product registrations

The reports from the Advisory Committee will be written to provide baselines information and facts about national vaccine development, supply and self-manufacturing capability. Based on this information, the Advisory Committee will assign sub-committee or working groups to perform analysis and propose strategic plans and policies for each key area. The strategic plans should be very clear about their objectives and activities. The plans also open the concept of “National Strategies and Policies of Vaccine Development, Supply and Self-Manufacturing” to be scrutinized and debated. The Advisory Committee encourages broad discussion about its priorities and activities and how best they can be achieved.

The processes involved in research to product launch normally take 7 to 13 years to go through multi-stage R&D and have a low success rate. Today, novel technologies are being used and investigated for new vaccine developments. As more shots were given to infants, multivalent combination vaccines were invented and have now become the trend. Therefore, the concerted actions are needed to accomplish the vision of the National Strategies and Policies of Vaccine Development, Supply and Self-Manufacturing. These actions should be established to be both realistic and attainable, and will require mobilizations and collaborations to engage and strengthen efforts of contributors in all stages of the vaccine continuum, in and between both the public and private sectors. Within the Advisory Committee, there will be sub-committees or working groups to

focus on the Elements in Vaccine Development, Supply, Utilization and Advocacy. Also, these sub-committees will have members from vaccine manufacturers, Department of Health (DOH), Ministry of Economic Affairs (MOEA), Center for Diseases Control (CDC), Department of Defense (DOD), Council of Agriculture (COA), Foreign Affairs Department (FAD), Institutes of Animal Technology


(IAT), National Universities, Academy of Science and Technology. Asian country can build strong vaccine industry, and the national healthcare will be self-sufficient and would be able to think about economic growth through manufacturing valuable biological products. In addition, this country can supply vaccines to foreign countries as the “humanitarian diplomacy”.

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