

# CENTRAL BARGAINING AND PROCUREMENT

FOR ACCESSIBILITY OF ESSENTIAL MEDICAL SUPPLIES  
AND EFFICIENT USE OF RESOURCES



# WHY IS THERE A NEED FOR A CENTRAL MEDICAL SUPPLY MANAGEMENT MECHANISM?

Despite the successful establishment of the Universal Coverage Scheme (i.e., UCS or Gold Card) to provide the majority of Thais with health insurance, in the initial stage of the policy implementation, it was found that patients with certain diseases or conditions were still having trouble accessing the requisite medical supplies that can be referred to as 'Essential medical supplies with accessibility problems.' That is, these were medicinal and/or non-medicinal products that are necessary for prevention and treatment. Such medical supplies are characterized by the need for a central mechanism to manage and make them accessible to the people.

Therefore, a mechanism for bargaining and purchasing at the national level was developed to solve the problem of people's access to costly health services in the spirit of universal access to needed health care.

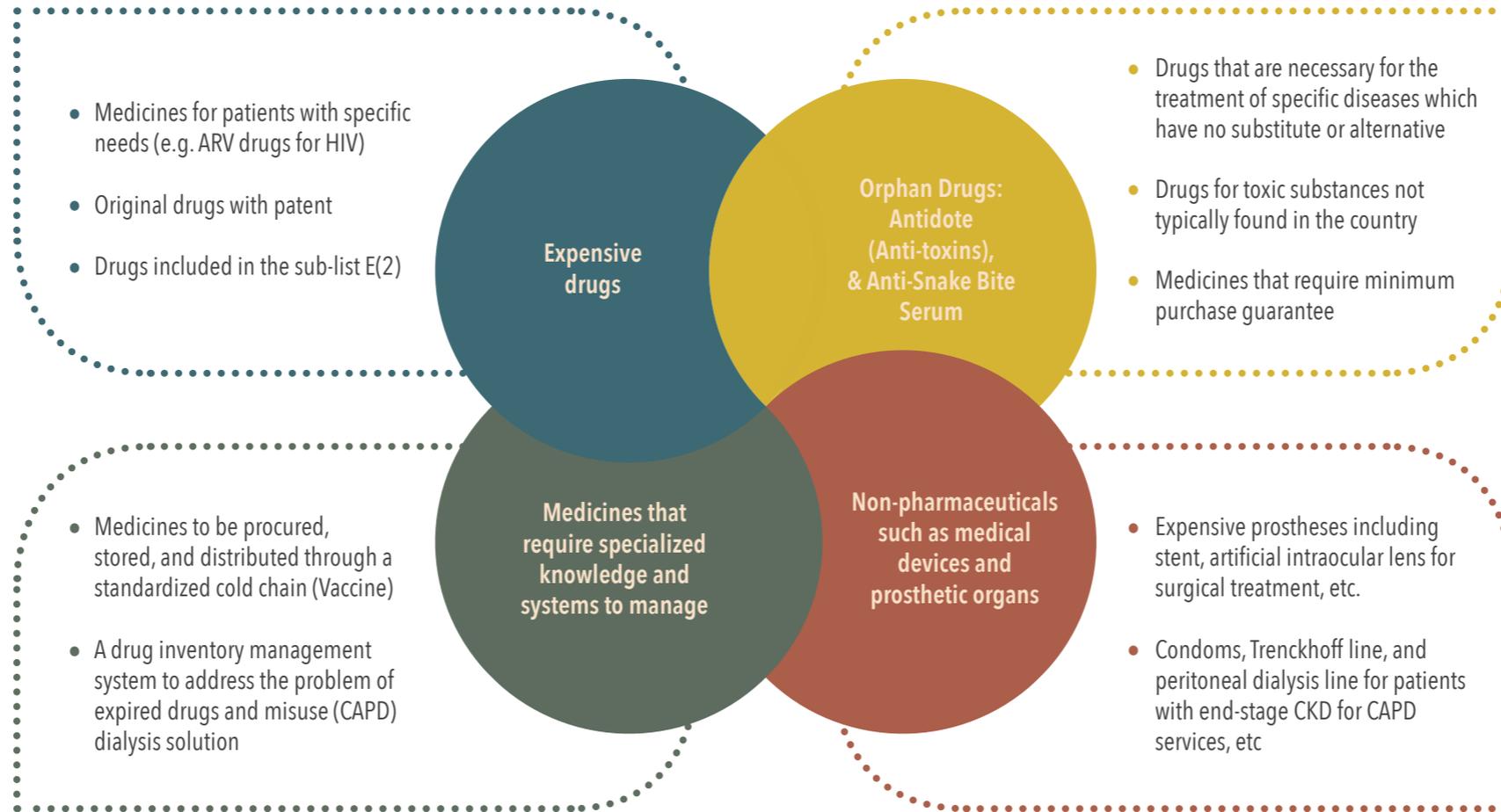
# OBJECTIVE OF CENTRAL BARGAINING AND PROCUREMENT SYSTEM

This system has three main objectives as part of the process of enhancing people's access to essential medical supplies and healthcare, and improving budget management and the health service system as follows:

- 1** To support access to medical supplies among the critically ill with rare and/or chronic disease, and to protect patients from bankruptcy risks due to medical bills.
- 2** To set up a governance system that covers medical supply management tasks. This is to provide good quality, cost-effective medicine that is sufficient for use in each patient, as well as to promote continuous service development leading to the rational use of essential medical supplies and ensure the availability of essential healthcare services when needed.
- 3** To increase cost-effective use of the budget, resulting in the sustainability of the service system.

# WHAT ARE THE MEDICAL SUPPLIES THAT NEED CENTRAL BARGAINING AND PROCUREMENT?

## FOUR TYPES OF MEDICAL SUPPLIES THAT NEED CENTRAL BARGAINING AND PROCUREMENT



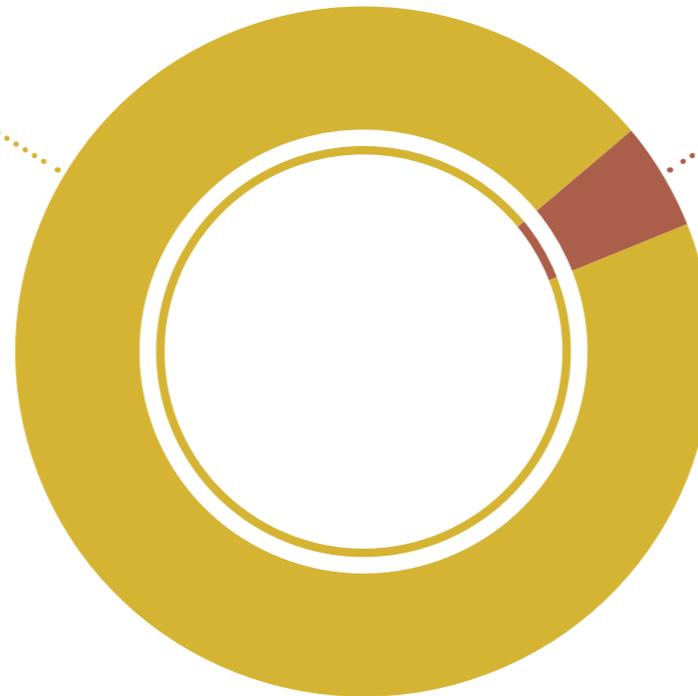
# TWO MODELS OF MEDICAL SUPPLIES PROCUREMENT IN THAILAND

Central Procurement contributes to only 5% of the total national drug consumption per year

## PROCUREMENT AT THE SERVICE UNIT **95%**

Service units procure according to the drug list of the service unit as follows:

- 1 General medical supplies
- 2 Other medical supplies and medical services in the UCS benefits package which is under the per capita budget
- 3 Essential medical groups that are funded according to the disbursement price ceiling conducted by centralized bargaining where the service unit is the procurement operator



## CENTRAL PROCUREMENT **5%**

10 projects with 143 items of medical supplies:

- 1 ARV drug project
- 2 Drugs under Compulsory Licensing (CL)
- 3 Orphan Drug and Anti-Toxic Drug Project
- 4 Expanded Program for Immunization (EPI) and Seasonal Influenza Vaccine
- 5 Drug Schedule E(2)
- 6 CAPD and Erythropoietin (EPO) project
- 7 Tenckhoff (TK) peritoneal dialysis project for CAPD patients
- 8 TB Drug Project
- 9 Device and Prosthetic Organ Project
- 10 Condom Project for HIV Prevention

# MECHANISMS FOR PARTICIPATION FROM ALL SECTORS

The structure of the committees/sub-committees and working groups of various agencies is organized by area of expertise which is considered as the center of the bargaining and procurement mechanism at the national level.

## National Health Security Board

### Sub-committee on Procurement Planning for Drugs and Medical Equipment Required by Special Projects

Bargains Working Group for Essential Medical Supplies under Special Projects

Monitoring and Evaluation Working Group for Preparation of Plans for Essential Medical Supplies According to Special Projects

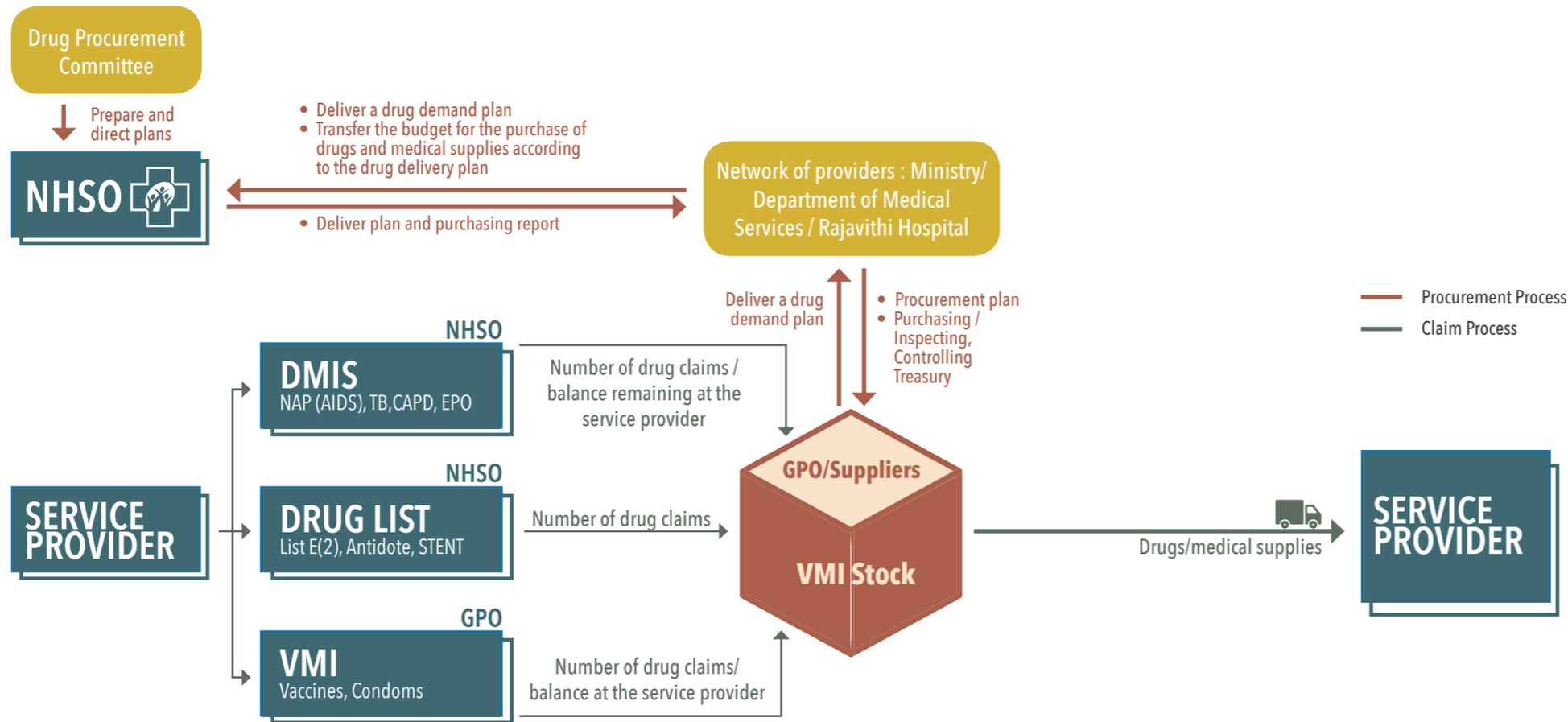
# THE ROLE OF THE NHSO

## UNDER THE CENTRAL BARGAINING MECHANISM FOR PROCUREMENT OF PHARMACEUTICALS

As a representative of the people, the NHSO plays a key role in promoting systematic access to medical supplies. The NHSO is connected to a network of working groups to promote participation and transparency in bargains and procurement at the national level as follows:

- 1** The NHSO is a coordinator that enhances participation from all sectors, especially patient groups, CSO, service units, medical associations, royal colleges, pharmaceutical companies, etc., to create a brainstorming platform that operates in the form of a board/committee at all levels
- 2** The NHSO manages disease funds and medical supplies under special projects

# INFORMATION SYSTEMS TO ORGANIZE CENTRAL BARGAINING AND PROCUREMENT MECHANISMS



The information systems are intended to optimize the management of medical supply stock and distribution. The information recorded in this system can be used to manage the stockpile and distribution of medical supplies. The operator can prepare a summary of the situation of using various types of medical items for inspection and reporting of results to relevant agencies. It can also be used as a reference in purchasing planning. The system consists of two database systems as follows:

- 1** Information system for managing medical supplies under special projects, divided into 3 sub-systems:
  - Disease Management Information System (DMIS)
  - Accounting system by type of medical supplies
  - Vender-Managed Inventory (VMI)
- 2** Medical service data recording and processing system or "e-claim"

# PROCESS UNDER THE CENTRAL PROCUREMENT MANAGEMENT MECHANISM

## SELECTION

### Selection:

[Co-operated by the Selection Sub-committee and NHSO]

- 1 Solicit recommendations from experts, Civil Society and patient groups
- 2 Prioritize drug types to conduct a study and analyze safety, efficacy, cost-effectiveness, and policy impact
- 3 Define and submit drug lists to the National Health Security Board

## PROCUREMENT

### Procurement:

[Co-operated by Ratchawithi Network, the GPO, Sub-committee, Monitoring and Evaluation Working Group, and NHSO]

- 1 **Central bargain:** consists of planning procurement requirements for budget approval
- 2 **Central procurement:** consists of procurement according to the relevant regulations and budget allocation to the Rajavithi network in installments to pay the GPO according to the contract period

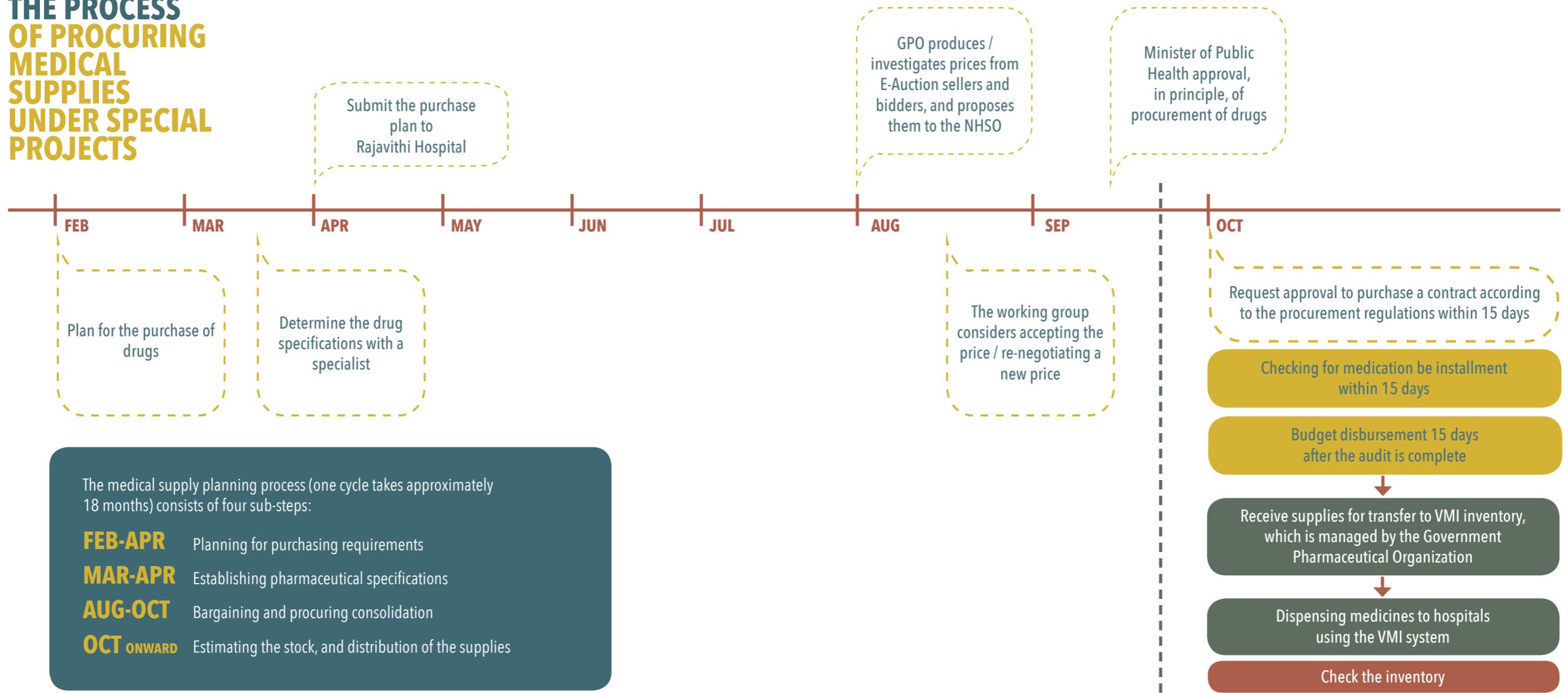
## STOCK & DISTRIBUTION

### Stock & Distribution:

[Co-operated by Rajavithi and the GPO Network, Sub-committee, Monitoring and Evaluation Working Group, and the NHSO]

- 1 Delivery of medical supplies to the warehouse
- 2 Replenishment of stock of medicines through VMI system (maximum period of 3 months)
- 3 Supervise and monitor distribution of medical supplies to service units according to compensation criteria

# THE PROCESS OF PROCURING MEDICAL SUPPLIES UNDER SPECIAL PROJECTS



The medical supply planning process (one cycle takes approximately 18 months) consists of four sub-steps:

- FEB-APR** Planning for purchasing requirements
- MAR-APR** Establishing pharmaceutical specifications
- AUG-OCT** Bargaining and procuring consolidation
- OCT ONWARD** Estimating the stock, and distribution of the supplies



### Quality assurance of medical supplies under the central procurement management mechanism

The NHSO has joined with the GPO to design additional quality assurance by providing confirmation of the quality analysis of pharmaceutical products by a Third-Party Lab (e.g., the Department of Medical Sciences). For any group of pharmaceuticals for which there is no qualified domestic diagnostic agency, such as some cancer drugs, the GPO will send samples of the medical supplies to a foreign laboratory for examination. For imported vaccines for use in the EPI program, there is a "Lot Released" process conducted by the Department of Medical Sciences every time. Only those medicines that have been analyzed to confirm their quality are distributed to the system.

Quality assurance at the national level can build confidence in the quality of the medicines provided and save the budget for the diagnostics of the service units. In the case of drug quality problem trouble-shooting after procurement, there is a system for monitoring and reporting drug quality problems. In some cases, WHO will be informed to monitor the problem on a global scale.

## MECHANISM OF CENTRAL PROCUREMENT OF FOUR TYPES OF MEDICAL SUPPLIES

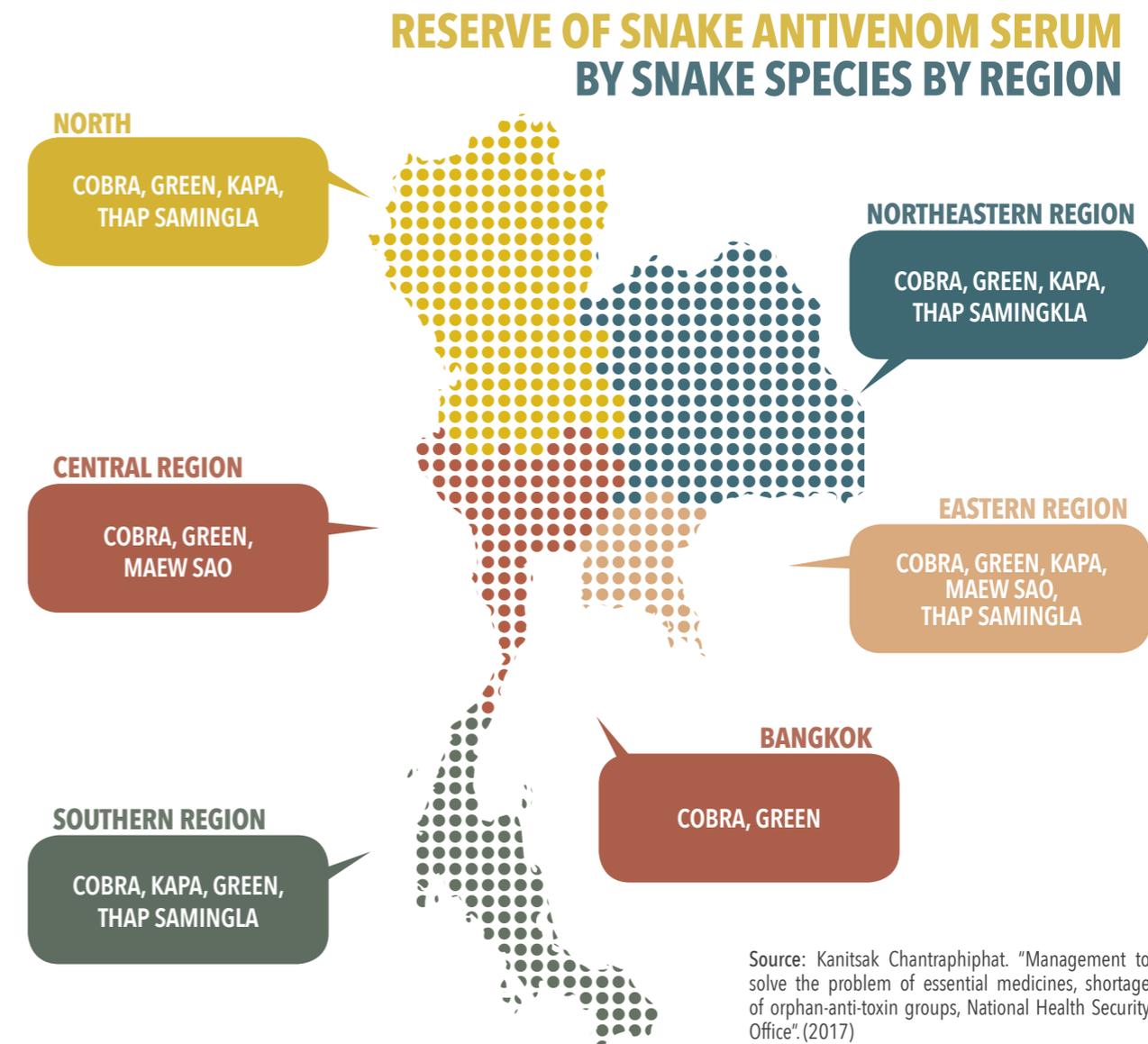
### 1 NATIONAL LIST OF ESSENTIAL DRUGS, SUBLIST E(2) DRUGS, AND SPECIFIC LIST

The stock for E(2) drugs will be stored in stock at the GPO. There are six drug lists, including Doctaxel 20 mg / 80 mg vial which have been approved under a CL order. The stock may be stored at the pharmaceutical/distribution company's warehouse (which applies to 21 drugs). Distribution of E(2) drugs under a special project will be done through the pharmaceutical inventory management system in conjunction with the VMI system. The system will check the instructions for use according to the approval criteria. If the criteria are met, the VMI system will forward the list and quantity information to the GPO or the pharmaceutical company for preparation and further delivery.

## 2 ORPHAN DRUGS IN THE ANTI-TOXIN GROUP AND SNAKE VENOM SERUM

This requires collaboration between both public and private agencies in information management and drug prescribing through consultation from the Ramathibodi and Siriraj Hospital Poison Centers, Animal Poison Clinics, Saowapa Institute, Thai Red Cross Society, and other related service units across the country. The contribution of such a system has resulted in a clear enhancement of the orphan drug supply system by establishing an information system for orphan drugs and anti-toxic drugs which uses GIS technology to assist in the real-time antidote retrieval process, obtaining the medicine quickly, and distributing drugs according to the severity and prevalence of the disease/condition, such as antivenoms provided in reserve in all provincial hospitals across the country or snakebite antivenom. Distribution is in accordance with the epidemiology/ risk management of potential venomous snake bites in each region.

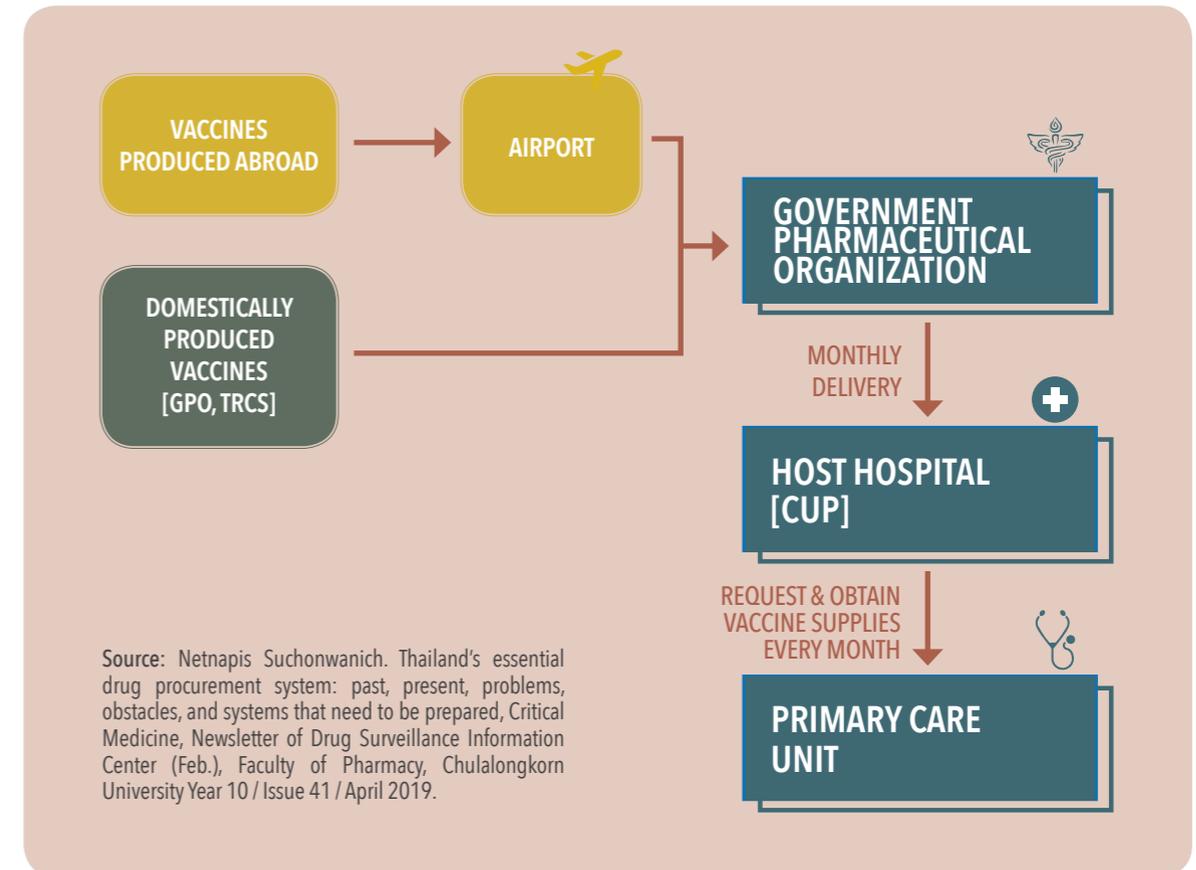
In addition to being able to save the lives of those who have been poisoned, systematic management of drug reserves can also reduce the budget for organizing the antivenom serum of the service unit, and strengthen the national security of antivenom and antivenom serum.



## VMI VACCINE DISTRIBUTION MODEL: 2010 - PRESENT

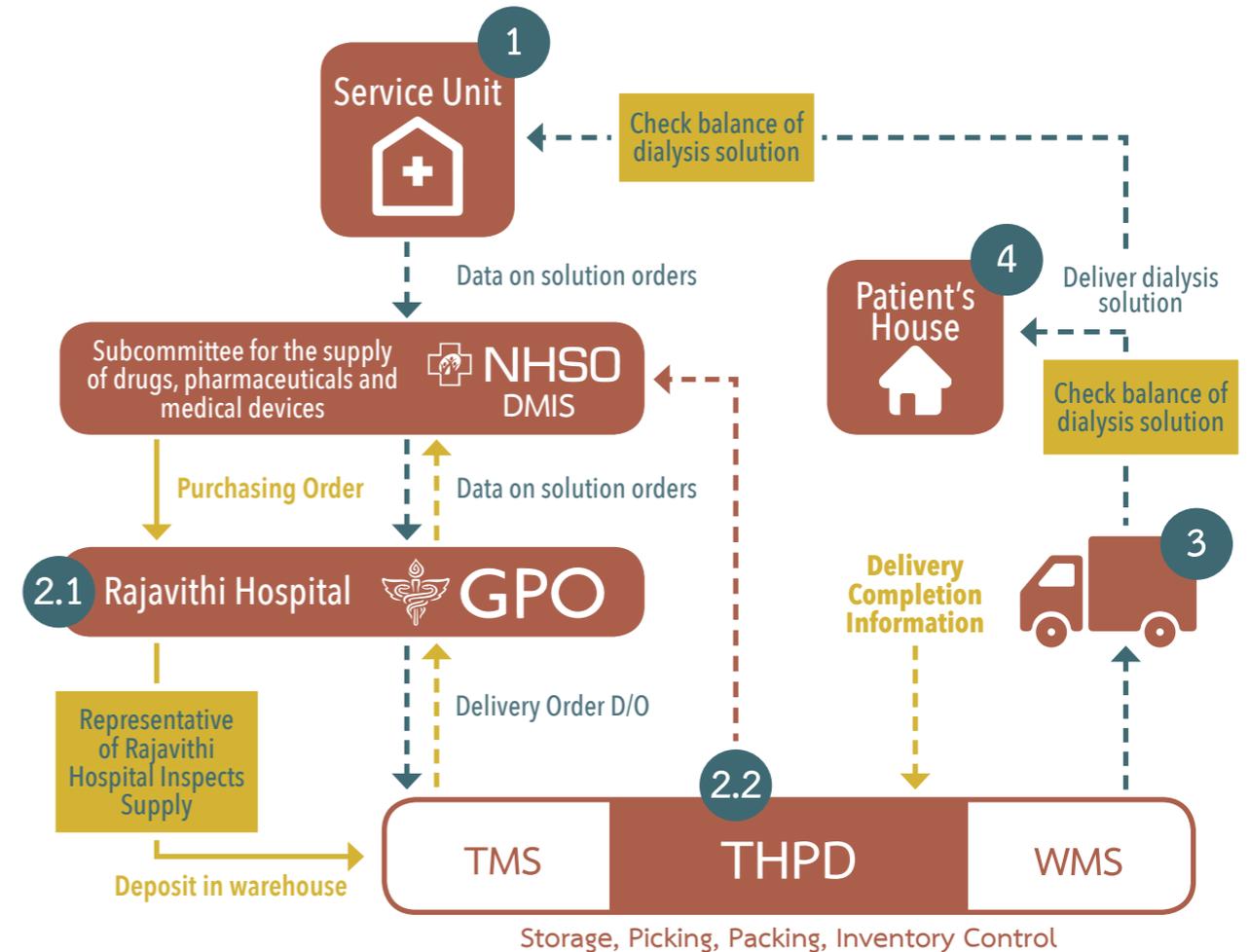
### 3 MANAGE THE SUPPLY OF EPI VACCINES UNDER A SPECIAL PROGRAM

Since 2010, in the management of the distribution of the EPI vaccines through the VMI system, both domestic and foreign vaccines are stored in the GPO warehouse (adhering to cold chain requirements). This is the process of maintaining the quality of vaccines from the manufacturer to the recipient by storing it at a temperature between 2 – 8 degrees Celsius) and in a suitable environment. This ensures that vaccines maintain quality and effectiveness throughout storage and point-to-point transportation. The vaccine is distributed to the service provider in each delivery cycle each month. The service unit must record the on-hand inventory of vaccines, after which the VMI system calculates the quantity to be delivered for the warehouse to prepare the products, and forwards that information to the distribution company for further delivery to the service unit with a lead time of 5 days.



## 4 DELIVERY OF DIALYSIS FLUIDS TO THE PATIENT'S HOME

In order to provide a continuous supply of medicines/supplies for these patients, the NHSO partnered with the GPO and Thailand Post Co., Ltd. to transport CAPD dialysis fluids through the DMIS\_CAPD system program. The service unit can order up to 150 bags of solution per month (and order up to two months' supply at a time). Data must be checked daily to determine the most accurate number of patients who need dialysis fluids, since loss of life can occur on a daily basis. Thailand Post Co. then transports the medicine/solution to the patient's home along with conducting a quick assessment of the amount of solution remaining at the patient's house in order to ensure adequate back-up of supply. That information is also transmitted via Smartphone so that clinical personnel can adjust or re-calculate the amount of the next dialysis fluid order needed.



# RESULTS OF IMPLEMENTATION OF THE CENTRAL PROCUREMENT MANAGEMENT MECHANISM

## 1 INCREASE ACCESS TO EXPENSIVE AND ORPHAN DRUGS

Over a nine-year period (2010 - 18), access to expensive and orphan drugs under the NHSO's special program has significantly increased.



Figure 1 Increased Access under Special Projects of the NHSO: 2010-18

Source: Sakulbumrungsil. Thai Drug Systems 2020: The Impact of Drug Financing System under Thailand Universal Health Coverage (UHC) on the Performances of Drug System, Journal of Health Science, Health Technical Office, Ministry of Public Health Vol. 29 Special Issue, January - February 2020: 59-70.

## 2 COST-EFFECTIVENESS AND BUDGET SAVINGS

One of the empirical outcomes of the central bargaining and procurement mechanism is the economic value of E(2) drugs (Clopidogrel and ARV drugs) that have had 'cumulative budget savings' during 2009 - 18 of up to 23,616 million baht.

The savings in procurement of budgets, especially for expensive pharmaceuticals such as some E(2) drugs, have led to further increases in benefits and other additional health services for UCS beneficiaries, such as the orphan drug project in the antivenom group and antivenom serum, the EPI program, and other special programs.

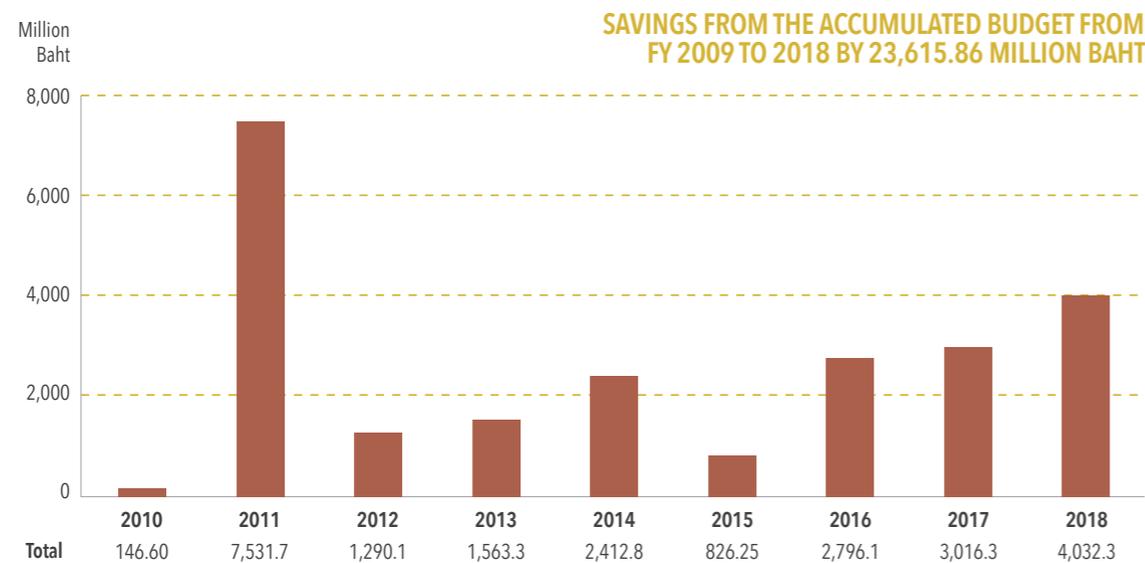


Figure 2: Cumulative Savings (baht) from Purchasing Clopidogrel and Antiretroviral Drugs (2010-18)

Source: Kanitsak Chantrapipat. Development for access to essential medicine benefits in the health insurance system, 2018.

## 3 MANAGEMENT OF MEDICAL SUPPLIES LEADING TO THE EXPANSION OF SPECIALIZED THERAPEUTIC SERVICES

Providing quality medical supplies in the system has led to improvements in treatment, as is the case with the procurement of drug eluting stent-DES coated coronary stents. Since 2009 until the time of this paper, the NHSO has been working with the Cardiovascular Intervention Association of Thailand to standardize the prescribing of these medical devices, with the GPO handling procurement. This has enabled the procurement of DES stents with indications of high therapeutic efficacy for coronary artery disease at a price of 30,000 baht (down from the original price of 85,000 baht) per unit. Currently, the NHSO can also purchase DES coils for only 12,000 baht per piece, which is lower than the price ceiling of the Comptroller General Department that allows expenditure of up to 35,000 baht per piece.

The management mechanism not only saves budget, but it also leads to more effective advocacy for heart treatment policies for patients across the country. There are "centers of excellence," and regional cardiac treatment services for patients across the country. This is helping to reduce congestion of the larger service units, shorten the waiting time, and reduce the burden of patient expenses as well.

Another outstanding example of the management system is the provision of intraocular lenses where the NHSO has co-specified pharmaceuticals with the ophthalmologists group. This enabled the NHSO to buy hard lenses for only 800 baht (compared to the market price 6,000 baht) and folding lenses for only 2,800 baht (compared to the market price 20,000 - 30,000 baht). These savings are supporting the development of cataract surgery treatment nationwide along with the development of a mobile cataract surgery unit starting from a network of ophthalmologists Ban Phaeo Hospital and Suphamit Hospital in Suphanburi Province, and expanding out to patients across the country. This outreach service is 20-50 times cheaper than the price of surgery at a private hospital, making it possible to provide a wide range of services to the public as well.

## **4** MANAGEMENT OF MEDICAL SUPPLIES THAT CREATES NEW TREATMENT APPROACHES FOR BENEFICIARIES

The NHSO has collaborated with the Technology Assessment and Health Policy Project and the Retina Society of the Royal College of Ophthalmologists. Together, they lobbied for adding injectable Bevacizumab (formerly a cancer drug) to the National List of Essential Drugs in 2012 under the E(2) drug sub-list for the treatment of macular degeneration caused by aging, types with abnormal blood vessels, and diabetic macular degeneration.

In 2013, Thailand became the first country in the world to list Bevacizumab in its List of Essential Drugs for retinopathy. Bevacizumab injection is primarily intended as a replacement for Ranibizumab injection for the treatment of conventional macular degeneration. Previously, the price was inaccessibly high (45,000 baht per injection), meaning that the vast majority of macular degeneration patients were unable to access treatment, and suffered disabilities. However, the NHSO system was able to reduce the cost of administering Bevacizumab injection to as little as 500-1,000 baht per injection, which is cheaper than the traditional drug Ranibizumab. The registration fee for Ranibizumab injection was reduced to approximately 1,400 million baht. In addition, service applications were expanded to include Bevacizumab injection to treat retinal vein thrombosis as a collateral benefit, starting in 2019.

## **5** MANAGEMENT OF MEDICAL SUPPLIES THAT CONTRIBUTE TO DRUG SECURITY FOR THE PEOPLE

The comprehensive pharmaceutical management system for orphan medicines, anti-venom and snake anti-venom drugs group makes it possible to save the lives of people who have been poisoned, quickly and efficiently. The success in increasing access to these types of drugs can increase the survival rate for poisonous snake bite to 98% in those who receive the drug. Thailand's management of these drugs has been hailed by the WHO as a "best practice" that can be leveraged to strengthen orphan and anti-toxin security networks in Southeast Asia and the Asia-Pacific region. That recognition should be a source of great pride for the country.

## **6** FACILITATING PATIENT ACCESS TO MEDICAL SUPPLIES

One of the main contributions of the central procurement management mechanism is the reduction of barriers to patient access to healthcare, both financial and physical. This is especially the case for patients in the disease group with ultra-high treatment costs. For example, in the case of end-stage renal disease patients, the NHSO, together with the Friends of Nephrology Association, lobbied for the “PD First” policy to provide services to patients across the country under the UCS. In addition, the delivery of dialysis fluids to the patient’s home was arranged by the GPO in cooperation with the Thailand Post Co. through its network of delivery points across the country. As a result, patients have more access to treatment, better quality of life, and increased survival rates.

## **7** REDUCING STEPS IN THE PROCESS TO INCREASE COST-EFFECTIVENESS AND EFFICIENCY OF THE PHARMACEUTICAL SYSTEM

In the case of ARV drug resupply, the NHSO has developed a PLHIV database, and works with the GPO to manage the backup and distribution of ARVs through the VMI system for drug delivery from the GPO’s pharmaceutical inventory directly to the service point. Management of this pharmaceutical inventory system has resulted in a change in the storage and distribution of ARV drugs, which can reduce provincial and regional drug stock depots, and increase the speed and accuracy of stock quantities for distribution for just-in-time delivery. This has resulted in savings of approximately one billion baht in 2009 from the 4,382 million baht expenditure in the 2008 budget. The savings from ARV drug administration was used for the development of other drug management projects, including a project to promote 100% condom use, and increasing public access to other essential medical supplies such as CAPD and the influenza vaccine program for at-risk populations.



# **THE STRENGTHS OF THE CENTRAL PROCUREMENT MANAGEMENT MECHANISM**

---

## **ENHANCE SERVICE ENGAGEMENT AND TRUST**

The NHSO has positioned its role as a central platform where all stakeholders can voice their opinions, articulate views, and participate in planning to enhance 'Shared Public Policy Ownership.' Stakeholders can join to create a body of knowledge from a comprehensive study of impacts in terms of effectiveness, safety, and economics. All these processes have boosted confidence of service providers under the National Health Security system.

---

## **TRANSPARENCY IN TERMS OF VERIFIABLE AND COST- EFFECTIVE MANAGEMENT.**

The NHSO has established a database system that connects service providers, deploys distribution guidelines using information technology, and practices efficient budget management. The NHSO uses the information to monitor, track, and evaluate performance and make collaborative decisions based on an empirical analysis of evidence. This is done together with the committees/sub-committees and working groups in every step. There is also a clear time frame and criteria for evaluating budget management and the pharmaceutical cycle, as well as providing two-way communication channels to the people and all relevant sectors which can translate the plan into action in the most efficient way.

# CHALLENGES AND AREAS FOR IMPROVEMENT

---

## MORE PROACTIVE DISSEMINATION OF RESULTS

The annual data collection on the economic value of pharmaceuticals under special projects provided through the central procurement management mechanism has been implemented with the main objective to report to the National Health Security Board and to respond on a case-by-case basis. NHSO should consider publicizing and disseminating the work of the NHSO, as well as to promote the corporate image in its policy implementation, especially information on economic value-per-purchase of medical supplies per purchasing cycle. Reports of that information should highlight the budget saved from the mechanism of procurement, and how the savings are used to improve health services and produce benefits for other diseases/health conditions under the UCS.

---

## CHALLENGES IN ORGANIZING CHEMOTHERAPY DRUGS

Chemotherapy is a high-price treatment that ranks in the top three on the list of the highest-value medicines disbursed from each facility's drug inventory. These drugs have specific characteristics that require a central mechanism of management, and that is one of the challenges facing the NHSO in managing budgets. The comprehensive chemotherapy drug management system needs to be refined.

---

## **MODIFICATION OF THE MANAGEMENT STRUCTURE**

The management restructuring took place from 2018 – present, with a shift from the NHSO-GPO as the purchasing operator to the MOPH-Rajavithi Network as the operator. This modification of the working style increased transparency and participation from stakeholders in all the subcommittees and working groups. However, there are concerns in terms of priorities from the reduction of the role of the Drug Selection Subcommittee to just a working group under the Planning Sub-Committee. This structural modification may result in limiting the focus of the working group to purchasing planning instead of considering medical supplies that are essential to the needs of the people. Another issue is the expanding membership of subcommittees from various agencies and departments. The increase in members may cause a delay in making timely decisions, and there may be gaps in communication because each work process has more people involved. With too many actors, a sense of true ownership of the work has withered. This may require long-term consideration related to the effectiveness of this structure for the management of pharmaceuticals under special programs.

---

## **THE BUDGET FOR SUPPLYING MEDICAL SUPPLIES UNDER SPECIAL PROJECTS**

The budget is increasing every year due to the expansion of coverage of medical supplies and higher survival rate of patients, especially those with chronic diseases requiring life-long treatment. That trend may threaten the viability of the budget in the long run. Therefore, the working group may need to focus on the study of available therapeutic technologies, rigorous cost-effectiveness to support sustainable fiscal management and planning, and support for parallel projects for promotion and prevention to reduce the incidence of costly NCDs and epidemics. For example, this could include the development of early-stage nephrotic screening services, development of media/channels to educate the public about prevention of NCD, etc.

# SUMMARY

Over a decade in operation, the NHSO has initiated the development of a central bargaining and procurement mechanism to create health services that truly meet the needs of patients and society on the basis of good governance. Such a mechanism is not only a sustainable way to increase people's access to health services. It also strengthens the participation of stakeholders in the design and advocacy of a joint medical service delivery policy. This leads to upgrading and improving the implementation guidelines of service units to be more efficient, timely, with greater coverage of disease, and boosting confidence in the treatment service system and the quality of medical supplies and services received.

The mechanism of bargaining and procurement at the national level is a strategy that produces good results across every component. That includes the selection, procurement, reserve stock, and distribution of medical supplies that meet the needs of the people. The cost-effectiveness in use of budget is maximized by the increased negotiating power via larger aggregate purchase volume, as well as helping to control budgets, and managing the limited supply of essential medicines for a sustainable, systematic drug inventory management system. This leads to expansion of services to cover different types of diseases, greater use of treatment technology, and truly meet the vision and mission of the UCS to cover all beneficiaries in an equal and quality way.



National Health Security Office