



Thailand's New National Vaccine Strategy: Building Capacity, Accelerating Production

An Interview with Dr. Yot Teerawattananon

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Last week NBR convened the 2011 Pacific Health Summit on vaccines in Seattle. This interview with Summit participant, Dr. Yot Teerawattananon (Thailand's Health Intervention and Technology Assessment Program), is part of a series of interviews on the latest developments and current issues facing the global vaccines and immunization field. This interview was published on the NBR website: <http://www.nbr.org>.

Yot Teerawattananon is Leader and Founder of the Health Intervention and Technology Assessment Program, which is a semi-autonomous research institute under the Bureau of Policy and Strategy in the Office of the Permanent Secretary of Thailand's Ministry of Public Health. He previously served as Director of Pong Hospital in northern Thailand. Since 2000, Dr. Teerawattananon has also worked as a researcher at the International Health Policy Program.

Thailand recently announced the National Vaccine Committees' (NVC) two- and five-year plans. What noteworthy recommendations are given in these plans?

The newly developed national vaccine strategy, approved by the Cabinet early this year, aims to advance domestic capacity in safeguarding the country against vaccine- preventable diseases. The plan includes recommendations for human resources, infrastructure development, and domestic production of vaccines for ten diseases—dengue, diphtheria, tetanus, pertussis, mumps, measles, encephalitis, polio, hepatitis B, and tuberculosis. If production succeeds, Thailand would be able to produce most of the essential vaccines for use in our EPI¹ system. At the moment, the country produces only two out of 11 vaccine antigens scheduled in the EPI.

Looking ahead, do you foresee challenges to the plans' implementation and success?

¹ Expanded Program on Immunization

In order for either plan to succeed, several obstacles must be overcome. First, the plans rely very much on governmental bodies that in the past have been unsuccessful in making progress in vaccine development. New ways of thinking and working, such as effective mechanisms for recruiting and retaining capable scientists or working with private partners, are needed, and so far, I have not seen clear plans and mechanisms to address these impediments. Second, with a budget allocation of approximately USD \$140 million over a five- and ten-year timeline, I am not convinced that it is sufficient to achieve the goals, given current technical capacity in the country. Lastly, all vaccines in Thailand's production pipeline, except dengue vaccine, are already included in the EPI and widely available in the global market at relatively cheap prices. As a result, there may be difficulties in making the national plan promising in terms of economic returns among responsible agencies to provide full support in the long-term.

In addition to these challenges facing existing vaccines, over the next decade, it is anticipated that several new vaccines will be introduced into the market, many of which will be far more expensive and bulkier than the vaccines in the traditional EPI package. In your opinion, is Thailand prepared to introduce these new vaccines into the health system, while still ensuring that citizens receive coverage of traditional EPI vaccines?

Yes, I think we have a very thoughtful approach to address these new vaccines. The introduction of a new vaccine is always a good case study for learning about health policy and politics, as it involves multiple stakeholders with lots of money and resources committed in the long-term. At the moment, the NCV is forming a plan to introduce some new vaccines and it is clearly seen that a single entity alone cannot make this happen. The National Health Security Office (NHSO), health professional bodies, research institutes, and industry are all playing important roles to help shape the policy.

Thailand offers universal access to healthcare, including free immunization coverage. Can you describe the link between Thailand's Universal Health Care program and immunization efforts? How are efforts coordinated between different agencies in determining which vaccines to provide?

At the moment, the Universal Health Coverage Scheme (UC) finances all vaccines under the EPI, which helps ensure its long-term financial sustainability. In some particular circumstances, the UC also makes incentives to health providers in order to achieve the national target of vaccine coverage. However, because the NCV, which gives recommendations about what should be covered under the EPI, and the NHSO, which is the UC manager, are independent, they need to convince each other when they want to include new vaccines using public financing. For example, the NCV always considers health needs, safety, and the efficacy of a vaccine, but the NHSO is interested in cost-effectiveness and the potential budgetary impact of the vaccine. This relationship can be seen as a good balance of power over the national vaccine policy but at the same time, it could also delay the adoption of new vaccines in the country. There is a recent effort aimed at harmonizing the criteria and mechanisms between these two agencies.

In what ways is Thailand, which currently imports around 80% of its vaccines, accelerating its move toward self-reliance, and what repercussions might this have on immunization policies? What impact could Thailand's ability to foster its own development of vaccines, and regionally export them, have on the future plans of the country's immunization program?

Apart from the aforementioned national policy, in 2009 the Thai Royal government decided to invest approximately USD \$45 million to build an influenza vaccine plant. The plant is now under construction with the aim of producing two million doses of inactivated influenza vaccine by 2014. The plant's production can be expanded to ten million doses of influenza vaccine in the future. This expansion can be considered as ensuring regional capacity to respond to pandemic influenza, because ten million doses of trivalent influenza vaccine are equal to 30 million doses of monovalent pandemic influenza vaccine.

Without support from the World Health Organization (WHO) and the Ministry of Health, Labor and Welfare, this initiative would not be possible—since the supply of seasonal influenza vaccine in the global market is already higher than its demand, the International Federation of Pharmaceutical Manufacturers & Associations (IFPMA) had made an agreement not to transfer technology for influenza vaccine to developing countries. I hope this case can highlight the importance of international collaboration in vaccine development.

In what area could public-private partnerships (PPPs) play a role in supporting and accelerating the country's capacity and national vaccine plan?

PPPs are very vital for Thailand to accelerate vaccine development and production. It includes seeking appropriate partners within and outside the country, given that private firms in Australia, India, Indonesia, and some other countries in the region are experienced in the field of vaccine development and production. Although PPPs are already addressed as part of the new national vaccine strategy, I have seen very few cases of such partnerships at the initial phase of the research and development process of dengue vaccine; however, I hope that those partnerships will prove successful and become models for further collaborations.

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