Challenges and Opportunities for Improving the Drug System in Thailand

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Abstract
Drug system is a part of the health system where the drug management system plays an important part resulting in people having drugs to use, having equal access to quality medicines, having reasonable usage that matches affordability of their household expenses and those of the country’s. The study of various components systematically in all articles of this issue of the Journal provides visibility to many challenges and opportunities to improve the drug system. We synthesized evidence from this supplement issue. The drug system in Thailand still has many challenges and opportunities for improvement in which relevant sectors should promote and implement them, including national mechanisms that monitor trends of those expensive drugs, bargaining for the drug prices, and/or having drug procurement procedures in order to obtain reasonable drug prices. Moreover, those drugs shall be used without prejudice and incorrect knowledge and beliefs. There are more issues to be considered such as promoting domestic pharmaceutical production system including generic drug, herbal medicine, and biological materials in order for more self–reliance, producing more experts in the field, having information systems which can efficiently monitor and evaluate performances of various sectors, and improving legal policies which allow implementation of the issues discussed above. Furthermore, all stakeholders involved must be able to adapt to future changes with the main goal of becoming convenience for people to access to essential drugs while unreasonable drug uses are reduced. All the stakeholders must adapt, with an important goal of people being able to easily access to drugs when needed, while unnecessary drug usage be reduced. The system will reduce drug prices; and new drugs will be more effective and specific to the diseases. There will be the use of appropriate technologies to help diagnose and prevent diseases. All of these developments will result in better health of the people.

Keywords: drug system; opportunities for improvement; future of drug system
Introduction

Drug system is a complex system which is directly related to the entire health system and also has an effect on economic and social system in the country. Good drug management system is an important part that will result in people having the necessary medicine to use, having equal access to quality medicines, and having reasonable usage that matches affordability of their household expenses and those of the country’s. As a result, the overall system is sustainable.

The connection of each component in the drug system can be explained according to the conceptual framework, developed from the meeting of the Drug System Report Committee of Thailand (Figure 1) where the drug system is a part of the health system with ultimate goal of achieving good health outcomes for Thais. This conceptual framework presents 3 main components of the drug system which are inputs, process and outputs/outcomes, and 2 supporting components which are governance and financing. These are important mechanism for driving the drug system. Each element interacts and connects each other under the contexts from both national and international which are constantly changing. Therefore, pharmaceutical industry and service delivery are involved with various stakeholders at individual, organizational and national levels, such as government sectors and service providers, for example, public and private health centers, and communities, including civil societies.

The 3 main components are:

1) Inputs, such as knowledge, human resources, and infrastructure i.e. places, equipment, technologies, support systems, information system, and budgets.

Figure 1 Conceptual framework of drug system in Thailand, 2018
2) Process, considering from drug supply chain, starts from R&D and manufacturing. From there, the drugs are distributed to service sectors through hospitals and communities, according to the selection process, procurement, distribution and utilization.

3) Outputs/outcomes, about having essential drugs with quality. This means efficacy and safety for Thai people to be able to access to these essential medicines, leading to availability, affordability, accessibility, rational use, equity, drug security and sustainability.

The good governance means that the drug system has fair supervision, monitoring and evaluation and for achieving the goals. The basic components of the drug governance system are policy, strategy, legislation, regulatory system, monitoring and evaluation, information system, and participation from public sectors, service providers and communities. And, the last component is financing. It is used for producing resources and health services with the objectives to achieve efficiency, adequacy, fairness, and sustainability.

All the components of the drug system must be continually improved in order to be well adapted with the situation and changes of those factors in the health system and surrounding factors whether internal or international contexts, including economy, society, law, politics, technology, and the environment. All of these have influenced and affected the drug system. The study of various components systematically in the articles of this special issue of this Journal provides visibility to many challenges and opportunities to improve the drug system. The important key areas are as follow:

1. Challenges

1.1 Drug cost containment

The medication costs in the country continue to rise. The domestic consumption of drugs is estimated at over 180,000 million baht per year, which is about 2.2 percent of the Gross Domestic Product (GDP) \(^{(1)}\) – that is almost 50 percent of national total health expenditure. This is considered a high proportion when comparing those of the other countries, even in the group of developed countries which have much higher living costs than that of Thailand. The high drug expenditure is reflected by various factors, such as

1.1.1 Irrational drug use behaviors

These behaviors caused by many factors, starting from drug users (i.e. having little knowledge or having wrong beliefs about the drugs), drug prescribers (i.e. prescribing medication without or not according to recommended dosage and indications), drug manufacturers or drug distributors (having inappropriate distribution sources, i.e. selling) or supplying wrong classes of drugs in pharmacies. In addition, if we assume that the national list of essential medicines has covered all necessary working and cost effective drugs and suitable for the country’s affordability, the portion of the drug usage on the list has an average of only 40 percent of overall prescriptions, which is about 66 percent of the total drug costs. \(^{(2)}\) This number is far out from the drug usage guidelines stated in the guidance according to the campaign Good Health at Low Cost, where it is recommended that it should be up to 70-90 percent of the total drug costs, depending on the levels of hospitals. \(^{(3)}\)
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1.1.2 Drug cost control policies and domestic drug pricing

The three public health schemes including Universal Coverage Scheme (UCS), Social Security Scheme (SSS) and Civil Servant Medical Benefit Scheme (CSMBS) are the major drug payers in the country. They establish policies using various methods in order for drug cost control in the systems, such as closed-end payment methods in the UCS and SSS. This causes prescribers to be more careful when prescribing medication that may be considered unnecessary for treatments. The CSMBS has strategies to control the expenditure of non-essential drug lists (pre-authorization method and A-F method), together with requesting cooperation for reasonable drug use. However, using the open-ended payment method, instead, cannot effectively control the cost of medicine as it should be. We find that health expenditure for CSMBS’s beneficiaries is much higher than that of the UCS and SSS. This leads to a suspicion of over-spend and unfairness of medical rights.

The drug price policies to determine the selling price at various points, such as factory wholesale and retailed prices, still have no control from the government as they should be. The strategies currently being used, have only price comparisons, price bargaining before being listed in the national essential drug list, and price bargaining before the National Health Security Office will procure these drugs, in case of only for drug list E (2)⁴. In fact, controlling drug prices for new patented drugs and generic drugs still has many ways to do by using effective drug price policies to control drug prices starting from the registration process to the price reviews after knowing the actual outcomes of these drugs on patients. However, various related laws and acts, issued by the Ministry of Public Health and some other ministries, are not conducive to systematic drug pricing.

1.1.3. Policies related to international drug management

The ability of the government to make agreement on trade and investment policies affects the effectiveness of drug procedures throughout the drug supply chain. This causes an impact on the import and export taxes to domestic drug manufacturers. Therefore, negotiations gain benefits to the country will have impacts to the drug price control as well as the country’s medical and health expenses. However, in past negotiations Thailand, in most cases, has disadvantages in many ways and does not benefit from the negotiation as much as it should be.

In terms of patents, they provide protections and monopolization to the inventors. In addition, monopolization of modern technologies may hinder the development of Thai generic drugs. Since the Thai pharmaceutical industry is still a downstream, Thailand is still incapable of performing research and development on new drugs that can be produced to the markets commercially. Therefore, the patent system in Thailand gives more benefits to foreign pharmaceutical companies that produce expensive new drugs rather than protecting and granting rights to domestic drug manufacturers.

1.2 Unfairness of pharmaceutical services affecting inaccessibility to essential drugs

Although having a universal health coverage system is one way to reduce gaps and inequality in access to health services, the inequality in services still occurs among people with poor economic status in the society. For example, in some cases, people have to
pay out-of-pocket at private hospitals or pharmacies in order to get services which are not covered by the health insurance system and/or to get drugs, uncovered in the essential drug list at public hospitals. Therefore, the use of the drugs which are not on the national drug list may be an obstacle to the access to these drugs for the UCS and SSS members.

As for those exercising their rights through the CSMBS, although according to the scheme’s policies, beneficiaries are eligible for more rights than the other 2 schemes, in some cases there are still issues accessing to certain drugs and health services that the scheme does not make arrangements for its beneficiaries, such as the drug list E (2). And for rare medicine, shortage drugs, and orphan drugs, they are still issues in accessing to these drugs for all the 3 health insurance funds.

1.3 Supporting policies for the inputs for the pharmaceutical system

1.3.1 Domestic pharmaceutical production

Since there is an increasing trend on importing foreign drugs and raw materials, it indicates that the direction of the pharmaceutical production for consumption tends to rely more on imports whereas the domestic drug production tends to steadily decline. Although drug policies on quality and Good Manufacturing Practice (GMP) assessment in compliance with the Pharmaceutical Inspection Co-operation Scheme (PIC/S) regulations from the government helps raising the country’s pharmaceutical production standards, it also causes those pharmaceutical companies to bear the increased production costs. In general, the drug selling prices in Thailand are determined by the Ministry of Public Health’s reference prices, central or regional procurement, and government procurement regulations – including the rights to sell drugs from the Government Pharmaceutical Organization which are restricted. These have caused the market to be rather limited and creating competitions among private sectors.

While, the endorsement and encouragement to use available resources including existing local knowledge is about using traditional medicine or herbal medicine, the production of expensive medicines – biological type, is still limited. For example, research and development of herbal raw materials is still mediocre. Also, quality inspections still require somewhat high technologies, using laboratory operations which are still inadequate and quite expensive. As for the biologicals, it requires high investments in many aspects, such as budgets, registrations, research and development, establishing production units, and other supporting systems. And, the knowhow on production techniques is also very crucial. All these matters have impact on being self-sufficiency of possessing essential medicines for use in the country.

1.3.2 Manpower

Due to the fact that there are changes in population structure, modern technologies, and discovery of more complex diseases, the pharmaceutical system will inevitably require more pharmacists in different grounds. Moreover, aside from having to possess the required skills, pharmacists must also be able to work proactively, work as a team with other professionals in different fields, and adapt to changes effectually. Currently, despite the fact that there is an expansion of educational institutions in order to produce more pharmacists to the market, when considering the national policies and development direction, the number of skilled and specialized pharmacists in the system is
still insufficient for future needs.

1.3.3 Pharmaceutical system information management

There have been issues in the pharmaceutical information system management, ranging from the drug registration, drug production, distribution, and drug consumption in the country. All of these are caused by scattering existing databases developed from users in various parts, divisions, and departments in government sectors. And, the private sectors also have their own databases, using their own drug codes. Therefore, it is very challenging and/or unable to link drug information from these different databases.

This leads to a challenge in pharmaceutical information management being unable to track drug distribution, drug usage in health insurance systems and other health sectors. Likewise, reports on drug production, imports and exports cannot be linked. Moreover, each database has its own problems with standards, data completion and accuracy as well as lacking of continuity, which affect to the data quality and reliability in the pharmaceutical information system.

1.4 Management in value chain: selection, procurement, and distribution

The medicine supply cycle involves selection, procurement, and distribution. The drug procurement and distribution are not only important processes which lead to drug usage and drug accessibility, but they are also important factors determining the effectiveness of the drug system. However, in the drug supply chain, there are still several system limitations, for example:

1.4.1 Drug selection at national level. There is a delay in the drug registration and selection into the national drug list. This may cause harm to business (opportunity loss) and a delay to patients’ drug accessibility.

1.4.2 The number of skilled personnel to perform drug and biological registrations is inadequate products, causing a delay in drug registration.

1.4.3 Transparency and work independency of related officers as well as the laws and regulations that support re-evaluations of problematic drug formulas in drug registrations.

1.4.4 Special privileges to the Government Pharmaceutical Organization in drug procurement policies of government hospitals over private companies. This is quite contradicting to a statement in Thailand’s constitution where stated that government sectors shall not operate in a way to compete with private sectors.

1.4.5 Even though drug selections to hospitals and drug selection in regional procurement system are having similar criteria in terms of drug registrations, such as factory quality evidence, raw material standards, and drug quality, but these selection processes still require duplicate documents which burdens manufacturers or drug companies in creating and demonstrating these documents. It indicates that the government sectors cannot integrate the necessary information for effectiveness.

1.4.6 Drug registration which focuses on the product–related processes, emphasizing on effectiveness, efficiency and safety as main interests. There is no basis or regulations on drug costs and selling prices in the drug registration process in Thailand.

1.4.7 Thailand’s laws do not yet have provisions, allowing patients’ accessibility to unregistered drugs but necessitated for treatment, such as orphan drugs, shortage drugs or drugs under research.

1.4.8 The lacks of systematic management to deal
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with shortage drugs and orphan drugs, whether in normal or crisis situations.

1.4.9 Issues on drug distribution in the sources that should not be sold, distribution of drugs without licenses, unethical drug distribution including illegal adverts of drugs or improper, over-claimed adverts of health products. The government sectors are unable to comprehensively track and suppress these offenders. In addition, the laws and penalties are weak, causing the offenders who have been prosecuted commit consistent violations over and over.

2. Opportunities for Drug System Development

From all the challenges above, there are opportunities in developments in many areas. This is in order to achieve the main objectives of the drug system. Therefore, the government, as the system administrator, is necessitated to allocate sufficient funds to support all activities, along with to determine a direction of drug system development in the following areas:

2.1 National processes to regulate expensive drug prices to be more reasonable and suitable for household and national affordability

2.1.1 Even though the price negotiation and drug purchasing have been done quite effectively, there are still different kinds of drugs that can be lower.

2.1.2 Promoting import of low-cost generic drugs, supporting domestic drug productions, and endorsing more on domestic productions of vaccines or biotechnology supplies.

2.1.3 Encouraging voluntary licensing to reduce drug prices.

2.1.4 A process to manage orphan drugs, specifically the drugs for rare diseases.

2.1.5 Provision of drug price international monitoring system, through the purchasing and bargaining networks.

2.1.6 Procurement of vaccines or certain drugs must be through long term contracts.

2.1.7 Integration of drug distribution for all health insurance systems in order to increase bargaining power and capability in drug management, especially for expensive drugs

2.2 Vigilance units that monitors movements of the drug system stakeholders, domestically and internationally

There must be reports of drug movements that may affect the pharmaceutical development system on the followings:

2.2.1 Pricing trends of generic drugs including expensive drugs.

2.2.2 Expiring patents can lower the drug prices.

2.2.3 Trends in market entering and drug productions of new manufacturers and existing manufacturers.

2.2.4 Updating on forthcoming new drugs that will replenish the existing ones. These upcoming new drugs could be cheaper but have better treatment efficiency (low cost – high efficiency).

2.2.5 Monitoring of drug distribution, drug promotion and advertisement for inappropriate cases.

2.3 Access to essential quality drugs

Efforts should be made to ensure the system that allows people to access essential quality drugs thoroughly and fairly without having to deal with price barriers to access to necessary drugs, and using the drugs reasonably as needed.
2.4 Standardization of the central drug codes beneficially for internal operations of related departments

This can be linked to activities of other sectors in the pharmaceutical and health systems including medicines, non-medicines, and medical supplies used in hospitals that connect to both the drug and medical systems for:

2.4.1 Using data to monitor and assess quality of work and research and development of drug systems

2.4.2 Managing the supply chain: manufacturing, import, export, registration, distribution, monitoring of drug quality and safety, and drug usage.

2.4.3 Drug administration in hospitals and reimbursements of medical expenses

2.5 Mechanisms to support rational drug use for implemented at the hospitals under the Ministry of Public Health

These mechanisms shall increase importance of setting guidelines and operations according to the policies for both workers and auditors. These also can expand to other related groups. For example:

2.5.1 Other medical institutions outside the Ministry of Public Health, such as other ministries, universities, private hospitals and clinics.

2.5.2 For the public sectors, medication literacy must be established. This is to enable rational use of medication in both medical service centers and communities. In addition, drug stores should be linked to the national health insurance system as well.

2.6 Development of curricula and teaching system in pharmaceutical science to meet future development needs

2.6.1 Systematic planning for the development of pharmaceutical manpower. Design and work closely in pharmaceutical professional organizations, pharmaceutical council, educational institutions and workplaces to position the role of pharmacists, increasing specialized skills in order to work along with other professionals.

2.6.2 Knowledge and skills in managing a pharmacy and taking a role of community pharmacist. This is in order to oversee safety of drug usage, protect consumers, and support the government services.

2.6.3 Knowledge of new drug production, biologicals, herbal medicine and traditional medicine. This is to utilize technologies to develop pharmaceutical products in various formats that respond to internal needs and necessities.

2.7 Enhancement in the quality of pharmacies and pharmacists in order to increase accessibility to essential drugs and elevate the quality of drug usage

Availability of people making more use of private resources and pharmacies can help to alleviate the burden on public health services:

2.7.1 Distribution of drug dispensing to pharmacies. At government hospitals, patients can pick up their medicine at drugstores. And likewise, in private hospitals, patients can choose to receive their medication with controlled fair pricing.

2.7.2 Management system in pharmacies and community pharmacists plays an important role in overseeing drug usage in the community. This is in order to reduce the loss of drugs caused by unused or misused medication.

2.7.3 Utilizing pharmacies for health promotion and disease prevention, such as risk screening for diseases, providing basic health examination services, offering health advices, consulting on contraception, being a distribution center for contraceptive equipment.
i.e. birth control pills, condoms, destroying of unused drugs, and distributing test kits for disease screening.

2.8 **Revising and/or legislating laws or policies to support essential drug production domestically**

2.8.1 Reducing the monopoly of drug selling by the Government Pharmaceutical Organization in public hospitals. This is in order to create fair competitions.

2.8.2 Promoting the production or import of chemicals, substrates, pharmaceutical raw materials, which are necessary for domestic productions. Having mutual raw material procurements. Having policies to promote synthesis or production of substances in various standards. This is in order to analyze environmental friendly drugs.

2.8.3 Creating incentives for inventing new drugs, i.e. tax measures to reduce production costs and increase quality and factory standards, innovation accounts and patent management.

2.9 **Promoting and developing the extensive use of herbal medicine**

This is to support the entire process from standardization of medicinal plants, raw material production, collection and development of Thai traditional medicine formulas to have pragmatic evidence. There should be a system to support the production and distribution of these herbal medicines domestically and for exports.

2.10 **Mechanisms that help create drug system stability**

The appropriate mechanisms include:

2.10.1 Promoting the Government Pharmaceutical Organization to be a research center, developing new drugs, producing orphaned drugs, and rare drugs, and biologicals. Also being a drug pricing unit in order to control price balance, and being able to transfer new technologies to private sectors.

2.10.2 Enhance the logistic systems for medicine and medical supplies to support the growing demands of drugs and drug distribution in the future.

3. **Trends and Directions of the Drug System in Thailand – from Past to Present**

Thailand has arrived at the point that the drug management system is being organized. The system’s various stakeholders, such as pharmacists – an important professions of the drug system in the future, pharmacies – a way for people to access primary health services, hospitals – a service point providing medicines to patients, drug companies and dealers, and people who use health services. Thus, there are the following situations:

Pharmacists: In the past, pharmacists were scarce like other health professionals. But at present there is a trend having more pharmacists. This is an opportunity to expand responsibilities, not just the pharmaceutical services in the hospitals by expanding the coverage of primary care pharmacy and consumer protection in providing drug monitoring services, home visit, promoting health awareness and disease prevention in the community.

Community pharmacies: In the past, most of them were just people who previously worked in pharmacies and sometimes don’t have pharmacists stationed in the stores. However currently, there are 20,000 pharmacies registered. There are 14,000 drugstores in type 1 (koryor 1)\(^{(5)}\) in which there are pharmacists available in the stores during opening hours.

Hospital: Medicines and other medical supplies are also sources of hospital income, especially the system
People: Because of the difficulty of accessing services, especially the lack of faith in the primary care system, receiving secondary and tertiary care are difficult. In most cases, people with minor illness will start curing themselves by buying medicine at drug stores. However, with an advancement of communication and information, people have more knowledge in self-care and medication. In people’s perspectives, we can say that there is a disruption of the drug system by (1) people becoming more aware of drug knowledge, (2) there are more channels to purchase drugs, not only at pharmacies. Currently, medicines are purchased via social media. And, (3) Information is easier to find on the internet.

4. Future Pictures

All that is happening in the pharmaceutical system in Thailand is leading to a turning point in the drug system and pharmaceutical management in the future. All stakeholders must adapt, with an important goal of people, when necessary, being able to easily access to drugs while unnecessary drug usage will be reduced. The system will reduce drug prices, new drugs will be more effective and specific to the diseases. There will be the use of other technologies to help diagnose and prevent diseases which create some changes in the drug systems. Future pictures that may occur are as follows:

4.1 People will have more knowledge and understanding about drug usage through various communication channels. And when they have to buy medicine themselves, there will be clearer explanations. Picking up medicines at a drugstore may not be costly because the quality pharmacy system is already in place in the health insurance system. When having to receive medication or medical supplies, patients will know the
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prices of medicines and medical supplies, including being able to pick up medicines or medical supplies at quality pharmacies nearby. While having chronic illnesses and continuous medication is needed, a pharmacist will be on hand to provide advice and to take care at home.

4.2 Public services: People themselves will be the main key to prove of identity. And reports of services and drugs received will be through a seamlessly linked information system. People can easily access their own information via appropriate technologies.

4.3 Quality pharmacies will play greater roles in the public health system. They will be the frontline to public consultation, disease screening, and drug reception. And when the qualities pharmacies have increased at one point, they will significantly reduce burden and congestion at hospitals.

4.4 Pharmacists will adjust their roles from bestowing drugs in hospitals to work in providing public health care services. They will give reasonable suggestions for using the drugs, follow up patients who need to take medication at home, provide advices on health issues and disease prevention via a form of pharmacy owners, working with primary care services and hospitals to monitor patients in the community. In the future, more people will be allocated to pharmacists who will take responsibilities in the neighborhood.

4.5 The health service units will adjust their services to accommodate outpatient consultation and transfer more patients to the community, including monitoring drug usage from patients through the linked information system. Secondary hospital and tertiary will add value by focusing on high-level services that need more resources and time, appropriately for the capacity level. And, the burden of community health service center will be reduced.

4.6 The national price negotiation mechanism will be increased in the terms of bargaining, buying and selling. The negotiation to buy expensive drugs will be more concentrated because the key factors of health costs come from drug prices. And in the past, drug prices are quite high because the bargaining power of the buyers is rather weak. In the future, all health insurance schemes will find a way to negotiate the drug prices or negotiate the price of the drugs base on a number of drugs expected to be used, resulting in lowering drug prices.

4.7 Pharmaceutical companies will reduce unnecessary costs through negotiating standard prices. The companies will tend to develop a patient care system integrated with the central system rather than focusing on selling patented drugs for maximizing profits.

4.8 With the above mechanism and global system integration, drug information, development direction, drug prices, the future direction will be more interchanged. There may be mechanisms at the international level for accessing to information of essential medicines. Since, there will be more drug information exchanged between countries, this could result in normalizing drug prices in different areas.

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สถาบันวิจัยระบบสาธารณสุข; ** คณะเภสัชศาสตร์ มหาวิทยาลัยมหิดล; *** สำนักพัฒนานโยบายสุขภาพระหว่างประเทศ กระทรวงสาธารณสุข
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ระบบยาเป็นส่วนหนึ่งของระบบสุขภาพ โดยการจัดการที่ดีในระบบยาเป็นส่วนสำคัญที่จะส่งผลให้ประชาชนมียาจำเป็นใช้ได้ ได้เข้าถึงยาที่มีคุณภาพอย่างเท่าเทียม มีการใช้อย่างสมเหตุผล ตรงกับความสามารถในการจ่ายของครัวเรือนและประเทศ และเกิดเป็นความยั่งยืนของระบบยาในประเทศ การสังเคราะห์องค์ประกอบต่างๆ ในระบบยาในบทความอื่นในวารสารฉบับนี้ ทำให้เห็นปัจจัยหลายประการที่ยังเป็นประเด็นท้าทายและเป็นโอกาสสำหรับการพัฒนาระบบยา ประเทศไทยยังมีปัจจัยหลายประการที่เป็นประเด็นท้าทายและเป็นโอกาสสำหรับการพัฒนาระบบยา ซึ่งภาคส่วนที่เกี่ยวข้องควรส่งเสริมและดำเนินการได้แก่ กลไกระดับชาติที่ติดตามแนวโน้มของยา ราคาแพง ต้องจัดทำข้อมูลระบบยาให้มีความสามารถในการจ่ายยาได้จากยาต่างๆ มีการใช้ยาที่มีคุณภาพตามเวลารักษา ความรู้และความเข้าใจที่ไม่ถูกต้อง การสนับสนุนระบบการผลิตยาในประเทศ ทั้งยาสามัญ สมุนไพร ชีววัตถุ เพื่อการพึ่งพาตนเองมากขึ้น การส่งเสริมศักยภาพด้านก้าลังคนให้มีความสามารถเฉพาะทาง การมีระบบข้อมูลสารสนเทศที่สามารถเชื่อมโยง ติดตาม และประเมินผลการดำเนินงานในภาคส่วนต่างๆ ได้อย่างมีประสิทธิภาพ ตลอดจนการปรับปรุงนโยบาย กฎหมาย ที่เอื้อต่อการปฏิบัติในประเด็นที่กล่าวข้างต้น นอกจากนี้แล้ว ระบบยาโดยผู้มีส่วนเกี่ยวข้องทั้งหมดต้องตระหนักถึงการเปลี่ยนแปลงผู้มีส่วนเกี่ยวข้องทั้งหมดต้องมีการปรับตัวให้เหมาะสมทั้งในส่วนของประเทศและประเทศต่างๆ ที่มีการเปลี่ยนแปลงผู้มีส่วนเกี่ยวข้องัง การปรับตัวให้เหมาะสมทั้งในส่วนของประเทศและประเทศต่างๆ ที่มีการเปลี่ยนแปลงผู้มีส่วนเกี่ยวข้อง ทำให้ภาพรวมการพัฒนาที่ถูกต้องและเป็นประโยชน์ต่อการพัฒนาที่เหมาะสมทั้งในส่วนของประเทศและประเทศต่างๆ ที่มีการเปลี่ยนแปลงผู้มีส่วนเกี่ยวข้อง ทำให้ภาพรวมการพัฒนาที่ถูกต้องและเป็นประโยชน์ต่อการพัฒนาที่เหมาะสมทั้งในส่วนของประเทศและประเทศต่างๆ ที่มีการเปลี่ยนแปลงผู้มีส่วนเกี่ยวข้อง

ค่าสำคัญ: ระบบยา; โอกาสในการพัฒนา; ภาพอนาคตของระบบยา