

Thai National Antidote Program

National Health Security Office (NHSO), Thailand

CATEGORY	Continuous Improvement Recognition Award
ORGANIZATION	1) Ramathibodi Poison Center, Faculty of Medicine Ramathibodi Hospital, Mahidol University 2) National Health Security Office (NHSO) 3) Government Pharmaceutical Organization (GPO)
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NAME OF THE PROJECT	The Thai National Antidote Project
OBJECTIVE AND NATURE OF PROJECT	Background Antidotes and antivenoms are medicines for treating some poisonings and envenomation. Appropriate use of these medicines significantly reduce mortality and morbidity rates and minimize medical resources. Unfortunately, Thailand suffered from shortage of some antidotes problem leading to the inadequate treatment and less favorable outcome. In fact, it is the global problem but low- and middle-income countries suffer more. There are several causes of this problem including little financial incentive for the industry to develop, produce and market them; infrequent use of some antidotes; unpredictable demands; stocking these medicines potentially becomes financial wastage. For snake antivenoms, there is only one source supply. Distribution of the antivenoms was nonsystematic. There were mismatch between the stock and demand in the specific areas. The specific types of antivenoms were inadequate stocked in some areas, but they were excess in the other parts of the country. The Thai National Antidote Project of Thailand (TNAP) was setup in 2010. The objective of this project is to secure that • Necessary antidotes and antivenoms are available nationwide in Thailand. • All patients in Thailand should be able to access to the necessary antidotes appropriately and timely. NHSO has provided financial and technical support to set up and developed TNAP since 2010. GPO is responsible to procure the antidotes and antivenoms

	according to the list of TNAP. Poison Centers empower the frontline health personnel to make diagnosis; verify the indication for treating patients with specific antidotes; continuously supervise the use of the drugs and monitor the medical outcome.
WHY IT SHOULD BE RECOGNISED	1. TNAP ensures the accessibility of the necessary antidotes under universal coverage. 2. There are several new approaches and innovations in this project. 3. TNAP is able to achieve the objective and goal. It can demonstrate the better clinical outcome and minimize the national budget for purchasing antivenoms without compromise the accessibility. 4. TNAP is a collaborative work among several agencies which are responsible to Thai health system in different aspects voluntarily. 5. Not only Thai patients gain benefits from TNAP, it also has international contribution. 4. Thailand and SEARO develop a project called “the Initiative for coordinated antidote procurement in the South-East Asia Region (iCAPS)” from the achievement of TNAP. People in this region will gain benefit from TNAP. In the near future, it is agree to cover ASEAN countries.
SUMMARY OF THE PROJECT	Ramathibodi Poison Center provides information and consultation to health personnel concerning the diagnosis and management of human poisoning since 1996. The Center also performs toxicovigilance. In 2010, NHSO allocated a budget to set up this project. List of the antidotes, which were shortage, was set up. Local pharmaceutical plants are encouraged to produce some antidotes. The rest are globally searched and procured by GPO. A new nationwide distribution of antidotes system is designed. All public and university hospitals are invited to be the stock sites, the drugs remain belonging to NHSO. The antidotes and antivenoms are stocked according to the local epidemiology, urgency of need, stockpiling and availability. A website for searching these antidotes and antivenom is developed by using GPO vendor managed inventory and Global Positioning System. It is web-based software and real-time updated for the type and number of antidotes and antivenoms in the stock sites. Since 2012, all kinds of snake antivenoms are included in the project. Distribution and management are the same as antidotes.

	Annual training related to the antidotes and antivenoms in the project were provided to doctors, pharmacists and nurses nationwide. Poison Centers supervise the frontline health care personnel for the proper use antidotes and antivenoms. Since 2017, 9 antidotes and 7 antivenoms are in the current list. From 2011-2017, more than 27,400 patients got benefit from TNAP. TNAP can show the ability to reduce mortality rate of severe poisoning. At the same times, TNAP has proved that the system can reduce the budget for purchasing antivenoms without comprising their accessibility.
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