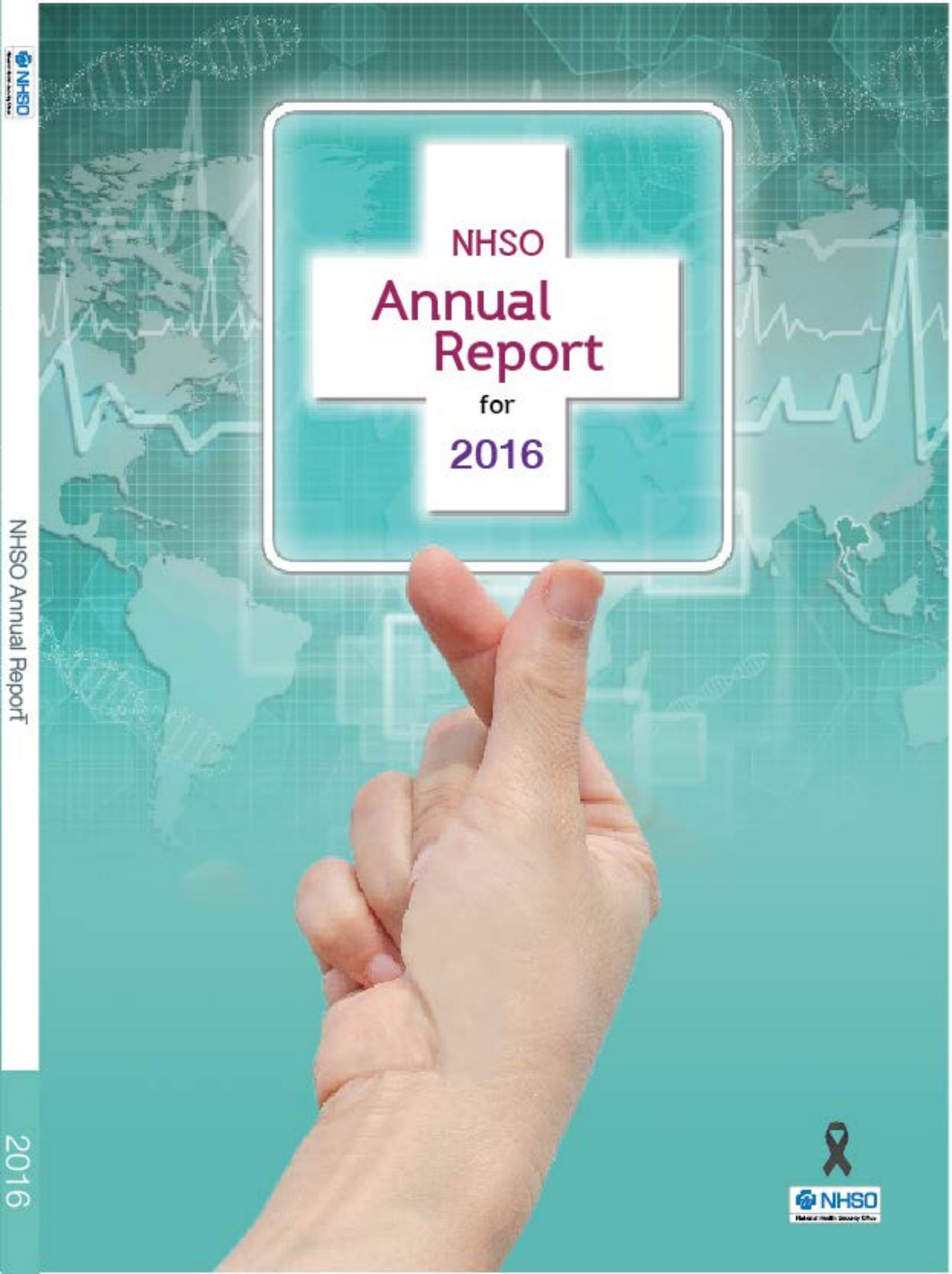
NHSO Annual Report for 2016



NHSO Annual Report 2016

NHSO
Annual Report

fiscal year
2016

A message from the Chair of the National Health Security Board

The Thai government has made improving the quality of life for all citizens through health system strengthening a priority. We aim to give Thai people access to quality services and financial risk protection – two main aims of the 2016-2030 Sustainable Development Goals (SDGs).

The Universal Health Coverage (UHC) is one of the primary policies to improve efficiency in health financing under the principle of "less suffering translates to more happiness" and "the strong strengthens the weak; the wealthy enriches the poor". Although achieving UHC for Thailand has been internationally recognized as a role model for other developing countries, continuous development and better management for the benefit of the citizens and the health system as a whole are still important missions. The mission to improve the Thai citizens' quality of life whilst being able to control long-term health expenditure for sustainable health security is complex. It includes improving efficiency in administration and resource management and improving accessibility to quality health care at every level with the involvement of all relevant sectors. People should have the right to standard quality services at all levels especially those who currently lack access, while still optimizing health spending to sustain long-term health protection.

In 2016, the National Health Security Board focused on expanding cooperation and collaboration between the Ministry of Public

Health, as the main provider of the National Health Insurance System, and the NHSO as a service provider to affect a more mutual support. Also, accelerated the important progresses, which were:

1) Improving efficiency in health security fund management, the development of compensation schemes, and the continued efforts to address the problem of managing service units funds;

2) Coordinating government health insurances to improve equity and efficiency in the health system through the development of EMCO;

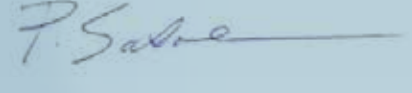
3) Continued development of current healthcare services including long-term care for dependent elderly and improvement of disease prevention. These should be reflected in both new and existing benefit packages in order to give added accessibility and efficiency of the healthcare system;

4) Promoting consumer rights protection in the health security system for beneficiaries of other small government health insurance schemes such as management of the central database of health care registration. Also, providing the information, registration and administration of complaints; and

5) Developing support systems for improved universal health coverage byrevising guidelines for the annual general meetings, updating to announcements, notifications, regulations and orders to be consistent; In order to accommodate changes in recruiting and screening the Secretary-General of the National Security Service for the term of office.

The achievements made so far have been successful due mainly to good support and collaboration with stakeholders and other alliances. I would like to thank both executives and staff from the Ministry of Public Health (MoPH), other related ministries, National Health Security Board, health facilities and hospitals both government and private, health professional institutes, local administrative organizations, civil society, and other related organizations including the NHSO for their involvement in universal health coverage development and support in the implementation of the government's universal health coverage policy. As a result, citizens are ensured an accessible standard quality of care; health equity; and benefit packages that cover more of the targeted groups, especially the disadvantaged.

I hope that all stakeholders and other alliances continue to give their support, involvement, and be a part of universal health coverage development, as they have done in the past, thus increasing the benefits granted to our citizens. I also wish you and your family all the best of happiness.



(Clinical Prof. Emeritus Piyasakol Sakolsatyadorn, MD)
Minister of Public Health
Chair of the National Health Security Board

A message from the Chair of the National Health Security Board

The Year 2016 sees the commencement of phase 4 (2016-2019) by The Health Service Standard and Quality Control Board. The operation of The Health Service Standard and Quality Control Board during phase 4, founded on Section 50 of the National Health Security Act, 2002, is still in progress and is. The Health Service Standard and Quality Control Board under phase 3 reviewed the framework guideline implementation, the goal of which was to provide people with access to quality health services. The goals of phase 4 are:

1) Set the direction and strategy for service quality and standards;

2) Strengthen the management mecha-nisms for service standards and quality at a regional level;

3) Create partnerships within all sectors to maintain the quality of service and standards;

4) Build awareness and understanding among providers to reduce conflict; and

5) Develope the quality of services and standards through information technology.

To assist the Health Service Standard and Quality Control Board in implementing Phase 4, a subcommittee on Protection of Rights and Promotion of Participation and the Legal Subcommittee on Basic Payments and Compliance were formed under The Health Service Standard and Quality Control Board. It has an important role in proposing and developing

mechanisms for controlling the quality and standards of service units and networks for the protection of rights in the national health insurance system in every sector. It must review and comment on the legal issues related to financial matters, as well as the standardization of service units to improve service quality of service units and service networks.

In relation to quality control and service standards at the regional level, the Health Service Standard and Quality Control Board have been appointed to serve for another term. The Health Service Standard and Quality Control Board play an important role in supervising and monitoring the provision of services in the National health insurance system both in terms of standard and quality of services provided. This methodology integrates the various mechanisms in this area, for example, a new subcommittee for the preliminary ruling of the 77 provinces has been appointed to replace the existing one. An independent body has been formed to review and process issues and complaints outside of the other parties involved. There are Health service centers in service units for public health coordination including the subcommittee on health coverage area (OPC).

The Health Service Standard and Quality Control Board in phase 4 will focus on the development of new and existing partnerships with professional organizations, associations, related organizations and the individual consumer. Such collaborations contribute to the wellbeing of the all involved and ensure system retains its quality and sustainability.

My thanks and continued supports go to members of The Health Service Standard and Quality Control Board, members of working groups and subcommittees at central, regional, and provincial levels, other related stakeholders, and the National Health Security Office for their continued involvement in our goal to benefit the people of Thailand in accordance with the National Health Security Act BE 2002

(Dr. Chatree Banchuen)
Chairman of the Health Service Standard
and Quality Control Board

A message from the Secretary-General of the National Health Security Office

On November 19th, 2002 the National Health Security Act came into effect, introducing Universal Health Coverage in Thailand. From that day Thai people who, previously, had been ineligible for medical treatment or social security subsequently had access to universal health insurance.

The first phase focused on the establishment of rights and giving the public service units. The early work has been focusing on achieving these goals continues today. The NHSO has since expanded its coverage to more than 99.93% of the population. However, Compairing the number of people exercising their rights in 2015 to in 2003, it was found that in-patients increased more than seven points from 79.85% to 87.58%, while outpatient usage increased by only four points from 71.48% to 75.30%.

In addition to public access to health services, medical expenses causing Thai households financial hardship has decreased from 5.74% in 2003 to 2.01% in 2015. Another relevant figure from surveys is the percentage of households suffering poverty due to prohibitively expensive medical treatment which decreased from 2.01% in 2003 to only 0.34% in 2015.

Patients requiring organ transplants or those with very high medical costs from chronic diseases such as CKD and HIV who previously had very limited access to services currently have substantially more options available to them.

Due to budget constraints on the National Health Security Fund and the national budget minimization, the NHSO has sought to increase the efficiency of fund management through various measures. One such successful measure has been the administration of medicines and supplies covering some of the more expensive and problematic items. Results from 2012-2015 showed savings of more than 30,000 million baht.

Furthermore, the NHSO takes into consideration the contributions and recom-mendations of the various sectors involved in public healthcare. One channel the NHSO operates is the NHSO Hotline 1330 which currently has 1400 lines. Average service statistics in 2016 showed that the majority (74.79%.) of inquiries, and complaints were resolved within 25 days.

This annual health coverage report includes the results and statistical data from the National Health Security Office, under the jurisdiction of the National Health Security Board. The surveys were conducted by the National Bureau of Statistics and the National Health Insurance Service database. Hopefully, it will also be helpful to those who are interested in studying the implementation process and to give an insight into the obstacles and challenges that need to be overcome during health insurance system development.

(Dr.Sakchai Kanjanawatana)
Secretary-General
National Health Security Office

Executive Summary

The National Health Security Office (NHSO) was established under the 2002 National Health Security Act. Section 24 stipulates that NHSO be a government agency, fall under the jurisdiction and supervision of the Minister of Public Health, and serve as the administrative body of the National Health Security Board and the Health Service Standard and Quality Control Board.

The vision that "every Thai citizen in the Kingdom of Thailand is assured of access to quality care without undue financial hardship" can be achieved by the careful development of a comprehensive benefit package of quality that can be accessed by everyone without undue financial hardship. This achievement rests on multi-stakeholder collaboration and partnership founded on trust, respect and compassion.

The budget is government subsidized. It is used to support and promote public health services for the 48.79 million people eligible for the universal overage scheme.

1. Capitation budget

1.1 Health service:	THB	107,629.76	million
1.2 Salary for health workers:	THB	40,143.14	million
1.3 Total:	THB	147,772.90	million
The per capita rate (including salary) is	THB	3,028.94	

2. Budget for specialized care

2.1 HIV and AIDS:	THB	3,011.90	million
2.2 Renal replacement therapy:	THB	6,318.10	million
2.3 NCD	THB	959.00	million
2.4 LTC	THB	600.00	million

3. Budget for remote and hardship areas

3.1 Three southern border provinces	THB	1,490.29	million
3.2 Health workforce	THB	3,000.00	million

Total (1+2+3): THB 163,152.18 million (6.0% of the national budget). The administrative budget (excluding salaries) accounts for THB 123,009.04 million. The budget for the central office and 13 branch offices was THB 1,414.09 million (0.87% of the Universal Coverage Fund)

The 2016 performance of the Universal Coverage Scheme (UCS) is briefly summarized as follows:

1. Population coverage

65.81 million Thais are eligible for health insurance (as of 30 September 2016), of which 65.78 million (99.95%) are registered beneficiaries of one of the three schemes.

Of the 48.37 million eligible for the UCS, 48.33 million are registered. The 0.03 million are as yet to register (0.05%) while 0.13 million people awaiting confirmation.

2. Healthcare Providers

Healthcare units registered under the UCS consist of:

2.1. 11,565 primary care units (94.36% are under the Ministry of Public Health);

2.2. 1,301 service units (68.95% under the Ministry of Public Health; 18.52% private); and

2.3. 1,109 referal units (84.58% under the Ministry of Public Health, 8.21% otherwise)

3. Access to care

3.1. **Basic services under the capitated budget**

- **Outpatient services amount to 173.23 million episodes at 3.589 times per person per year**
- **Inpatient services amount to 5.78 million episode at 0.120 times per person per year.**

- **Specific services**
  - Emergency services outside the referral network 1.30 million cases
  - 3895 in 3955 STEMI and 2889 in 2901 stroke patients can access thrombolytic drugs, respectively. 154,561 cataract patients lens replacement. 78388 tuberculosis patients received care. 10755 terminal patients receive palliative care.
- **Access to expensive drugs including orphan drugs and antidotes via the VMI**
  - 34,434 patients can access high-cost drugs. 7,141 patients can access orphan drugs and antidotes. 232,052 patients can access compulsory-icensing agent (clopidogrel).
- **Vaccination** 2,369,796 people in the target group receive the flu vaccine
- **Disability**
- Of the 1,183,474 registered disabled persons, 32,997 are provided with assisted disability aids (34,670 equipments), while 264,008 persons receive rehabilitative care (764,438 times). The 332,635 elderly and 424177 patients receive rehabilitative care. The 2399 visually impaired receive orientation and mobility training.

- **Thai traditional medicine.** There are 1,713,769 recipients of the traditional Thai herbal massage; 35,855 women receive post-partum; and 3,067,295 patients are prescribed herbal medicines.

3.2. **Specialized care**

- **HIV and AIDS** There are 270,993 HIV-infected patients (94.52%) receiving antiretroviral therapy. 234,834 people receive antiretroviral treatment (86.66%). 172,095 patients (73.28% of those receiving therapy) have viral load less than 1,000 copies/ml.
- **Renal replacement therapy** 45,629 patients receive renal reaplcement therapy: 24056 for CAPD; 24,056 for HD; 4626 for EPO; 172 for KT; and 1527 for KTI
- **Diabetes mellitus and hypertension** 3,603,840 DM patients undergo screening for DM complications. 1,702,378 patients suffer from diabetes and hypertension; and 1,901,462 have only hypertension.
- **Dependent elderly** There is an integrated program for the 80826 dependent elderly (of the 10000 targeted). 889 primary care units and 1,752 community health funds are involved.

4. Service quality

The NHSO collaborates with the Hospital Accreditation Institute to ensure the continuous improvement of services through the Hospital Accreditation (HA) system. Of the 1060 referrals, 992 are accredited (93.58%): 585 (55.19%) are at step-2 and 11 (1.04%) are at at step-1.

5. Protection

5.1. **Protection of rights**

Both consumers and service providers have various channels for inquiries, complaints, and referrals. These include the 1330 Hotline, letters, fax, e-mail or direct contact. In FY2016 there are 579,338 contacts**.**

1) 560,293 inquiries from consumers (526,092) and service providers (34,201);
2) 4,405 general complaints
3) 11,035 care-related complaints related to care; and
4) 3,605 referral coordination.

5.2. **Compensation**

Of the 1,069 petitioners, 885 (82.79%) were compensated and received THB212.952 million.

5.3. **Participation of civil societies**

To support the establishment of a network of civil societies in the UHC, there are 818 facilitation centers and 146 coordination centers in 146 health facicilties across 77 provinces.

Furthermore, there are 115 independent complaints units spread over 76 provinces to ensure fair judgements, as stipulated in Article 50 (5).

6. Participation from non-health sectors

7,755 local administrative organizations (99.73% out of 7,776) contribute to the local health insurance fund. This amounts to THB1,214 million for public health activities aimed at the most vulnerable such as schoolchildren, the elderly and working-age groups.

7. Satisfaction of consumers and health-care providers

The survey received very positive feedback from beneficiaries. Their satisfaction level was 89.50% (average satisfaction score 8.95), while that of service providers was 70.00% (average satisfaction score 7.00). The satisfaction of partner agencies was 79.60% (average satisfaction score 7.96).

8. Problems, obstacles and challenges for the UCS implementation

8.1. **Problems and obstacles**

- Management of the UCS fund that allows the beneficiaries to continue receiving essential and quality care;
- Increasing demand for health services due to the demographic shift towards the ageing society;
- Health problems arising from behavioral choices and beliefs; and
- Oversight by the State Auditing Office and the Government Budget Expending Monitoring and Reviewing Committee.

8.2. **Challenges**

- Seek other sources of revenue to ensure financing sustainability;
- Harmonize disparate health schemes to ensure fair and equiatable access to needed care;
- Foster better understanding between health providers and insurers;
- Increase access to care for the vulnerable groups; and
- Increase availability of care for avoidable or preventable illnesses.

1. Development of a dependent elderly care system.

Between 2014 and 2015, the National Health Security Board appointed a subcommittee. The goal was to, between 2014 and 2018, develop and establish a long-term care strategy for the dependent elderly, which included setting up a management system and the development of tools for screening and evaluation, service activities, allocation of human resources for elderly care in the community (care givers) and managing long-term care in community (Care management). Regulations, standards and management guidelines were established and a scheme was piloted to aid families and communities in 11 areas in 9 provinces with the emphasis on integrating health services and social services at a grassroots level (District/ Villages/Families). This operation is supported by providing local administrations with assistance from the primary care unit network.

In 2016, an agreement was signed between the Ministry of Public Health, the National Health Security Office, the Municipal League of Thailand, and the Subdistrict Administrative Organization Association of Thailand as a driving force in "a combined effort to understand the needs of the dependent eldery". A committee was established to develop a set of benefits and compensation rates for public health services and to focus on a long-term care system for the dependent eldery. An announcement was made by the National Health Security Council (No.2) in FY2016 defining the criteria by which local administrative organizations should operate and manage local health insurance funds, effective from January 4, 2016. Local administrations together with the district health insurance offices in 13 districts have successfully implemented pilot schemes for the long-term care of the dependent elderly. The Barthel ADL index was used as an assess for the elderly who were dependent for their daily needs by 1,752 local administrative organizations. In 2016, care plans and provisions of public health services to aid the dependent elderly assisted 80,826 (of the 100,000 targeted) people in 64,660 households, of which 16,166 were bedridden. The cost of services provided was 404.130 million baht. Primary care units in each area provided 889 public health care services (each service unit receives a budget of Baht 100,000 each, totaling THB88.9 million for service and academic development, in addition to service compensation).

2. Management enhancement, financing, human resources and health information to support health reform.

In order to effectively maintain and manage the National Health Security Fund, several subcommittees have been set up by the Ministry of Public Health (MoPH). These include the National Committee on Universal Coverage Fund Allocation for hospitals affiliated with the MoPH (7x7), the Regional Committee on Universal Coverage Fund Allocation for hospitals affiliated with the MoPH (5x5) and the Monitoring and Evaluation committee on Universal Coverage Fund Management. Their responsiblilities are to ensure the guidelines for the management of the National Health Security Fund are followed, and to track progress and success rates, working together on five issues: working mechanisms, finance, shared services, information management and ensuring quality of service. The National Health Security Fund's spending, under the MoPH, for health services in FY2015 and FY2016 laid down budget guidelines for the allocation of minimum revenues for outpatient (OP) services, inpatient services (IP) and disease prevention services, PP-non-UC (PP), shared pay management for IP, OP and PP payment systems, and minimum unit requirements including adjusting for compensation and a limit for service units that serve people in a remote area, high risk and the 3 southern border provinces. Detailed guidlines have been proposed to help manage the National Health Security Fund in FY2017. The development of data collection systems ensure information sharing and fund management at national and district levels of the public health service. The type and scope of health promotion, disease prevention services (PP), covering other rights (Non-UC), integration of service plans to improve service, and access and quality problems of service systems are being considered along.

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PART 1

Improving Universal Health Coverage Overview

1. The Concept of Universal Health Coverage
2. Health Financing and Budgeting for Universal Health Coverage
3. Improving Coverage and Household expenditure for Health Care
4. Healthcare Service Provision and Accreditation
5. Accessibility, Efficiency, Quality and Effectiveness of the Healthcare System
6. Consumers' Rights Protection and Stakeholder Participation

1. The concept of Universal Health Coverage

The basic concept of Universal Health Coverage (UHC) is to extend health coverage to the entire population, allowing citizens access to health services when needed without financial barriers. Health financing systems are important mechanisms for equity building, especially to promote universal health coverage and thus removing or reducing financial risks and barriers when accessing health services. Universal Health Coverage needs to extend coverage in at least 3 dimensions (Figure 1) shown below:

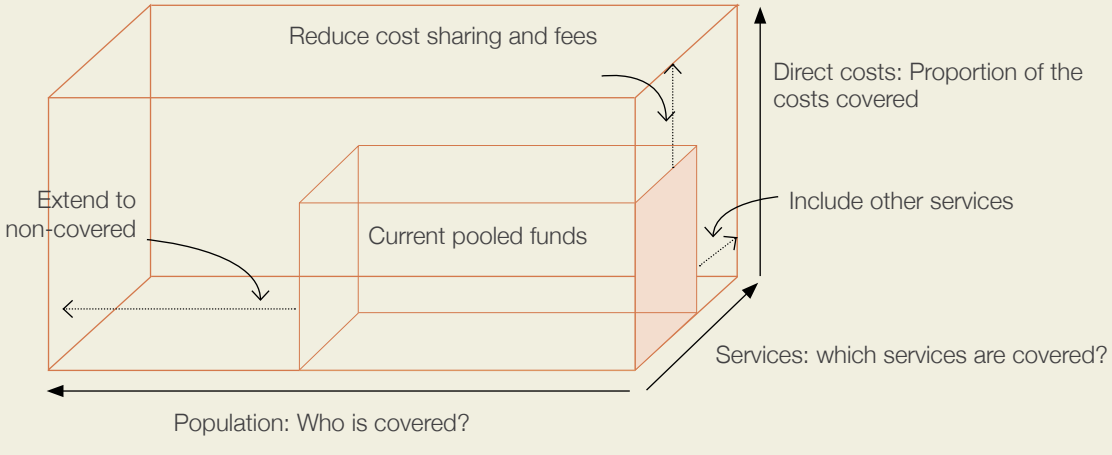
1) Expansion of health insurance system to cover the public.

2) Expansion of health insurance system to cover health services.

3) Expansion of health insurance system to cover health costs.

According to the World Health Organization (WHO), these proposed three dimensions need to be considered when moving towards universal coverage. The desirable target is 100% of population in the country covered; every social group. Whereas covered service means service benefit packages focusing on essential services up to, and high cost services to protect the poor from high expenditure. The benefit packages will vary depending on the socio-economic situation of each country, however desirable universal health coverage should, at a minimum, include services for health promotion, disease prevention, curative care, and rehabilitation. However, extending health service coverage in one direction will invariably affect the coverage of the other dimensions. One of the obvious problems is long waiting lists. Therefore, some services may not be covered or, in many countries, require co-payment by service users, that means the covered cost in UHC is not 100%, some people will still have to pay out of their own pockets, for some services.. It is difficult to cover 100% of the 3 dimensions even for developed countries. The target of extending covered cost should be "minimizing people's expenditure for essential

Figure 1 Three dimensions to consider when moving towards universal coverage



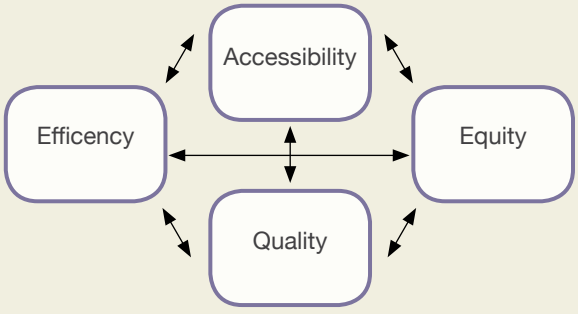
Source: World health report 2010. WHO

services, to protect the poor" rather than "trying to eradicate people's out-of-pocket payments altogether".

Extending coverage in any or all of the 3 dimensions requires increased expenditure. However, to keep running a minimum cost is also of great importance. Therefore, funds have to be allocated to benefit the system most efficiently. There are other factors to take into consideration when expanding accessibility, such as quality, and equity in health service usage. The extension of accessibility will also cause an increase in workload which affects quality of service and may affect equality among certain groups of people. Therefore, moving to UHC needs to adjust the balance among at least 4 dimensions of effective outcomes in healthcare system (Figure 2) to prevent negative impacts to the overall health service system

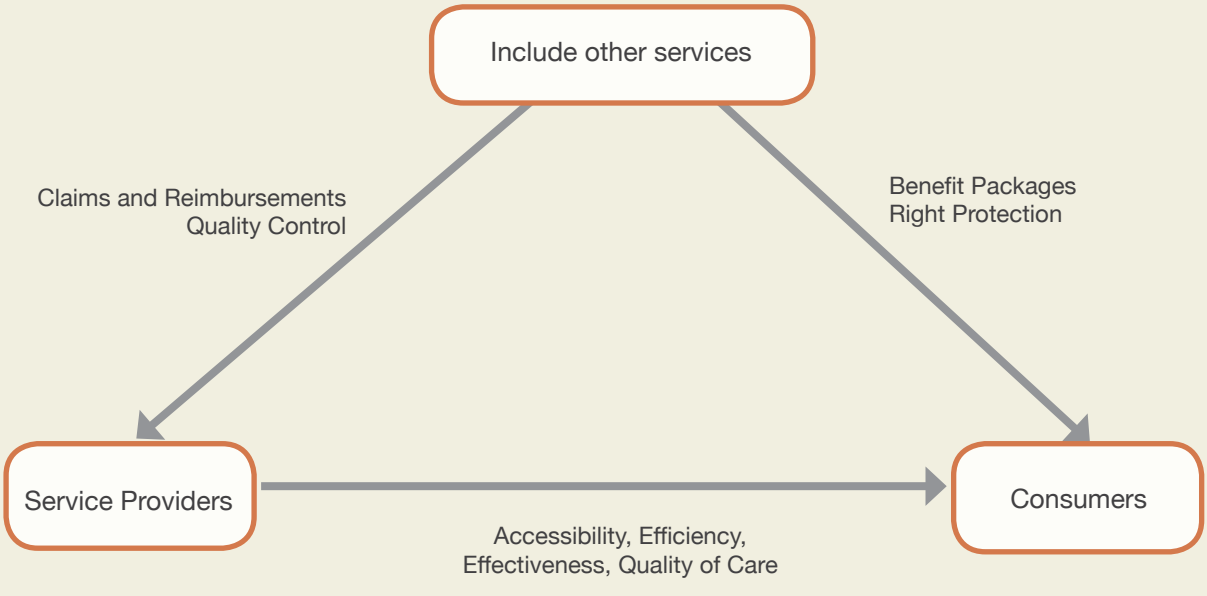
Moving towards full implementation of universal health coverage does not consist of only financial mechanisms to extend health coverage but by also promoting new relationships within

Figure 2 Four dimensions of effective outcomes in healthcare system



the key stakeholders of the system. The key stakeholders of universal health coverage include purchasers, service providers, and consumers. The roles of the purchasers are reimbursing health care cost to service providers in accordance with service agreements, preparing optimal benefit packages to promote effective outcomes, removing financial risks from the beneficiaries, and ensuring appropriate distribution of services between regions. Furthermore, consumer rights protection and stakeholder participation are also important to ensure a good relationship with stakeholders. This relationship is summarized in Figure 3

Figure 3 Relationships of key stakeholders in universal health coverage



The above concepts create the framework for improving UHC. It has been divided into the following 5 linked sections; as represented in Figure 4

1. Health Financing and Budgeting for Universal Health Coverage

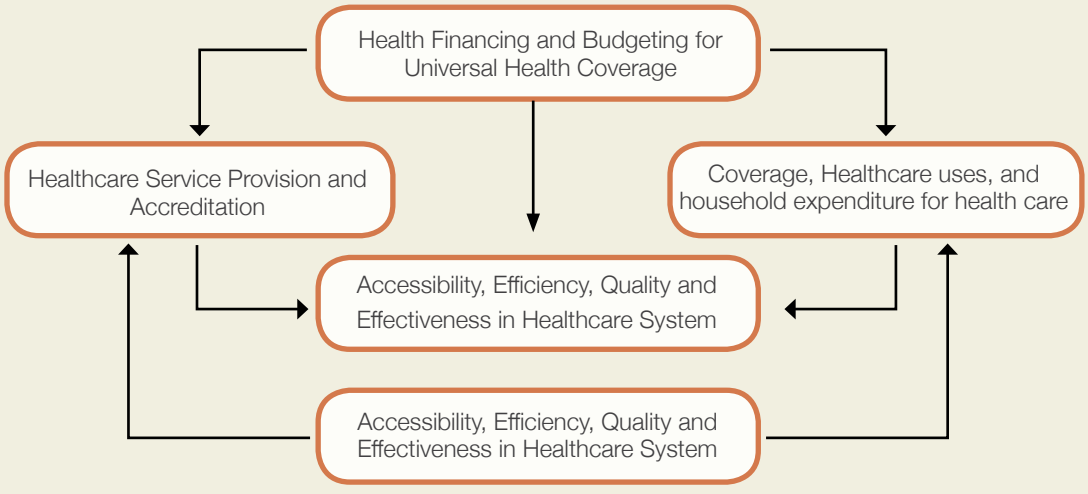
2. Coverage, Healthcare uses, and household expenditure for health care

3. Healthcare Service Provision and Accreditation

4. Accessibility, Efficiency, Quality and Effectiveness in Healthcare System

5. Consumers' Right Protection and Stakeholder Participation

Figure 4 Framework to represent the Annual Report for the UHC



The conceptual framework for the implementation of national health insurance starts with the financial health and budgeting of the National Health Security System. The main mechanism for building a national health insurance is an adequate budget which is correctly allocated to optimize the use of health services. This, by extension, benefits those exercising their right to public health services. It helps to reduce health expenditure of the household and protects them from financial problems caused by use of health services, thus making access to health services better. It also allows the National Health Security System to support health service through the mechanism of purchasing health services and making essential health services readily available. This combination of potential development and quality control mechanisms allows health service units to maintain adequate standards and quality of service for when people exercise their rights. It is always important to take into consideration the issues of efficiency, quality, fairness and effectiveness to produce the right balance within a health service system. Lastly, the system has to include a protection mechanism that covers both its service providers and the consumers. These protections and subsequent punishments or wrongdoing compensations are prerequisites for both service providers and the consumers' confidence in the system.

2. Health Financing and Budgeting for Universal Health Coverage

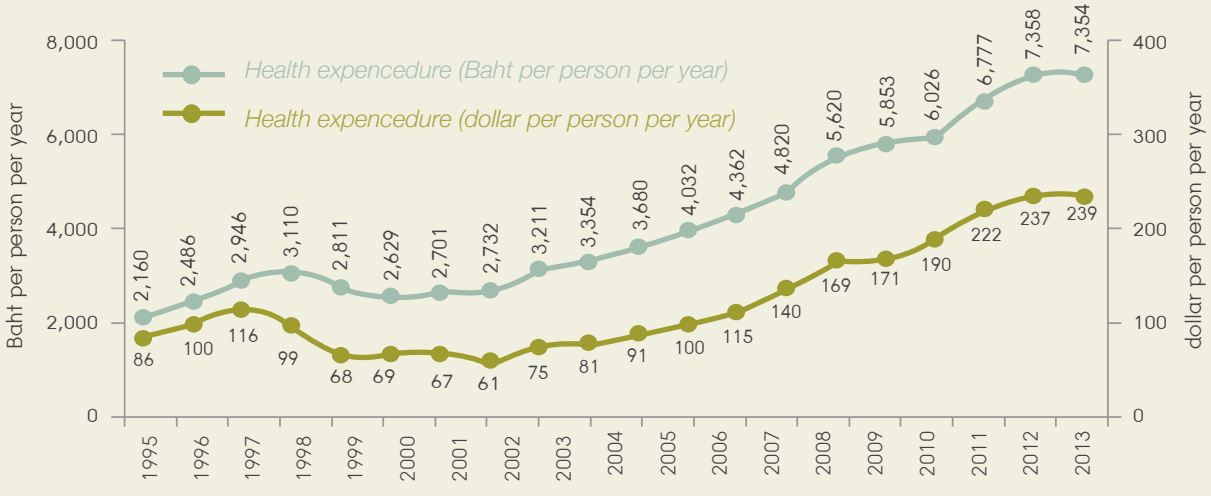
2.1 Overview of National Health Expenditures

The introduction of national health insurance schemes brings some obstacles and problems. The government has to take responsibility for health expenditures. The health care system funds have to be well managed, otherwise it will impact the coverage and services which available by the system. To expand public coverage and services, the government has to increase the budget and/or collaborate with the private sector. To this end, the National Health Account (NHA), which is the index of the resources used by both the public and private sectors for the health of the population, has been established. It indicates the burden of household and government spending, including the proportion of health expenditure per capita or health expenditure per national income.

Health financing policies are important mechanisms, for universal health coverage (UHC) implementation, to protect households from financial risk. The government is an important part of the UHC, so the careful management for sustainable implementation is needed.

Health expenditure per capita per year between 1994 and 2013 increased and decreased. The annual per capita health expenditure increased from THB2,160 in 1994 to THB3,110 in 1997 and then reduced due to the country's economic crisis. After 2002, with the introduction of Thailand's national health insurance scheme, health expenditure per person per year increased to THB 7,354 by 2013 (Figure 5)

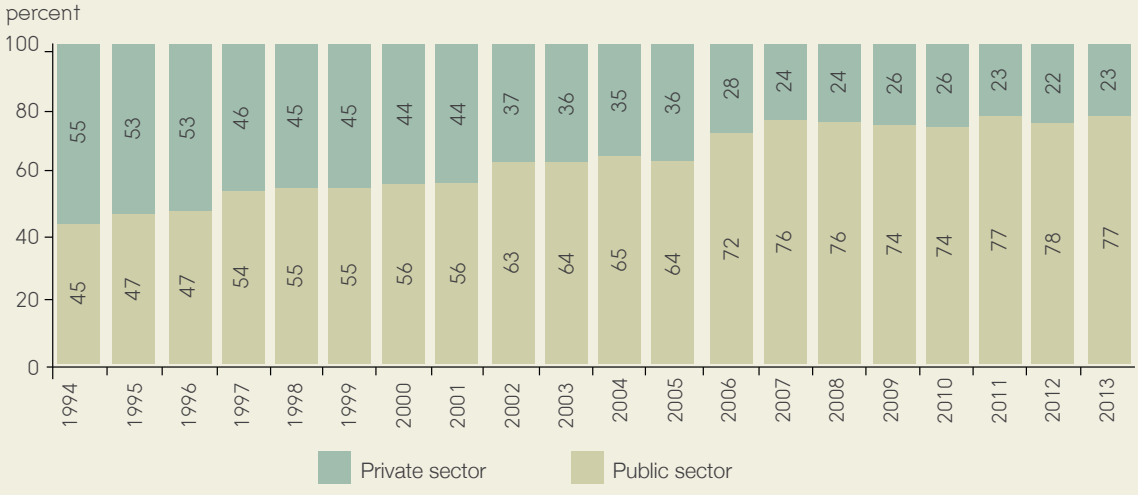
Figure 5 Thai National Health Expenditure, FY 1994 – 2013



Source: Thai National Health Account FY2013, International Health Policy Program (IHPP), Ministry of Public Health, Thailand

Health expenditure is divided into public and private sectors. The proportion of public health expenditure increased from 1994, from 45% to 77% in 2013 (Figure 6)

Figure 6 National Health Expenditure ratio between government and private sectors, FY 1994-2013

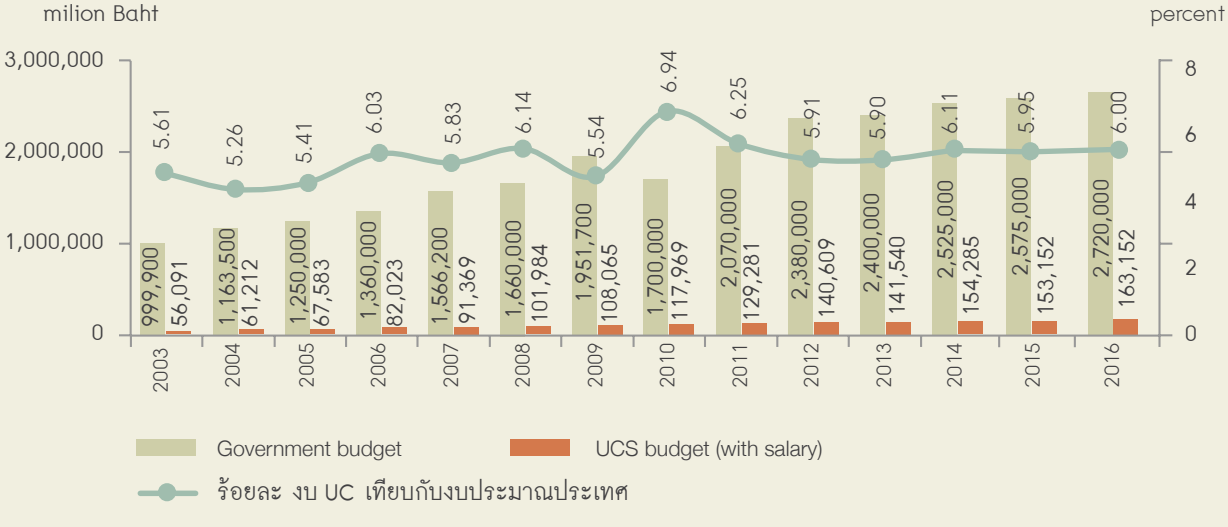


Source: National Health Account FY2013, International Health Policy Program (IHPP), Ministry of Public Health, Thailand

2.2 The Universal Coverage Scheme's budgeting

All budgets for implementing the UHC in Thailand through the Universal Coverage Scheme (UCS) have been subsidized by the government. The proportion of UCS Budget compared to the national budget was between 5.26%-6.94% (2003-2016). For most years, the UCS budget has increased in relative to overall government spending except in 2010 when the national budget decreased, but the UCS Budget increased to 6.94% (Figure 7)

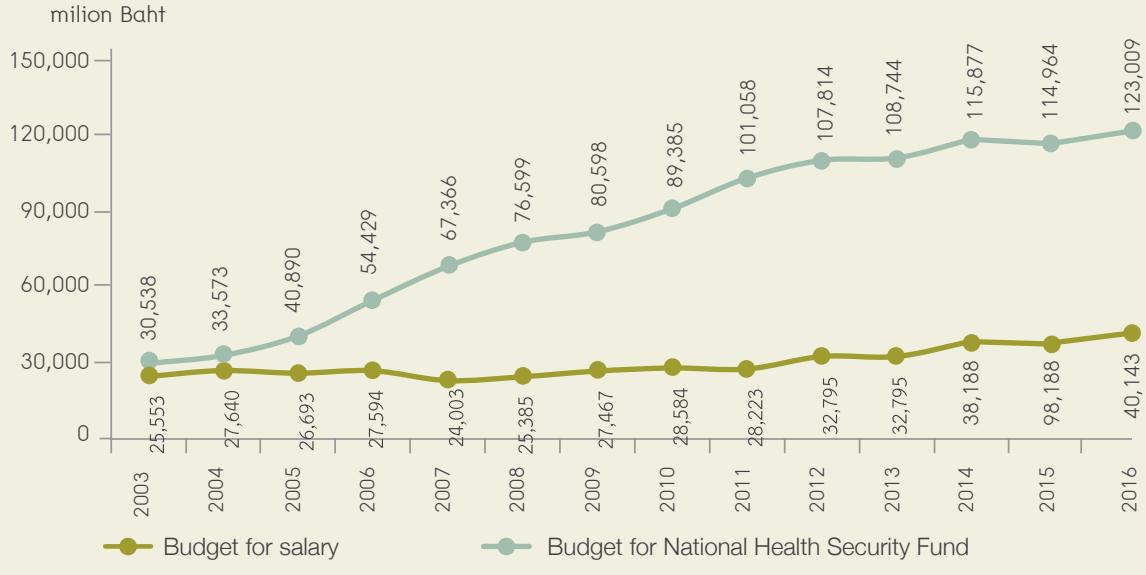
Figure 7 Government budget for the UCS and ratio to the overall government budget, FY 2003-2016



Source: National Health Account FY2003-2016, International Health Policy Program (IHPP), Ministry of Public Health, Thailand
Note: 2003-2006 were allocated additional budget of 5,000 million baht, 3,845.33 million baht, 4,993.33 million baht and 14,761.83 million baht respectively.

The UCS budget includes the salaries of health staff under the Office of The Permanent Secretary, the Ministry of Public Health (MOPH) since FY2002. The total amount of these salaries has ranged from THB2.6-THB3.2 billion per year. However, the percentage of the salaries has decreased from 45.6% in FY2003 to 24.93% in FY2015. The net budget for the UCS after government salary deductions has increased from THB30.538 billion in FY2003 to THB114.964 billion in FY2016, about 3.06 times of the salary as shown in figure 8

Figure 8 National Health Expenditure, FY 2003-2016



Source: *Bureau of Plan and Evaluation, NHSO*

Note: *The rate for salary deduction from the national health security budget has been reviewed a few times since UHC implementation as follows:*

1. *Revisions for health staffs under the office of permanent secretary, MOPH were done in FY2004 and FY2007.*
2. *Revisions for health staffs under other affiliated departments or ministries were done in FY2004 and FY2011.*
3. *During FY2003 - 2006, central budgets of the government were added in the amount of THB 5,000 mil., THB3,845.33 mil., THB4,993.33 mil., and THB14,761.83 mil., respectively. The reason for the additional budgets included increasing in capitation rate or the number of beneficiaries.*

Over the past 13 years, the net UCS budget for general health services has increased from THB1,202.40 per capita in 2002 to THB3,028.94 in 2016, an increase of 2.5 times. This has created greater benefit for both consumers and providers. In 2006, 2009, 2010 and 2016; many other services saw increased support including HIV and AIDS services, Chronic Kidney Failure, the prevention and treatment of chronic diseases (diabetes and hypertension), and the dependent elderly.

In the FY 2016, the National Health Security Office continued to support and promote people's right to access health services. For the 48.79 million people eligible for national health insurance, the budget was 123,009.04 million baht (excluding public sector health insurance of 40,143.14 million baht) (Table 1).

The amount of 3,028.94 baht per capita was allocated to national health insurance, covering 7 types of services (Table 2).

Table 1 National Health Security Funds Report by Item FY2012-2016

Unit: Million Baht

List	2012*	2013	2014	2015	2016
1. Medical Services flat rate /per person	133,186.41	133,495.04	141,430.92	140,718.75	147,772.90
1.1 Expenses for medical services	100,391.13	100,699.76	103,049.63*	102,530.72	107,629.76
1.2 Wages of public service units in the national health insurance system.	32,795.28	32,795.28	38,381.29	38,188.02	40,143.14
2. Services for HIV Infection and AIDS patients	2,940.06	3,276.83	2,947.00	2,811.90	3,011.90
3. Chronic Kidney Failure patients services	3,857.89	4,357.79	5,178.80	5,247.22	6,318.10
4. Chronic Disease Control and Treatment services	437.90	410.09	801.24	908.99	959.00
5. Psychiatric Services	187.14	-	-	-	-
6. Additional costs For service units in a remote area. Risk Area and 3 Southern Border Provinces	-	-	900.00	464.80	1,490.29
7. Compensation for Human Resources in Public Health (Service Unit under the Ministry of Public Health)	-	-	3,000.00	3,000.00	3,000.00
8. Health Services for the Dependent Elderly	-	-	-	-	600.00
Total	**140,609.40**	**141,539.75**	**154,257.97**	**153,151.66**	**163,152.18**
National Health Security Fund (Excluding government service fee.)	107,814.12	108,744.46	115,876.67	114,963.64	123,009.04
Capitation budget (Expenses for medical services)	2,755.60	2,755.60	2,895.09	2,895.09	3,028.94

Source: *Announcement of the National Health Security Council on Criteria for the Implementation and Management of the National Health Security Fund for those who have the right to health insurance.*

Note: **Including the request for the National Health Security Fund Balance Sheet as of 30 September 2012 amounting to Baht 700 million. FY 2014*

Table 2 Capitation budget classification, FY 2016

Services	Capitation rate (Baht/head)
1. General out-patient services	1,103.92
2. In-patient services	1,060.14
3. Specific vertical programs, e.g., high cost care, disease management programs, OP refer out of province	305.29
4. Health promotion and disease prevention for all Thai citizens (UCS and other government schemes)	398.60
5. Rehabilitation medical services	16.13
5. Rehabilitation medical services	10.77
7. Depreciation cost for building and medical investment in registered hospitals	128.69
8. compensation budget to consumer for losses from health services in accordance with Section 41 of the Act	5.40
9. compensation budget to health provider for losses from health services in accordance with to Section 41 of the Act	-*
Total	**3,028.94**

Source: The NHSB announcement on Operation guideline for UCS budget management, FY2016

2.3 National Health Security Fund allocation

In the FY 2016 the National Health Fund allocated 122,881.24 (99.90%) of its THB123,009.04 million budget (Table 3).

Table 3 National Health Security Fund budget allocation FY 2016

List	Budget Received [1] (million baht)	Budget Paid [2] (million baht)	Budget Percentage Paid
1. Medical Services flat rate/per person for medical services	107,629.76	107,738.83	100.10
2. Service charge for HIV infection and AIDS patients	3,011.90	2,571.83	85.39
3. Service charge for patients with chronic renal failure.	6,318.10	6,627.03	104.89
4. Service charge for prevention, treatment and treatment of chronic diseases.	959.00	960.14	100.12
5. Additional charges for service units in a risk, remote area and 3 Southern Border Provinces	1,490.29	1,490.29	100.00
6. Compensation for Human Resources in Public Health (Department of Health Services, Ministry of Public Health)	3,000.00	3,000.00	100.00
7. Health Services for the Dependent Elderly	600.00	493.13	82.19
Included budget	**123,009.04**	**122,881.24**	**99.90**

Source: 1) National Health Security Board Notification on Criteria for the Implementation and Management of National Health Security Fund For those who have the right to health insurance FY 2016.
2) National Health Security Fund Report FY 2016 as of September 30, 2016.

3. Improving coverage and household expenditure for health care

The main goal of national health insurance is to create equitable access to essential services for all Thais. Since its introduction 14 years ago, the indicators of its success include an increased fairness in access to quality health care services, the reduction of household medical expenses and protections given to prevent households from suffering financial crisis or bankruptcy due to medical expenses.

3.1 Improving equity in health service accessibility

3.1.1 Universal Health Coverage situation

Universal Health Coverage (UHC) covering the whole of Thai society is one indication of improved equity in health service accessibility. In the past decade, UHC in Thailand increased dramatically from 71.00% in FY2001 to 99.95% in FY2016. As of September 30, 2016, 65.71 million of the 65.81 million people eligible for health insurance were registered in the system. Of the 48.37 million people eligible for national health insurance, 48.33 million people have registered for the right to health coverage. (Universal Coverage Scheme: UCS) the equivalent of 99.93%. Approx. 0.030 million people or 0.05% were still not registered and about 0.13 million people were waiting for status confirmation. (Table 4)

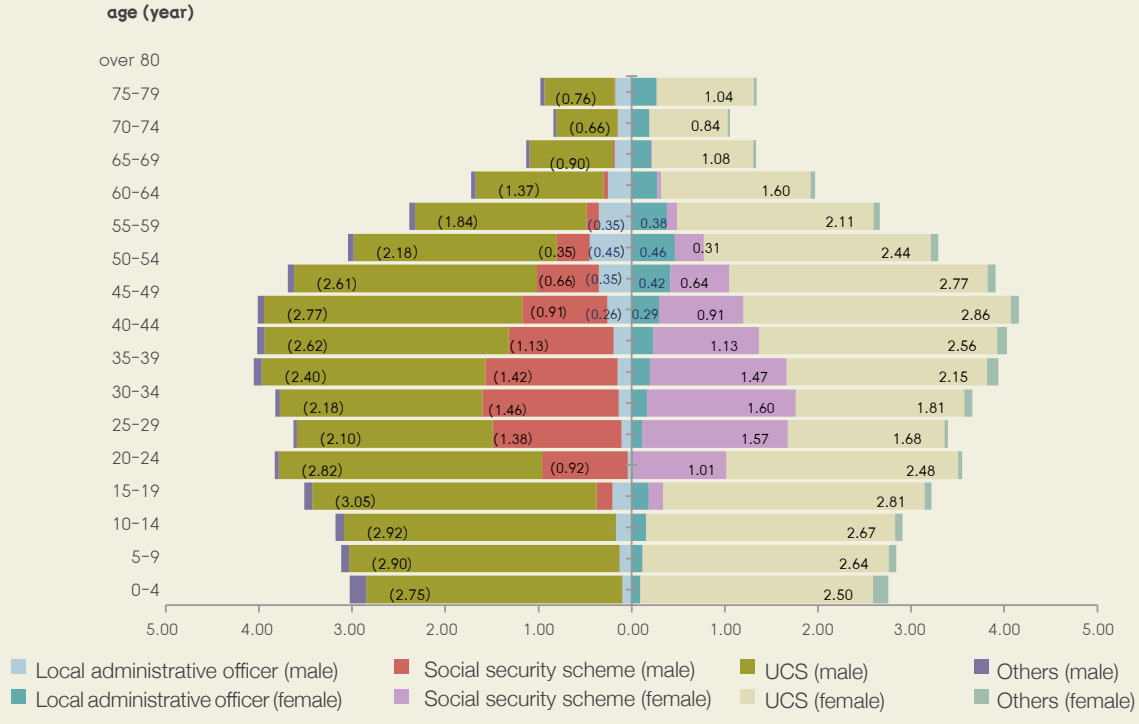
When comparing proportions of population utilizing UCS or other government health insurance schemes, classified by gender and age group, the findings showed that most of the UCS patients were children and elderly (0-19 years-old and people over 58 years old) while most of the other schemes were being utilized by the working aged group 25-49 years old. Government and civil servants' rights are distributed in all age groups, especially 40 years old. (Figure 9)

Table 4 The Population of Thailand classified by health insurance status, FY 2012-2016

Order	Category	2012	2013	2014	2015	2016
1	National Health Security (UCS)	48,620,104	48,612,007	48,312,428	48,336,321	48,330,473
2	Social Security (SSS)	10,327,129	10,689,260	11,065,325	11,266,495	11,630,205
3	Civil servant/state enterprise (OFC)	4,967,575	4,878,258	4,837,927	4,836,208	4,742,823
4	Local employee (LGO)		99,780	578,525	611,982	615,157
5	Person with status issues (STP)	343,583	413,549	489,275	400,333	384,592
6	Private teacher (VPT)	102,834	100,265	72,159	78,387	73,683
7	Veterans (VET)	164,027	163,684	-	-	-
8	Qualified non-registered UCS	65,113	81,983	105,184	50,148	34,584
9	Total number of coverage (1+2+3+4+5+6+7+8)	64,590,365	65,038,786	65,460,823	65,579,874	65,811,517
10	Total number of UCS (1+2+3+4+5+6+7)	64,525,252	64,956,803	65,355,639	65,529,726	65,776,933
11	Total number of those entitled to health insurance (1+8)	48,685,217	48,693,990	48,417,612	48,386,469	48,365,057
12	Percentage of coverage (10/ 9*100)	99.90	99.87	99.84	99.92	99.95
13	Percentage of UCS (1/11*100)	99.87	99.83	99.78	99.90	99.93
14	Unknown citizen status (Waits for confirmation) *	791,008	624,552	214,382	140,760	125,945
15	Thais living abroad (FRG) **	15,641	15,733	17,119	16,889	15,967
16	Foreigner (NRD)	106,941	124,871	192,379	218,701	324,689
17	Foreigner with insurance (NRH)	-	-	-	94	86
18	Total of others (14+15+16+17)	913,590	765,156	423,880	376,444	466,687
19	Total population	65,503,955	65,803,942	65,884,703	65,956,318	66,278,204

Source: Bureau of Registration Administration, NHSO, September, 2016

Figure 9 Proportions of the population using UCS or other government health schemes classified by gender and age group FY 2016

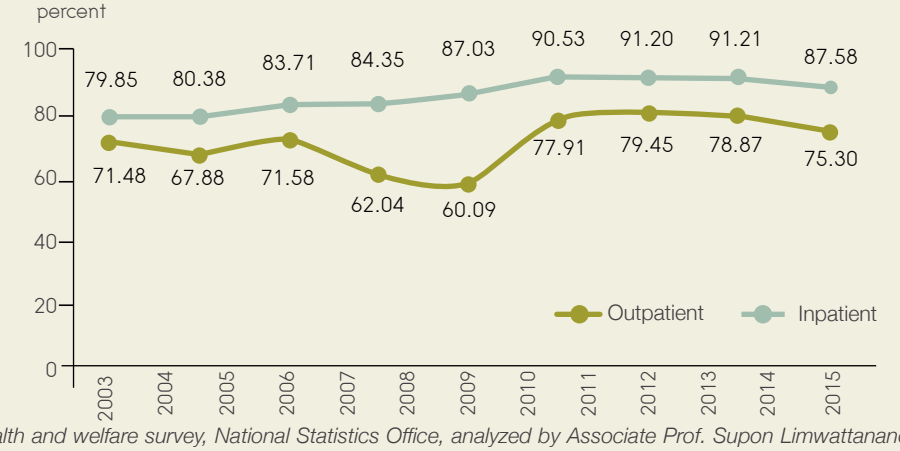


Source: Bureau of Registration Administration, NHSO, September, 2016

3.1.2 How patients accessed Healthcare via the Universal Coverage Scheme

According to the health and welfare survey by the National Statistics Office in 2015, analyzed by Prof. Supon Limwattananonta of Khon Kaen University, The amount of UCS beneficiaries accessing out-patient services (OPS) and in-patient services (IPS) had both increased. The results in Figure 10 show that the percentage of UCS beneficiaries accessing out-patient and in-patient services in FY2015 were 75.30% and 87.58%, respectively.

Figure 10 Utilization of out-patient services and in-patient services, 2003-2015

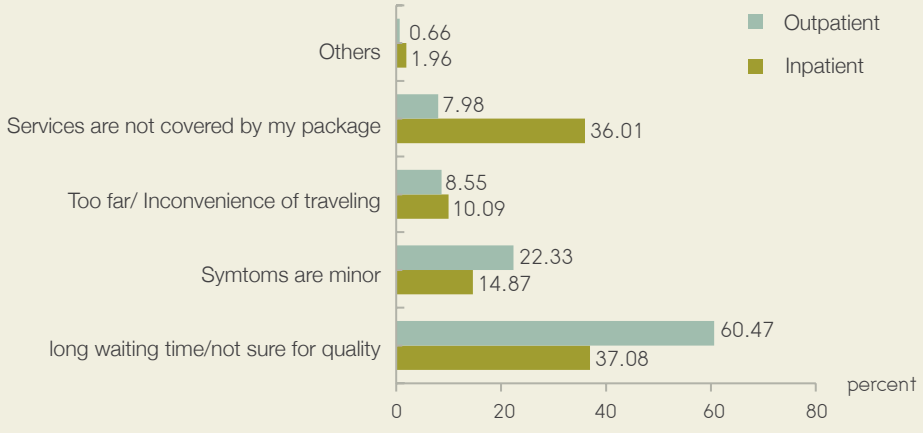


Source: *Health and welfare survey, National Statistics Office, analyzed by Associate Prof. Supon Limwattananonta of Khon Kaen University*

Note: *There was no survey in 2008, 2010, 2012, and 2014.*

In order to achieve full UHC implementation, it is important that the beneficiaries are not only covered by related government health insurance schemes but also are reimbursed for health services in accordance with their benefit packages. However, a health and welfare survey by National Statistics Office in 2015 found that some beneficiaries did not utilize their benefit packages and were willing to pay out of pocket for services. The top three reasons for not using out-patient services were "symptoms are minor", "long waiting time", and "inconvenience during office hours", respectively. The top three reasons for not using in-patient services were "long waiting time", "unreliable or absent diagnosis", and "services are not covered by my benefit package." The most common reasons in health promotion services were "long waiting time", and "service not covered by benefit package." As shown in Figure 11

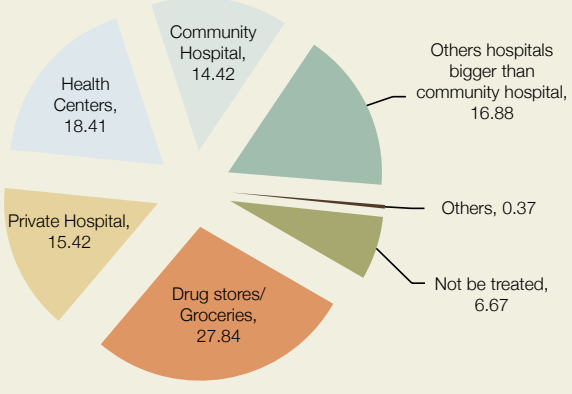
Figure 11 Reasons for not utilizing a UCS benefit package when accessing health services, FY 2015



Source: Health and welfare survey 2015, National Statistics Office.
Analyzed by Bureau of Executive Information Administration, NHSO.

According to the same survey, the chosen alternative options of consumers when they were sick and did not admit themselves to hospital were "drug stores" (27.84%), "private hospitals" (15.42%), "health promotion hospitals or health centers" (18.41%), and "community hospitals" (14.42%), respectively as shown in Figure 12

Figure 12 Choices consumers made when they were, FY2015



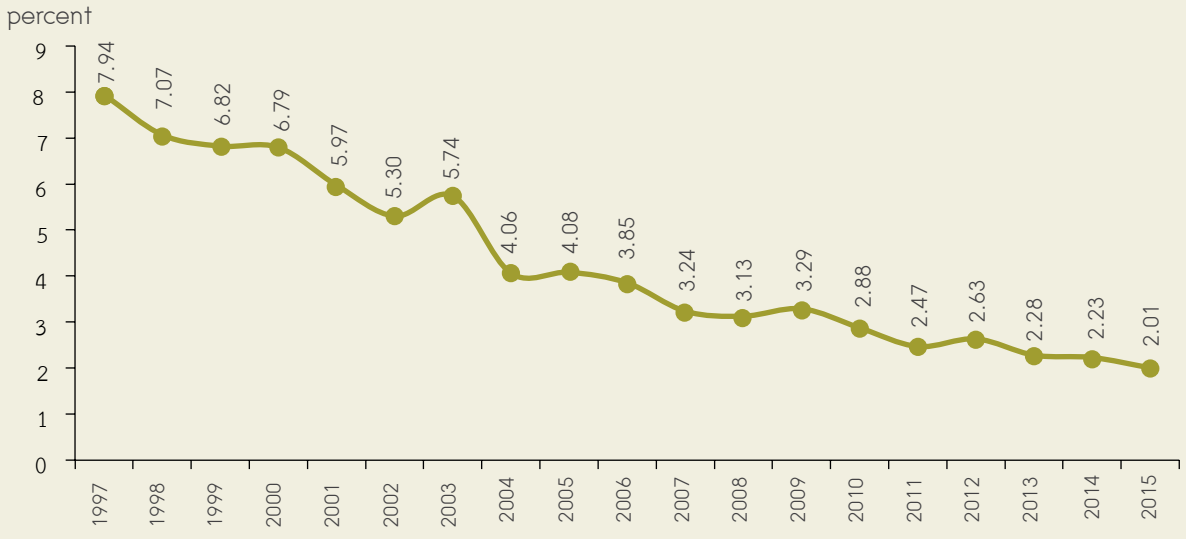
Source: Health and welfare survey, National Statistics Office, 2015
Analyzed by Bureau of Plan and Policy, NHSO

3.2 Household's Burden on Health expenditures

Health financing means the managing of resources, i.e. the budget, contributions and health expenditure of a household. In the long run, governments and households can invest in health and prevent households from experiencing financial crisis or even bankruptcy due to medical expenses. Therefore, reducing the burden of a household's medical expenses reflects the success of national health insurance. Based on the committee's recommendations, the National Health Security System mobilizes resources for sustainability[1] set for 2022. Incidences of household bankruptcy from medical expenses should not exceed the current level (2013) of 2.3% of all households. The incidences of households that have suffered hardship after the payment of medical expenses should not be more than the current level (2013) of 0.47% of all households. Based on data analysis, socio-economic surveys of households by the National Statistical Office found which households suffered financial crisis from medical expenses. By analyzing the health expenditures of more than 10% of all households, it was shown to decline fourfold from 7.94% in 1997 to 2.01% in 2015 (Figure 13). Households that suffered hardship due to medical expenses, having dropped below the poverty line after the payment of medical expenses to 2.36% in 1997, went down to 0.34% in 2015 (Figure 14).

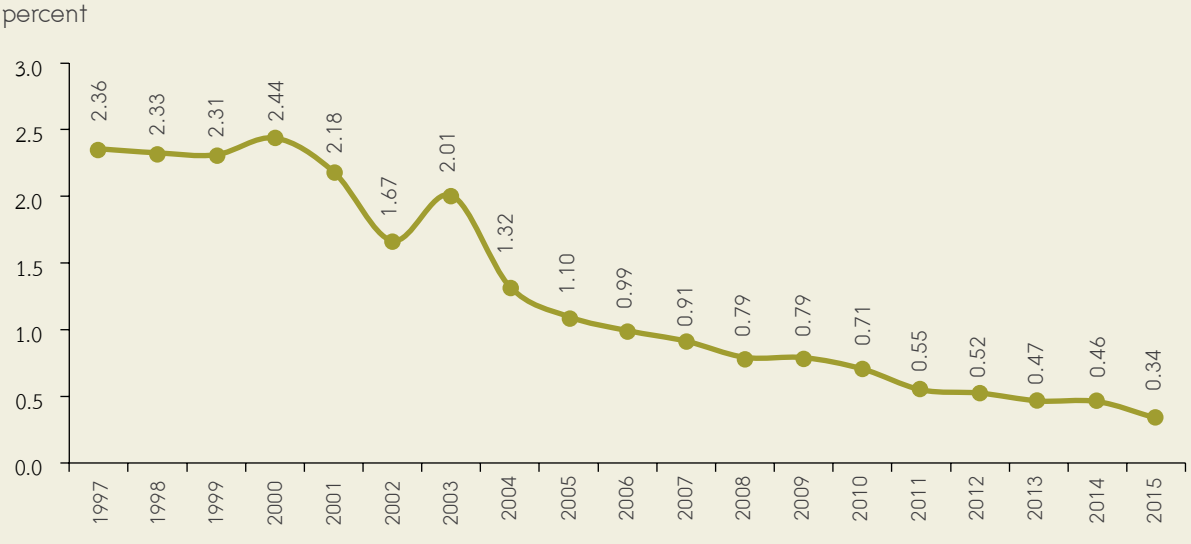
[1] Ordinance of the Ministry of Public Health No. 1020/2015 dated June 24, 2015, appointing a committee to develop guidelines for mobilization of resources for the sustainability of the national health insurance system, according to the order of the Prime Minister, date April 20, 2015; to study and synthesize proposals for sustainable resource mobilization and resource management in an effective and equitable health insurance system. Mr. Ammar Siam Vala is the consultant. and Mr. Suwit Wichepholprasert is the chairman (Source: The Committee for Guidelines for Raising Resources for the Sustainability of National Health Security System. Health Financing Proposals for sustainability of National Health Security System, Targets, Indicators and Goals, Nonthaburi; Pages 1-3.)

Figure 13 Percentage of households experiencing financial crisis due to medical expenses: 1997-2015



Source: *Supon Limwattananonta analyzed from Household socio-economic survey of the National Statistics Office, FY1988 – 2015*
Note: *1) Household health expenditure is more than 10% of total expenditures.*
2) Since 2006, the National Statistical Office has been surveying the socio-economic situation of households every year (b efore 2006 surveyed every 2 years)

Figure 14 Percentage of households experiencing impoverishment due to medical expenses. 1997-2015



Source: *Supon Limwattananonta analyzed from Household socio-economic survey of the National Statistics Office, FY1988 – 2015*
Note: *1) 2015 uses the poverty line 2004 as the base year to measure poverty. Consumer price index (CPI)*
2) Since 2006, the National Statistical Office has been surveying the socio-economic situation of households every year (before 2006 surveyed every 2 years)

4. Healthcare Service Provision and Accreditation

4.1 Healthcare Service Provision

In moving to the universal health coverage, besides providing health benefit packages, providing qualified health care units for beneficiaries is an essential factor. Another important factor is assisting people exercise their health insurance rights.

To help provide care services in to eligible individuals in FY2016 registered hospitals under the UCS are classified into three categories: primary care facilities, main contracting units, and referral units. Most of the providers and hospitals were affiliated to the Ministry of Public Health: 94.36% of the 11,565 primary care facilities; 68.95% of the 1,301 main contracting units; and 83.95% of 983 referral hospitals (Table 5)

Table 5 The number of registered hospitals & percentages under the UCS, FY 2016

Types of hospitals / Affiliation	Primary care units		Main contracting units		Referral hospitals			Total	
	Units	%	Units	%	Capitaton	Non-Capitation	%	Units	%
Ministry of Public Health	10,913	94.36	897	68.95	862	76	84.58	11,056	92.97
Other gov. affiliations	95	0.82	74	5.69	69	22	8.21	143	1.20
Private	263	2.27	241	18.52	39	28	6.04	300	2.52
Local Administrative org.	294	2.54	89	6.84	13	0	1.17	393	3.30
Total	**11,565**	**100**	**1,301**	**100**	**983**	**126**	**100**	**11,892**	**100**

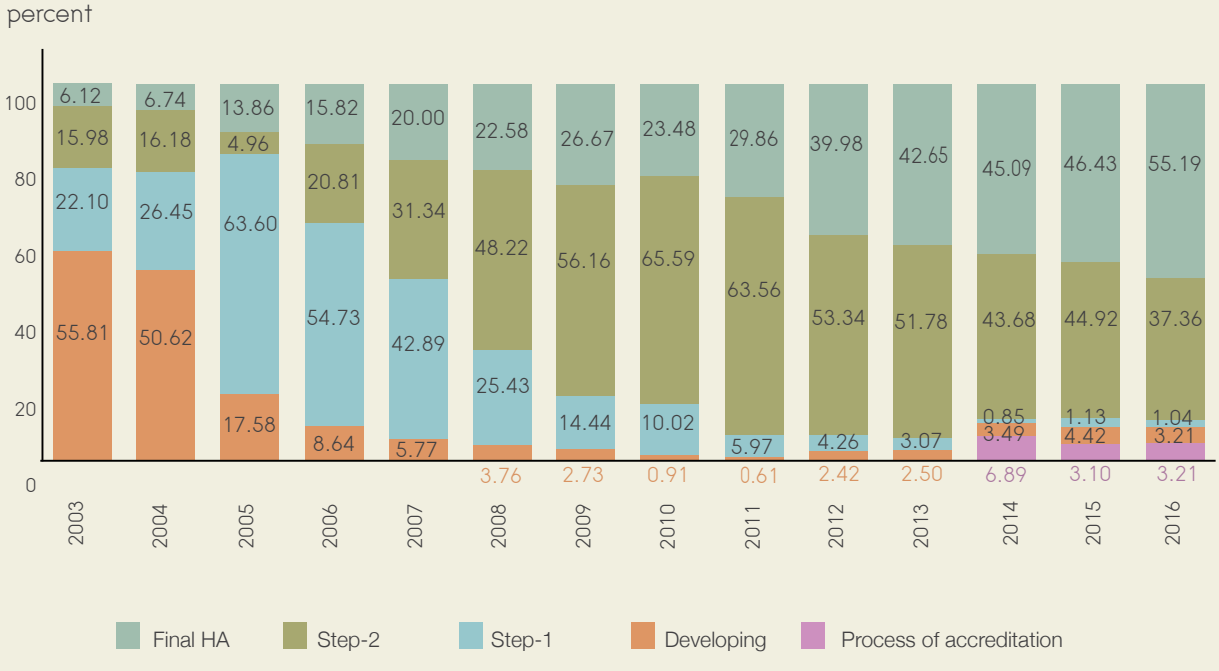
Source: *Bureau of Registration Administration, NHSO, September 2016*
Note: *1) Number of service units counted by type registered service. One service unit can register more than one type.*
2) Capitation is a payment arrangement for health care service providers

4.2 Quality Audit and Hospital Accreditation

4.2.1 Quality Assurance for Service Units

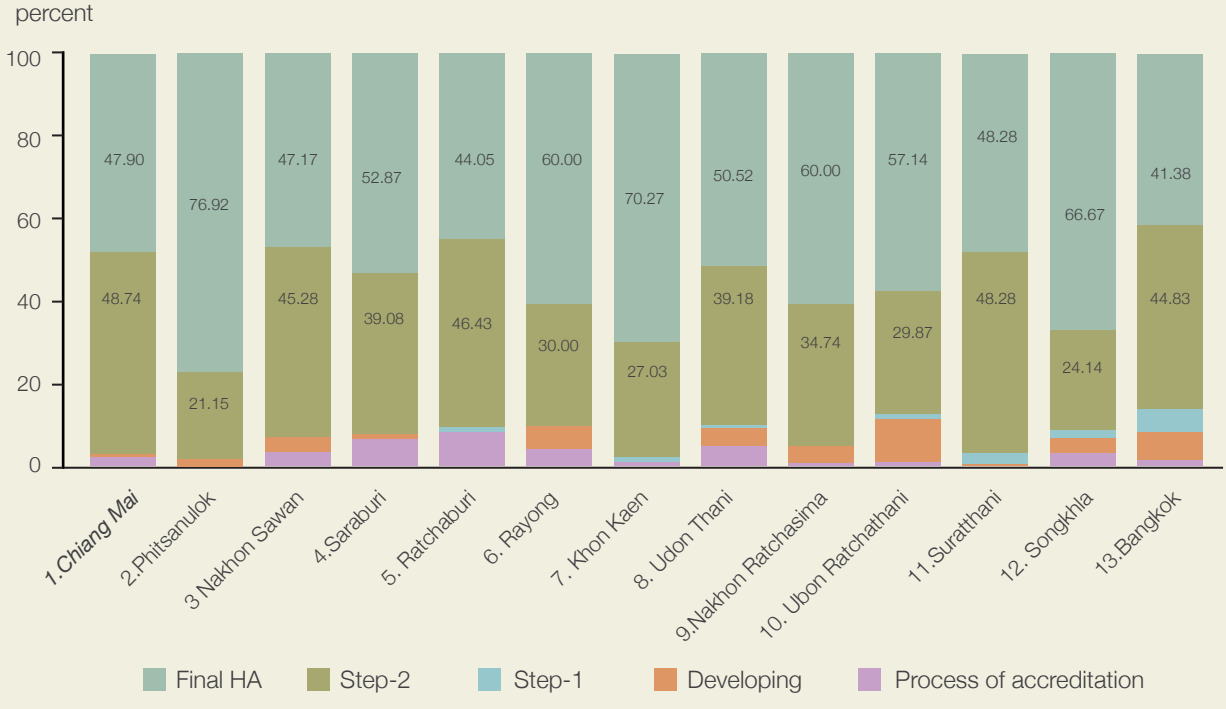
The NHSO has continued to promote quality and improvement for its main contractors and referral hospitals by supporting the hospital accreditation (HA) processes. During FY 2016 of the 1060 referrals received for quality assurance 992 HAs (93.58%) were given. 585 (55.19%) certified quality and 396 (37.36%) for quality assurance. In addition, 34 (3.21%) were in the process of accreditation (Figure 15). When classified by NHSO region, the UCS registered hospitals in FY2015 with the highest proportion of accredited hospitals were in Region 2 Phitsanulok, followed by Khon Kaen (70.27%) and Songkhla (12.6%) (Figure 16)

Figure 15 UCS registered hospitals percentages classified by level of hospital accreditation (HA): FY 2003-2016



Source: The Healthcare Accreditation Institute, as of September 30, 2016 , analyzed by Bureau of Quality and Health Outcome Monitoring, NHSO

Figure 16 UCS registered hospitals percentage classified by level of accreditation and by region in FY 2016



Source: The Healthcare Accreditation Institute, as of September 30, 2016 , analyzed by Bureau of Quality and Health Outcome Monitoring, NHSO.

4.2.2 Service Unit Assessment

In order to guarantee an acceptable standard of quality from health care units, hospital assessments were performed. The evaluations are divided into categories based on the type of registration. The FY2016 outcomes, based on the type of service unit meeting the required criteria (either conditionally or unconditionally), were 97.13%, 99.92% and 96.55% respectively (Table 6).

When affiliation of the hospitals is considered, the primary care units and the main contractor hospitals under the Ministry of Public Health and the other government affiliation passed more than other types of affiliations. However, more referral hospitals under other government affiliations passed than ones under the Ministry of Public Health. Details of the assessment classified by hospital's affiliation are shown in Figure 17

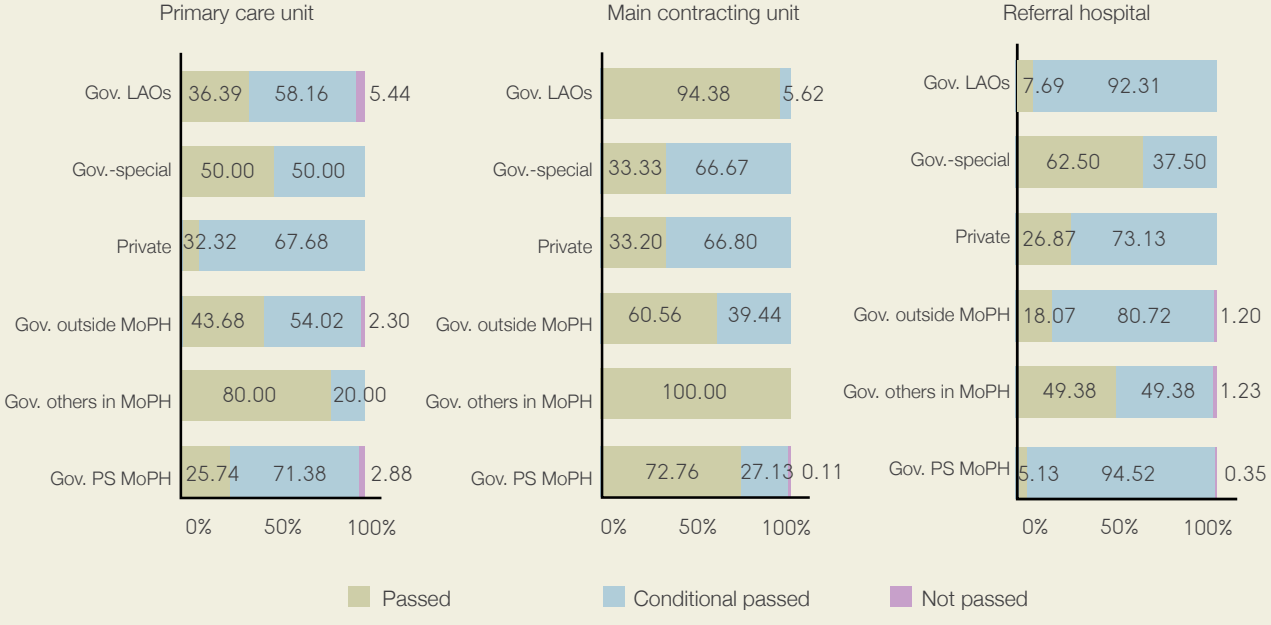
When hospitals' locations classified by the NHSO regions are considered, the primary care units and the referral hospitals located in the NHSO Region 13 (Bangkok) passed more often than other regions. The main contractor hospitals located in the NHSO region 4 (Saraburi) passed more than other regions. Overall, it was found that the main contractor hospitals in every region, except the NHSO region 8 (Udon Thani), passed in a higher proportion than primary care units and referral hospitals. Details of these results are shown in (Figure 18).

Table 6 Results of hospital assessment classified by level types, FY 2016

Results \ Types of hospitals	Primary care units		Main contracting units		Referral hospitals	
	Units	%	Units	%	Units	%
Passed	3,046	26.34	862	66.26	123	11.09
Passed with conditions	8,187	70.79	438	33.67	981	88.46
Not passed	332	2.87	1	0.07	5	0.45
Total	**11,565**	**100.00**	**1,301**	**100.00**	**1,109**	**100.00**

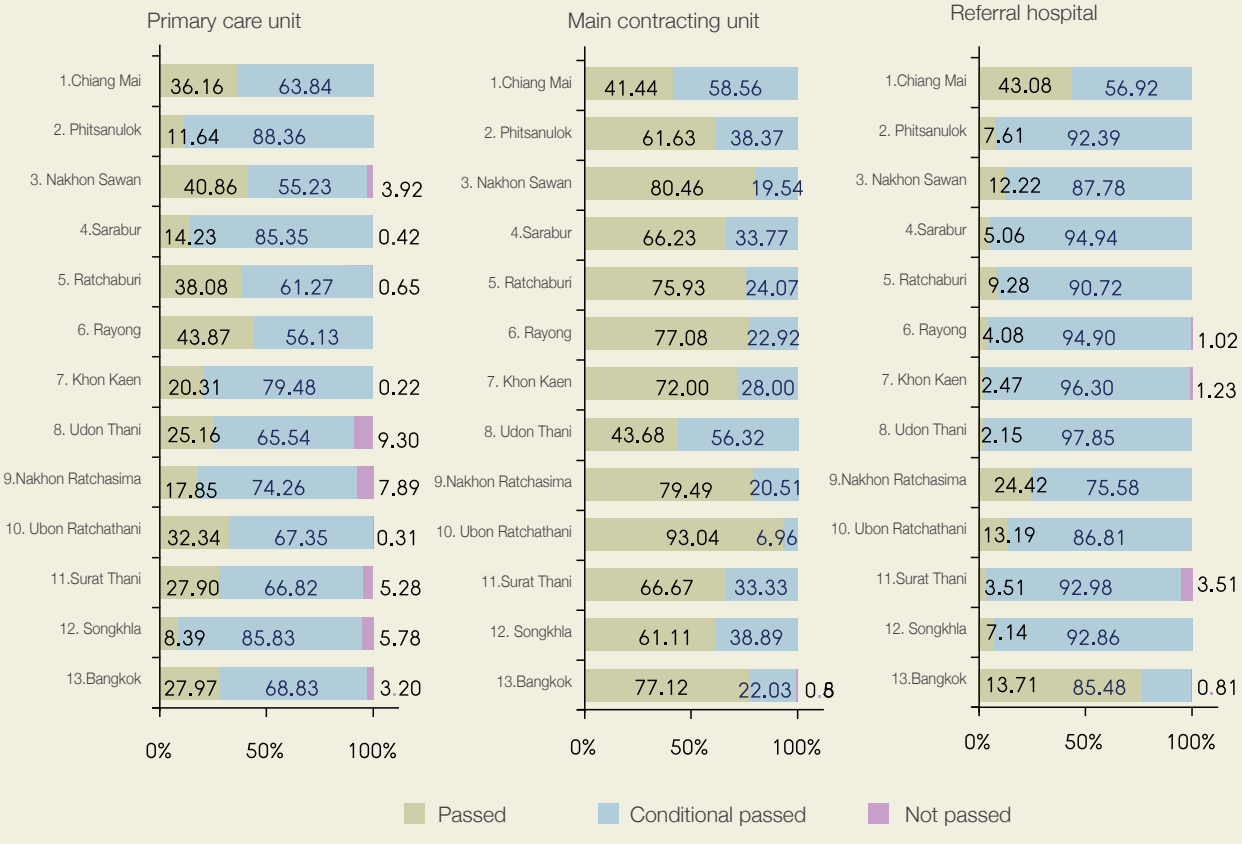
Source: Bureau of Registration Administration, NHSO, September 2016

Figure 17 Results of hospital assessment classified by type of service unit, FY 2016



Source: Bureau of Registration Administration, NHSO, September 2016

Figure 18 Hospital assessment results as percentages classified by type of service unit and jurisdiction FY 2016



Source: Bureau of Registration Administration, NHSO, September 2016

5. Accessibility, Efficiency, Quality and Effectiveness of the Healthcare System

5.1 Medical and public health services for national health

Key performance indices (KPIs) of the UCS management were set in several dimensions. Details of FY2016 goals and performance for each KPI are described in Table 7.

Table 7 NHSO key performance indices, FY 2016

KPIs	Units	Target (according to budget allocation)	Output	Performance (% of output)
Targeted population [1]				
- Thai citizens (Sept.2015)	Person	65,323,148	65,776,933	100.69
- UCS beneficiaries (Sept.2015)	Person	48,787,000	48,330,473	99.06
1. Out-patient services (OP)				
- total OP visits	Visits	154,796,161	173,228,285	111.91
- utilization rate	VIsits/ person/year	3.170	3.589	113.21
2. In-patient services (IP)				
- total admissions	Admissions	5,726,787	5,781,554	100.96
- utilization rate	Admissions /person/yr.	0.117	0.120	102.56
3. Disease management or vertical programs				
3.1 Accident and Emergency (AE)				
- AE in hospitals located outside their registered province, and service outside registered hospital in disabled people	Visits	900,550	1,304,801	144.89
- Birth delivery in new SSS less than 3 months of contribution (IP)	Visits	619,454	581,435	93.86
- number of non-registered UCS accessing to service in the first time	visits	15,666	9,397	59.98
- OP refer out of province or OP refer with-in province where having university hospital in province	Visits	269,829	320,987	118.96
- referred cases with transportation cost	Visits	221,437	225,438	101.81

KPIs	Units	Target (according to budget allocation)	Output	Performance (% of output)
3.2 confidence in quality of care improvment				
- Number of dialysis/hemodialysis In case of acute renal failure (Peritoneal dialysis and Hemodialysis for acute renal failure) [3]	Visits	27,077	38,391	141.78
- Medicinal treatment for opportunistic infections (Cryptococcal meningitis & Cytomegalovirus retinitis) in HIV-patients: Cytomegalovirus retinitis) [3]	Visits	5,620	3,654	65.02
- Stroke fast track [3]	visits	2,267	2,901	127.97
- ST-elevated Myocardial Infarction fast track or STEMI fast track [3]	visits	1,813	3,955	218.15
- cataract surgery	Visits	112,200	154,561	137.75
- Laser treatment for diabetic retinopathy [3]	Visits	12,075	9,578	79.32
- Orthodontics services for cleft lip and cleft palate [5]	Cases	274	1,277	466.06
3.3 financial risk of healthcare providers reducing				
- Hemophilia [3]	Cases	1,487	1,158	77.87
- Hyperbaric oxygen therapy in Decompression sickness [3]	Cases	40	11	27.50
- Corneal transplantation [6]	Cases	390	306	78.46
- Heart transplantation [7]	Cases	51	78	152.94
- Liver transplantation in children [7]	Cases	138	189	136.96
- Hematopoietic stem cell transplantation	Cases	24	22	91.67
3.4 Services required closed monitoring				
- Methadone maintenance treatment (MMT) in drug addicts [3]	Cases	2,428	6,308	259.80
- Essential, high-cost drug (E(2) category drug list of the NLEM)	Cases	22,448	34,434	153.39
- Orphan drugs	Cases	5,216	7,141	136.91
- Compulsory Licensing: CL(Clopidogrel) [8]	Cases	179,200	232,052	129.49
3.5 Disease management or vertical programs				
- Transfusion-dependent thalassemia : TDT [9]	Cases	2,820	11,940	423.40
- Tuberculosis [10]	Cases	56,900	78,388	137.76
- Morphine treatment in palliative cases [5]	Cases	11,490	10,755	93.60
4. Health promotion and prevention				
- Seasoning influenza vaccines [11]	Cases	3,154,507	2,369,796	75.12

KPIs	Units	Target (according to budget allocation)	Output	Performance (% of output)
5. Rehabilitation [12]				
- disables	Cases	1,148,668	1,183,474	103.03
- instruments for disables	Cases	44,349	32,997	74.40
- rehabilitation services for disables	Cases	187,800	264,008	140.58
- rehabilitation services for elderly	Cases	243,787	332,635	136.44
- rehabilitation services for others	Cases	308,060	424,117	137.67
- rehabilitation Services for disabled persons	Cases	6,294	8,301	131.89
- Orientation and Mobility (O&M) for disables	Cases	3,430	2,399	69.94
6. Thai Traditional Medicine Service				
- Massage, hot compress, herbal stream	Visits	4,975,371	4,217,406	84.77
- post-partum care	Cases	35,576	35,855	100.78
- prescribing herbal medicines in national essential drug list	Visits	4,414,819	4,826,880	109.33
7. Preliminary Assistance to Service Providers [13]				
- Preliminary compensations in accordance with section 41 of the Act	Cases	1,142	885	77.50

Source:

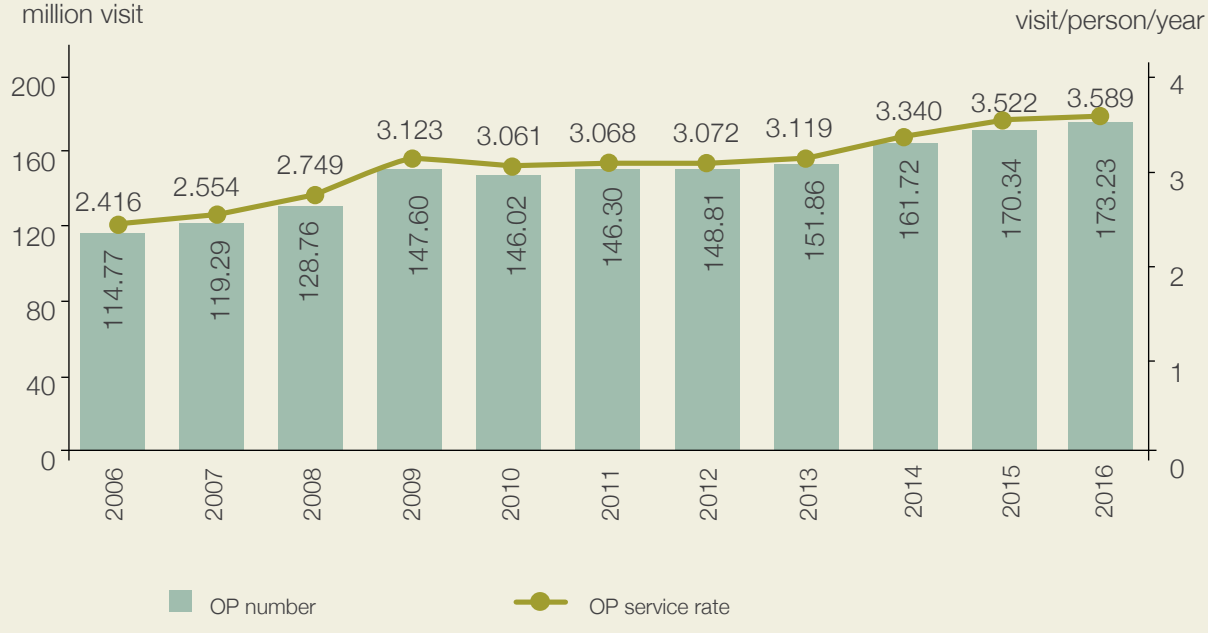
1) *Office of the National Statistical Office, as of September 30, 2016.*
2) *Outpatient Services Information - Individuals UCS Rights Administration Bureau of Insurance Information, analyzed by the Bureau of Plan and Budget Administration. As of September 30, 2016, processed as of January 2017.*
3) *M & E for Payment (H0401) Information and Evaluation Center for Health Care Information as of September 30, 2016, processed as of December 14, 2016.*
4) *OP reference database, e-claim, Information Management Office, HOSP. Data as of August 31, 2016 (11 month data) processed as of November 2016.*
5) *Office of Administration, Allocation and Compensation of NHSO. Data as of September 30, 2016, processed as of November 2016.*
6) *Bureau of Quality and Standard Support Services, as of September 30, 2016, processed as of November 2016.*
7) *Program Support for Kidney Disease Rehabilitation Services Data as of September 30, 2016 Processing as of December 2016*
8) *The Office of Drug and Alcohol Information Services Support as of September 30, 2016.*
9) *Database of Health Promotion and Disease Prevention Services by Primary Health Service Support Center. Data as of September 30, 2016, processed as of December 2016.*
10) *TB Information System (TB Data HUB) is an analysis of the TB and HIV-infected service plan. Data as of September 30, 2016, processed as of November 2016.*
11) *Reported data 43. Ministry of Public Health file, as analyzed by the Office of Primary Care Systems Support, as of September 30, 2016, processed as of January 2017.*
12) *Record-keeping programs for disabled persons and rehabilitation services. Bureau of Insurance Information Administration, Analytical Bureau of Community Health Services, NHS. Data as of September 30, 2016, processed as of December 2016.*
13) *Bureau of Insurance Information Administration, Analyzed by The National Institute of Standards and Technology Information as of September 30, 2016*

5.2. Evaluating service access, quality performance, and service results.

5.0.1 Out-patient and In-patient Services

Out-patient (OP) services are the preferred mode of services of a majority of people so it can be a strong indicator to the overall use of health-care services. It was expected that accessing OP services would increase with the implementation of UHC. Data between FY2006 and FY2016 has shown that the number people using OP services under the UCS increased from 114.77 million visits or 2.416 visit/person/year in FY2006 to 173.23 million visits or 3.589 visit/person/year in FY2016, as shown in Figure 19

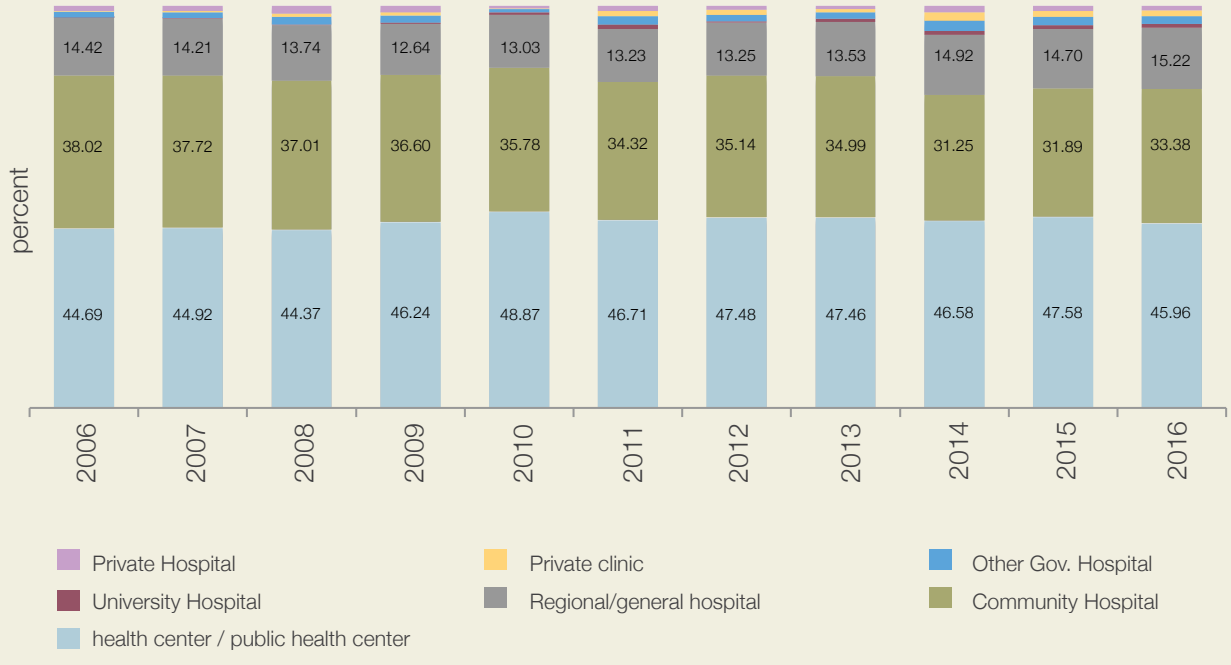
Figure 19 The number of out-patient visits and utilization rate per person per year of the UCS, FY 2006-2016



Source: *1) Out-patient data of FY2006-2009 are from 0110RP5 Report, Ministry of Public Health*
2) Compensation Database Outpatient Individuals' Rights UCS 2010 - 2013 Office of Administrative Allocation and Compensation for Services as of December 2013, Analysis by the Office of Planning and Budget, NHSO
3) Outpatient Services Information Individual UCS Rights 2014-2016 Bureau of Insurance Information Administration, as of January 2017, Analysis by the Office of Planning and Budget, NHSO.

Data shows that a majority of patients received outpatient services. At the health centers or public health centers, utilization increased from 44.69% in 2006 to 47.58% in 2015 then went down in 2016. At community hospitals, utilization dropped from 38.02% in 2006 to 33.38% in 2016. At General Hospital/Hospital Center, utilization slightly increased from 14.42% in 2006 to 15.22% in 2016. (Figure 20)

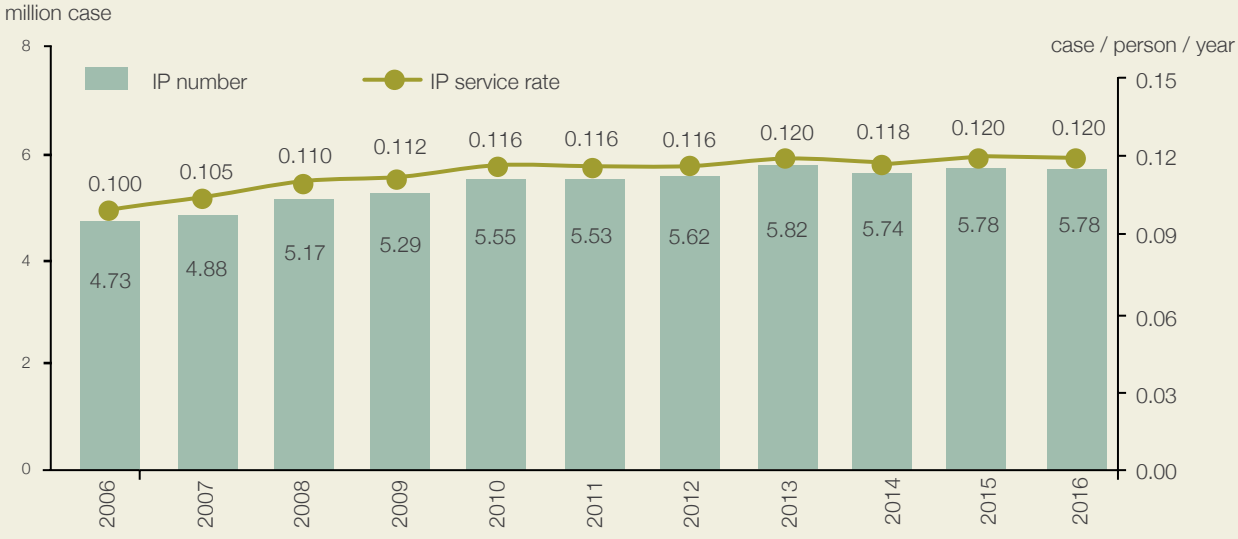
Figure 20 Out-patient services usage as a percentage, classified by type of health facilities. FY 2006-2016



Source: *1) Out-patient data of FY2006-2009 are from 0110RP5 Report, Ministry of Public Health*
2) Compensation Database Outpatient Individuals' Rights UCS 2010 - 2013 Office of Administrative Allocation and Compensation for Services as of December 2013, Analysis by the Office of Planning and Budget, NHSO
3) Outpatient Services Information Individual UCS Rights 2014-2016 Bureau of Insurance Information Administration, as of January 2017, Analysis by the Office of Planning and Budget, NHSO.

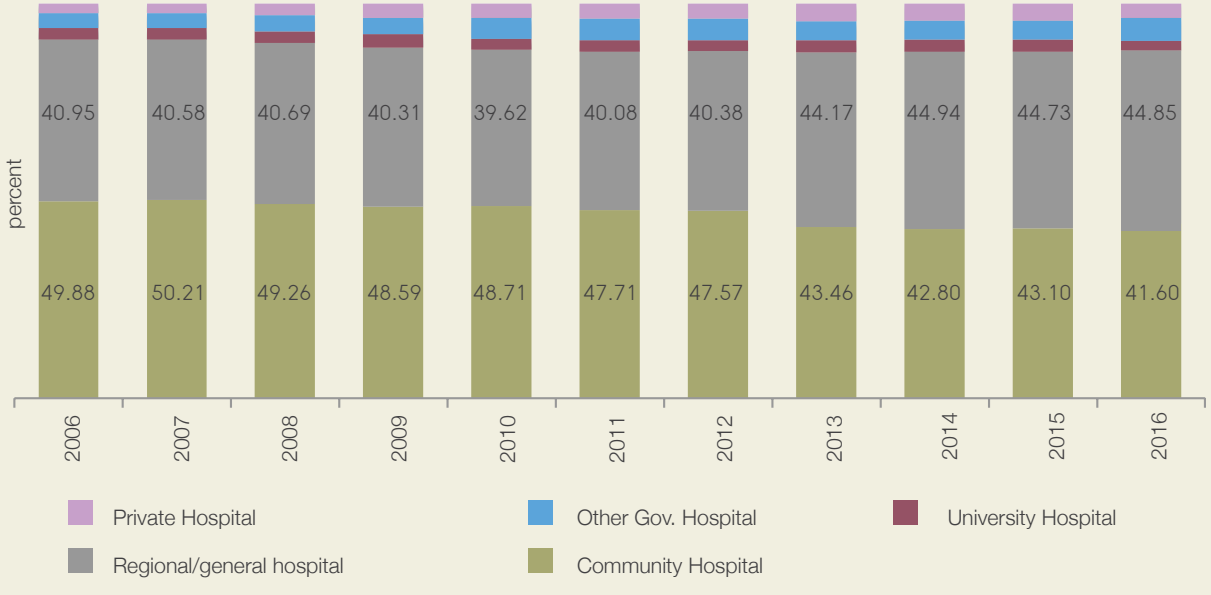
For Inpatient Services, the number increased from 4.73 million in 2006 to 5.78 million in 2016. The rate of inpatient services increased from 0.100 per person per year 2006 to 0.120 per person per year in 2016 (Figure 21). In 2016, 44.85% of respondents opted for general hospital/general hospital services, followed by community hospitals 41.60% (Figure 22).

Figure 21 Inpatient services under the UCS, FY 2006-2016



Source: *1) In-patient data of FY2006-2009 are from 0110RP5 Report, Ministry of Public Health*
2) UCS Annual Subsidized Compensation Scheme 2010 - 2012 Office of Administrative Reimbursement and Allocation Service December 2013, Analysis by the Office of Administrative and Budget Administration,
3) npatient Services Information, UCS Rights, 2013-2015, Office of Insurance Information Management, March 2016, Analysis by the Office of Administrative and Budget Administration,
4) npatient Services Information, UCS Rights, 2016, Office of Insurance Information Management, February 2017, analyzed by the Office of Administrative and Budget Administration,

Figure 22 In-patient services under the UCS classified by hospital types FY 2006-2016



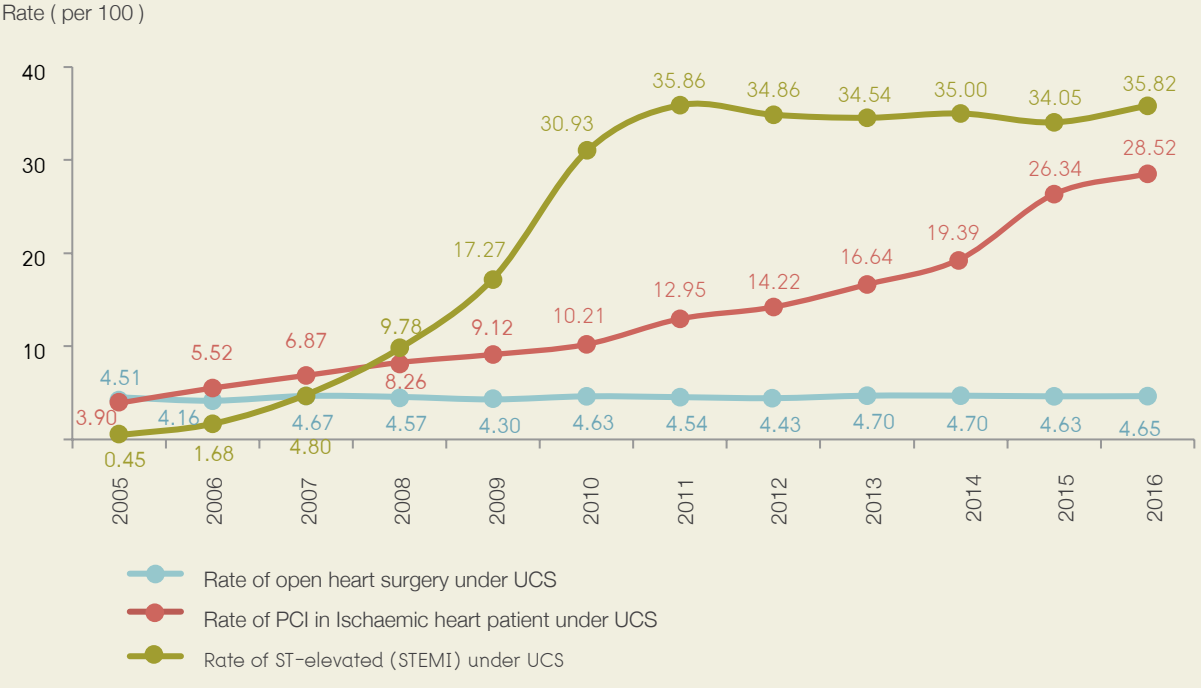
Source: *1) In-patient data of FY2006-2009 are from 0110RP5 Report, Ministry of Public Health*
2) UCS Annual Subsidized Compensation Scheme 2010 - 2012 Office of Administrative Reimbursement and Allocation Service December 2013, Analysis by the Office of Administrative and Budget Administration,
3) Inpatient Services Information, UCS Rights, 2013-2015, Office of Insurance Information Management, March 2016, Analysis by the Office of Administrative and Budget Administration,
4) Inpatient Services Information, UCS Rights, 2016, Office of Insurance Information Management, February 2017, analyzed by the Office of Administrative and Budget Administration.

5.2.2 Disease management and vertical program

1) Cardiovascular diseases

One of the limitations when requiring access to health services for heart and cardiovascular diseases is a lack of specialists in terms of availability and distribution. Yet access to essential cardiovascular procedures is increasing, especially for cardiac catheterization. Percutaneous Coronary Intervention (PCI) for patients with Ischemic heart disease and infusion of thrombolytic therapy in ST-elevated acute myocardial infarction (STEMI) increased from 3.90% and 0.45% in 2005 to 28.52% and 35.82% in 2016, respectively. Open heart surgery is likely to be between 4.16-4.70% (Figure 23).

Figure 23 The rate of heart procedures for UCS patients ages 15 years and older: FY 2005-2016

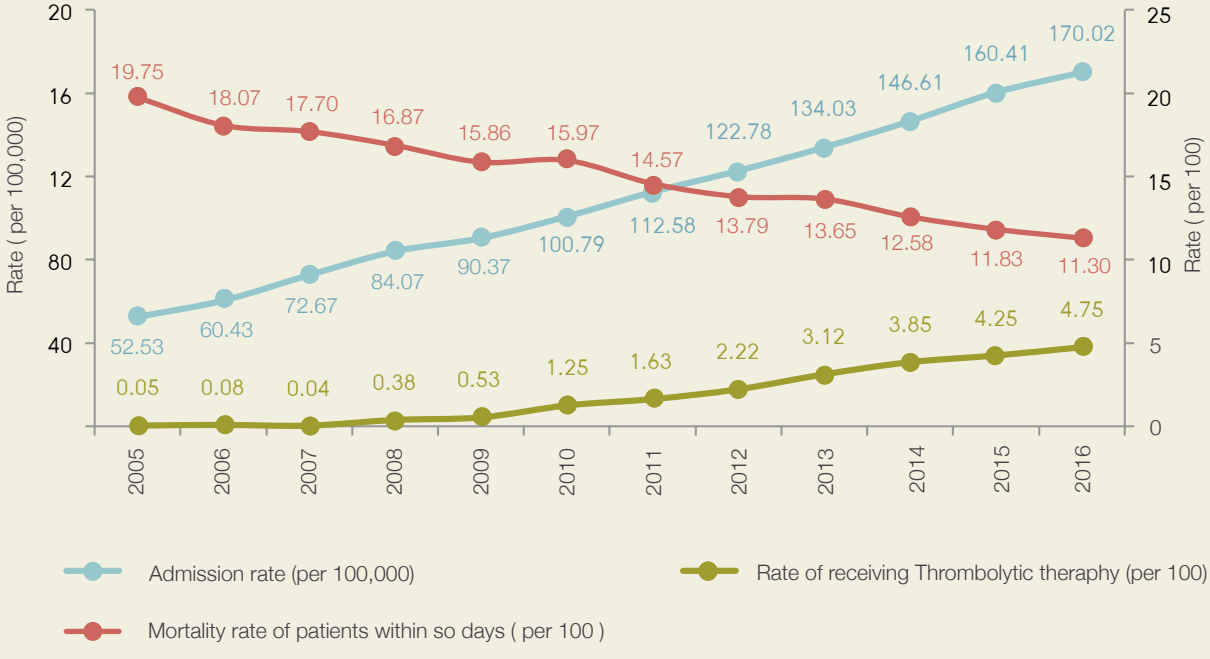


Source: NHSO Health Service Indicator: H0301 Information as of September 30, 2016
As of November 30, 2016, analyzed by the Bureau of Information and Evaluation of Health Care.

2) Heart disease

The number of people dying from heart disease is increasing every year. Even for those that survive a large majority are left disabled later, resulting in lower quality of life. These produces expense to both the family and the country. Stroke patients need to be treated promptly. For patients with Cerebral infarction in FY 2016, accessing hospital services there was a significant upward trend from a rate of 52.53 per 100,000 in 2005 to 170.02 in 2016. Patients receiving thrombolytic therapy increased from 0.05% in 2005 to 4.75% in 2016. This resulted in the mortality within 30 days after hospitalization declining from 19.75% in 2005 to 11.30% in 2016. Hence, fast access to medical services and efficient treatment of thrombocytopenic purpura has decreased both disability and mortality (Figure 24).

Figure 24 Accessibility to thrombolytic treatment for cerebral infarction for UCS patients aged 15 years and older: FY 2005-2016



Source: NHSO Health Service Indicator: H0301, Information as of September 30, 2016, November 30, 2016, analyzed by the Bureau of Information and Evaluation of Health Care

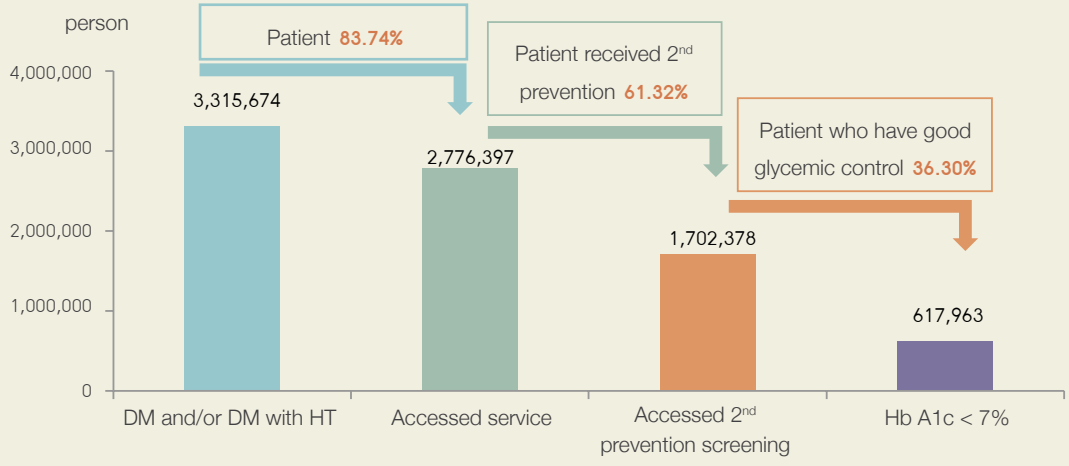
3) Diabetes Mellitus and Hypertension

Diabetes Mellitus (DM) and Hypertension (HT) are preventable conditions however, prevention is also required. Prevention and treatment of the diseases can reduce the burden on the patient, their family, and society as a whole in the long term. In FY2015, the NHSO was allocated a budget of THB909.2 million to screen patients with complications resulting from these diseases (Secondary prevention). A total number of 3,603,840 people (128.24% of the targeted amout 2,810,300), with

(1) Access to 2nd prevention services (HbA1c, lipid profile, micro albuminuria, retinal detachment and foot exams at least once a year). Of those, 61.32% were diabetic and/or hypertensive patients (1,702,378 from 2,776,397), of which 36.30% were found to have good glycemic control. HbA1c <7%) (Figure 25)

(2) Access to 2nd prevention services (Fasting Plasma Glucose, Lipid Profile, and Urinalysis at least once a year). Of those, 53.31% were hypertensive patients (1,901,462 out of 3,553,376) of which 64.60% were found to have good blood pressure control. (Blood pressure level <140/90 mmHg) (Figure 26)

Figure 25 Accessibility to secondary prevention for DM and HT FY2016

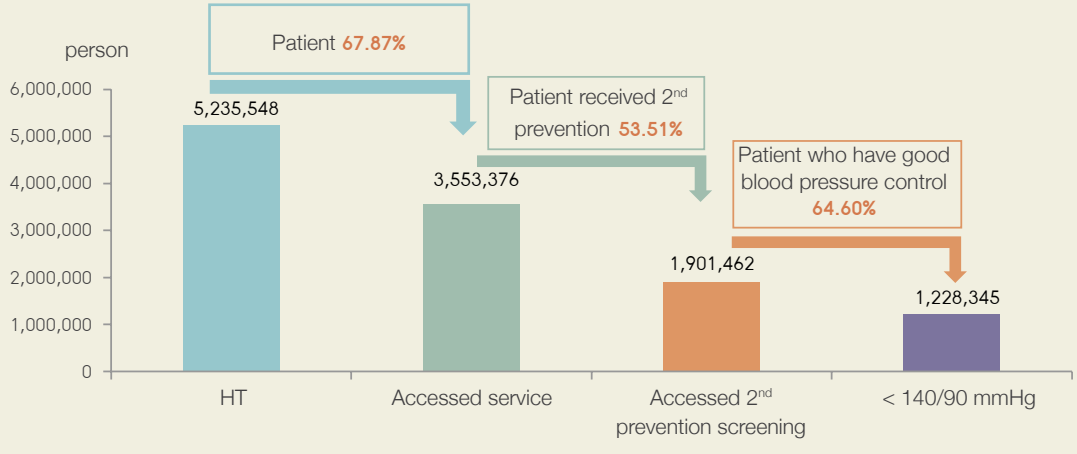


Source: *Diabetes and high blood pressure Information that can access to services in 2016, Bureau of Insurance Information Administration, Analyzed by the Program Support for Chronic Disease and Specific Disease Services and the plan and budget of the NHSO.*

Note: *1) The incidence of diabetes in the 15-year-old population was 8.9% (based on a survey of Thai population health by physical examination No. 5: NHES V; Information as of October 11, 2016)*

2) Access to 2nd prevention (calculated from the number of patients with diabetes and/or uncomplicated hypertension multiplied by percentage of patients receiving second prevention) and good glycemic control. (HbA1c <7%). Data from the Diabetes Care Assessment Report 2 and/Hypertension 2015: MedResNet

Figure 26 Secondary prevention services for inpatients with hypertension. FY 2016



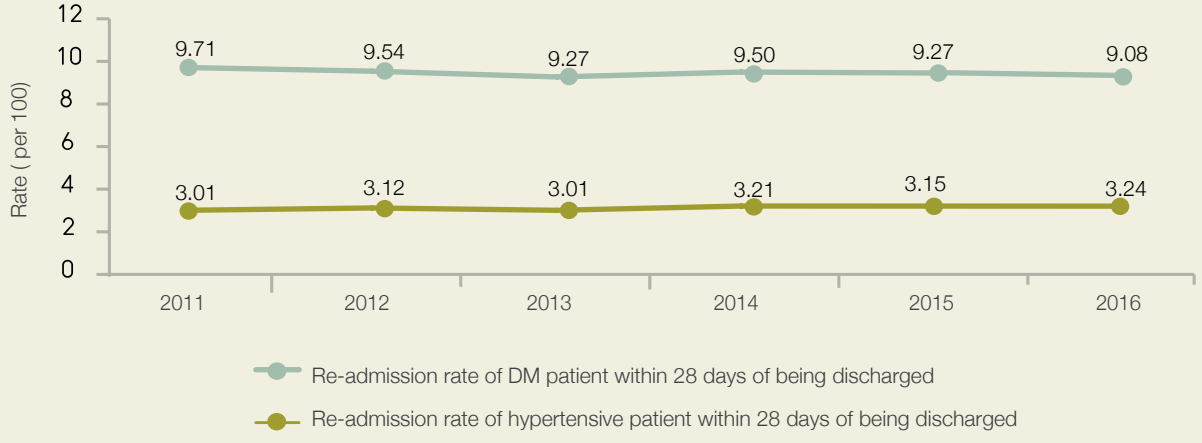
Source: *Diabetes and high blood pressure Information that can access to services in 2016, Bureau of Insurance Information Administration, Analyzed by the Program Support for Chronic Disease and Specific Disease Services and the plan and budget of the NHSO.*

Note: *1) The incidence of diabetes in the 15-year-old population was 8.9% (based on a survey of Thai population health by physical examination No. 5: NHES V; Information as of October 11, 2016)*

2) Access to 2nd prevention (calculated from the number of patients with uncomplicated hypertension multiplied by percentage of patients receiving 2nd prevention) and good blood pressure control. (Blood pressure <140/90 mmHg). Data from the Diabetes Care Assessment Report 2 and/Hypertension 2015: MedResNet

Re-admission within 28 days of being discharged is another indicator that reflects quality of IP care or effectiveness of the last treatment. Under the UCS patients, aged 15 years and older requiring further treatment within 28 days had decreased slightly from 9.71% in FY2011 to 8.8% in FY2015 for DM patients and from 3.01% in FY2011 to 2.97% in FY2015 for HT patients, as shown in Figure 27.

Figure 27 Re-admission within 28 days of a previous discharge for DM and HT patients 15 years and over: FY 2011-2016



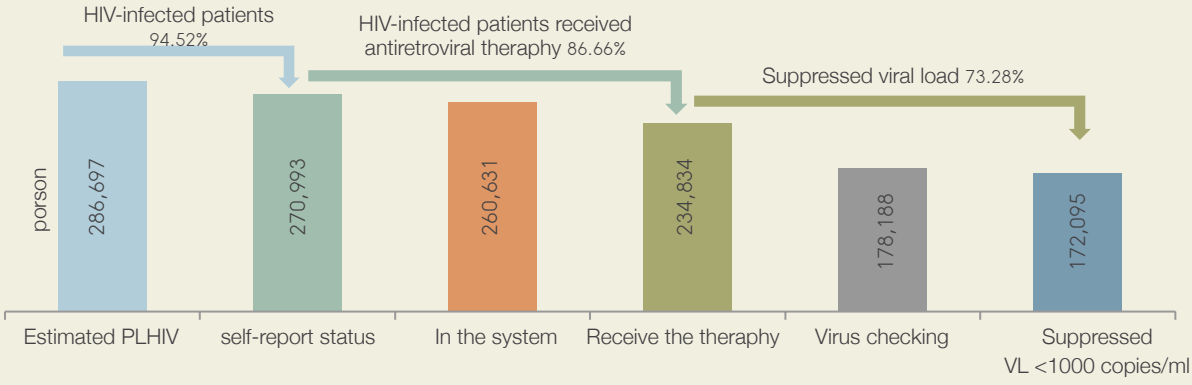
Source: *NHSO Health Service Indicator: H0301), September 30, 2016*
November 30, 2016, analyzed by the Bureau of Information and Evaluation of Health Care
Note: *1) Use updated status information to see the quality of the distribution plan.*
2) Cannot distinguish planed or unplanned patients from inpatient data (IP) because the second admit may be scheduled for continuous procedure

4) HIV/AIDS services

NHSO has consistently supported access to healthcare services for HIV/AIDS patients. In FY2016 a budget of THB3,011,901 million was allocated, targeted at 211,100 people.

Through to FY 2019, Thailand has set the goal of ending the country's AIDS problem, it is called Fast-Track-Targets 2020 or 90-90-90. This means 90% have been checked for infection, 90% of HIV-infected patients have received antiretroviral therapy, and 90% of antiretroviral users have suppressed viral load (Suppressed: VL <1000 copies/ml). Also 94.52% of HIV infected and AIDS patients had self-reported status, 86.66% HIV-infected patients received antiretroviral therapy and 73.28% of antiretroviral recipients the virus was suppressed. (Figure 28)

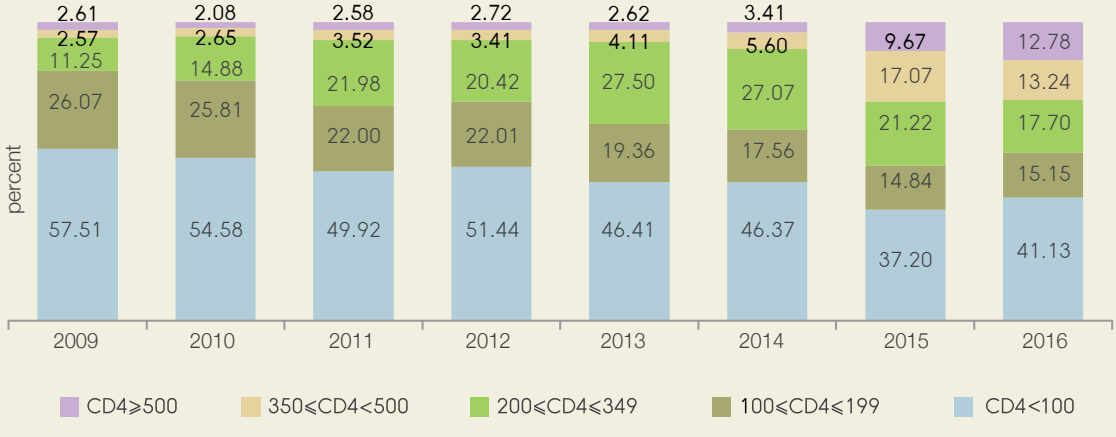
Figure 28 Healthcare service for HIV/AIDS patients in FY 2016



Source: 1) *Information Services Report on results, treatment and follow-up of HIV/AIDS patients. Data as of September 30, 2016. Processed as of October 7, 2016. The program supports the TB and HIV services.*
2) Estimated PLHIV is estimated by the Centers for Disease Control and Prevention, Department of Disease Control, Ministry of Public Health.
3) 2016 change of viral load criteria in HIV-infected patients with antiretroviral therapy for 12 months with undetected viral load <50 copies/ml. (Suppressed: VL <1000 copies/ml)

According to data released by provider follow-up services, there was an evident that a delay in accessing health services was the main cause of death. All patients entering the system under the UCS are tested and classified, based on CD4 level to ascertain the severity of their condition before being enrolled for ART. The number of new cases with severe immune deficiency (CD4 < 100 cell/mm3) enrolled into the program have continued to decrease slightly from 57.51% in 2009 to 41.13% in 2016 Patients with impaired immunity (CD4> = 500 cells/mm3) has increased from 2.61% in 2009 to 12.78% in 2016. This is consistent with the policy of extending access to antiretroviral drugs. Diagnosed HIV positive patients should receive antiretroviral treatment regardless of CD4 level, have access to HIV counseling and testing services at least twice per year to determine the status of infection. All information is logged to ensure that care is received faster, and to reduce the risk of the disease spreading (Figure 29).

Figure 29 Proportion of new HIV/AIDS patients and CD4-eligible patients (CD4 cell level/mm3) FY 2009-2016



Source: *Information Services Report on results, treatment and follow-up of HIV/AIDS patients. Data as of September 30, 2016. Processed as of October 7, 2016. The program supports the TB and HIV services.*

5) Chronic Kidney Diseases

The NHSO has approved additional funds for Renal Replacement Therapy, which is a costly treatment that exceeds the average household budget. Financial barriers because of the excessive cost of treatment and after-care as well as a limitation of suitable service facilities have affected necessary patient care. The NHSO, therefore, has undertaken to address this issue not only through their benefit packages but also by supporting related health system developments. In order to promote quality of care, quality of life, and health outcome, kidney replacement therapy, i.e., peritoneal dialysis for end-stage chronic kidney diseases has been included in the UCS benefit packages under the "PD first" policy since FY2008.

In FY2016, the budget allocation was THB6,318.10 million for 44,411 patients. There were 45,629 patients with chronic kidney disease receiving continuous dialysis (CAPD), and 24,056 hemodialysis patients (HD). 15,248 people were treated with hemodialysis, Only 4,626 EPO (HD Self-pay) blood transfusions and 172 kidney transplant recipients. (Table 8)

Table 8 Renal Replacement Therapy In patients with chronic renal failure FY 2013 –2016

Service	2013	2014	2015	2016
1) Continuous Ambulatory Peritoneal Dialysis: CAPD)	14,225	18,284	21,513	24,056
- Old	7,407	10,748	13,817	16,490
- New	5,554	7,169	7,320	7,224
- Changed from other RRT methods	1,264	367	376	342
- Dead	3,233	4,066	4,590	4,991
- Patients who change treatment/cure/non-follow-up	244	401	433	1,372
2) Hemodialysis: HD	7,855	10,525	13,223	15,248
- Old	5,250	6,676	9,011	11,518
- New	2,071	2,513	2,680	2,754
- Changed from other RRT methods	534	1,336	1,532	976
- Dead	995	1,484	1,669	1,678
- Patients who change treatment/cure/non-follow-up	184	30	36	71
3) Hemodialysis Self Pay: HD Self-pay)	2,513	3,389	4,067	4,626
- Old	1,356	1,992	2,529	3,112
- New	797	1,365	1,488	1,472
- Changed from other RRT methods	360	32	50	42
- Dead	431	715	816	846
- Patients who change treatment/cure/non-follow-up	90	145	139	237
4) Kidney Transplantation: KT	86	182	182	172
- New	86	182	182	172
- Dead	3	9	15	103

Service	2013	2014	2015	2016
5) Kidney Transplantation Immunosuppressive Drug: KTI)	1,197	1,292	1,418	1,527
- Old	998	1,068	1,186	1,300
- New	199	224	232	227
- Dead	24	65	83	35
- Patients who change treatment/cure/non-follow-up	105	41	35	26
Total	25,876	33,672	40,403	45,629

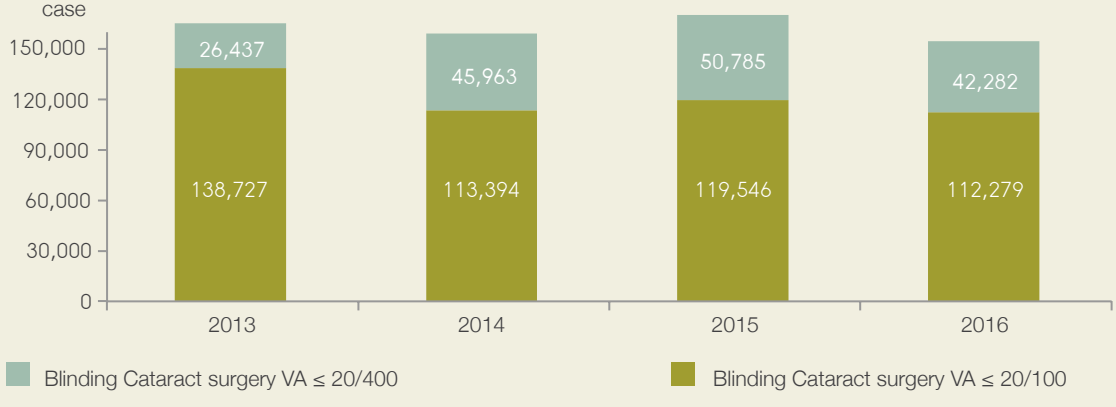
Source: *Chronic kidney disease management data, NHSO (September 2016)*

Note:
1) *Patients may change RRT method in accordance with their medical indications*
2) *The number of patients accessing RRT services does not include the number of dead patients.*
3) *Hemodialysis Hemodialysis (HD) is a hemodialysis service in patients with end-stage renal disease that meets the criteria set by the fund. Hemodialysis Red Blood Cell (EPO) and Management Cost*
4) *HD self pay is the only hemodialysis (EPO) blood donation service in the last decade.*

6) Health services for Cataract surgery

In FY 2016, UCS patients underwent cataract surgery 154,561 cases or 137.75% (target 112,200 cases), 27.36% (42,282 cases). Blinding Cataract surgery (eye level VA worse or equal to 20/400) (Figure 30)

Figure 30 Cataract Surgery classified by vision FY 2013 – 2016



Source:
1) *FY 2013-2014 data analyzed by the supportive programs for chronic and specific diseases.*
2) *FY 2015-2016 from the M & E for Payment (H0401) Report. Information and Evaluation Center for Healthcare Information as of September 30, 2016, processed as of December 14, 2016.*

7) Psychiatric services in the community.

In the FY2016, NHSO was given an additional budget of THB 49.80 million to ensure that chronic psychiatric patients, such as those who suffer from schizophrenia, in the community are monitored and given continuous care, a better quality of life and can return to normal life in society. Services are operated by a hospital network consisting of psychiatric hospitals. These primary care units in the community have provided care for 8,300 chronic psychiatric patients.

8) Health services for dependent elderly people.

In FY 2016, national health insurance system spent THB600 million on health care for the dependent elderly. The target was 100,000 people found by 1752 local administrative were evaluated by family doctors, using the Barthel ADL index, who developed and provided individualized care plans. The 80,826 elderly dependents in 64,660 households, of which 16,166 were bedridden were cared for by 889 primary care units.

9) Health Promotion and Disease Prevention

The Health promotion and disease prevention policy are important strategies of the UHC that helps curtail illness from preventable diseases and prolongs quality of life through healthier life choices. The importance of this strategy, which covers both the healthy and the sick, lead the National Health Security board to increase its budget for health promotion and disease prevention from THB175.00 per person in FY 2003 to 398.60 baht per person in FY 2016. This is an increase of 2.28 times in 14 years (Table 9).

Table 9 Percentage of Health Promotion and Disease Prevention Classified by age group FY 2015-2016

No.	Indicators	Outcomes(%)	
		2015	2016
1. Maternal care			
1.1	Rate of pregnancies attended the first visit of ANC within the first 12 weeks. [1] (60% target)	57.10	53.24
1.2	Rate of pregnancies attended at least 5 times for antenatal care during pregnancy2[1] (60% target)	51.10	47.31
1.3	Percentage of oral health examination of pregnant women [2]	-	77.00
1.4	Percentage of women after childbirth and taken care of 3 times. [1] (65% target)	-	53.73
1.5	Primary screening for Thalassemia in pregnant women [2]	92.97	95.00
1.6	Maternal mortality rate (target no more than 15%)	27.50	26.63
	Maternal mortality rate UCS Rights [2]	28.07	31.14
1.7	The incidence of hypoxia of baby during labor. UCS Rights [2]	26.51	25.66
1.8	Percentage of low birth weight (<2,500 grams) in UCS Rights [2]	10.27	10.55
1.9	Mortality rate of infants per 1,000 live births UCS Rights [2]	6.92	6.46
1.10	Birth delivery rate of teenage pregnancy, age 15-19 years, UCS (per 1000 girls aged 15-19 years) [1] (42% target)	43.11	41.75
1.11	Birth delivery rate of teenage pregnancy, age 15-19 years, UCS (per 1000 girls aged 15-19 years) UCS Rights [2]	43.44	41.03

No.	Indicators	Outcomes(%)	
		2015	2016
2. Child health			
2.1	Fundamental Vaccinations 4		
	- BCG (newborn)	100.00	100.00
	- MMR1 (9-12 months)	98.70	98.70
	- DTP3/OPV3 (6 months)	99.40	99.40
	- HBV3 (6 months)	99.40	99.40
	- DTP4/OPV4 (18 months)	97.80	97.80
	- JE2 (12-18 months)	96.10	96.10
	- JE3 (2 years)	91.90	91.90
	- MMR2 (4-6 years)	93.80	93.80
	- DT5 (11-12 years)	96.20	96.20
2.2	Rate of confirmation in thyroid hormone deficiency [4]	85.96	89.00
2.3	Children age 0-5 years grow properly [1] (80% target)	81.50	91.94
2.4	Weighing and height measurement in early childhood (6-12 years)[2]	-	57.35
2.5	Students with weight issues [1] (10% target)	-	12.92
3. Workforces and elderly care			
3.1	CA cervix screening rate at least once within 5 years, women aged 30-60 years old [5]	69.00	69.50
3.2	Depression screening rate 2		
	• Aged 30-59 years old	55.51	34.00
	• Aged 60 years or older	84.08	60.00
3.3	DM screening rate 2		
	• Aged 30-59 years old	81.71	64.70
	• Aged 60 years or older	74.92	81.60
3.4	Hypertension screening rate 2		
	• Aged 30-59 years old	82.90	78.90
	• Aged 60 years or older	77.85	90.40
3.5	Denture service in elderly group aged 60 years and older 6[6] (2015 targets: 35,000 people in 2016: 33,390 people)	101.19	99.52
3.6	Seasonal influenza vaccines in risk groups[2] (2015 targets: 2,831,998 people in 2016: 3,154,507 people)	78.47	75.12

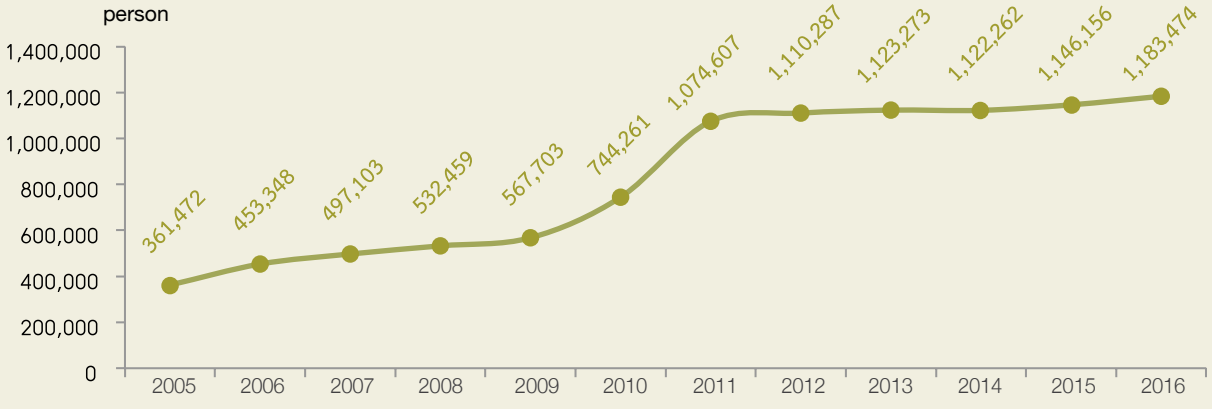
Source: *1) Health statistics, Bureau of policy and strategy, Ministry of Public Health, September 2016*
2) National Health Security Office, September 30, 2016.
3) National Immunization Program, Thailand 2013.
4) Department of Medical Sciences, September 30, 2016.
5) Cervix Cancer screening report, National Cancer Institute, 2016, http://122.155.167.188/December, 2016
6) Denture service report 2016, http://nakhonsawan.nhso.go.th/denture/denture1.php, September 30, 2016.

10) Medical Rehabilitation Services

The accumulative number of disabled people registered to the UCS increased from 361,472 cases in FY2005 to 1,183,474 in FY2016 (Figure 31). Statistics for disabled people classified by types of disability (Figure 32) shows that most have physical disabilities (41.12%), deaf and hard of hearing (17.87%) and with intellectual disabilities (14.81%) There were 32,997 of 34,670 people categorized as handicapped (Table 10).

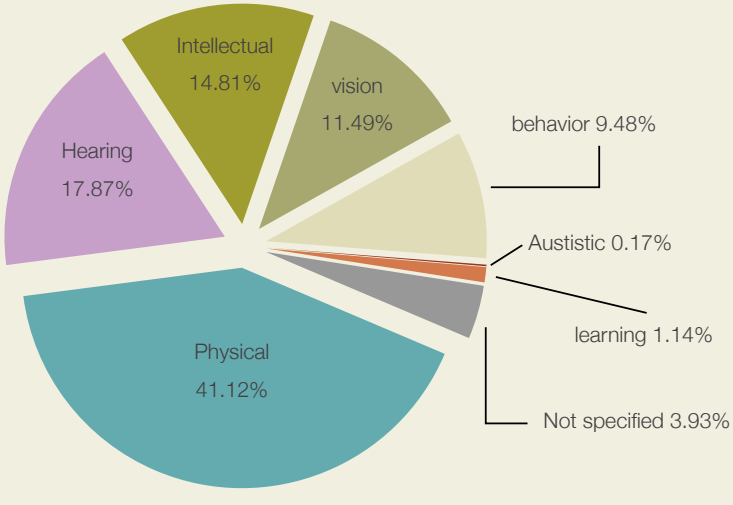
The demand for rehabilitation services has increased steadily. Below they are classified by type of service recipient (disabled, elderly, patients who need rehabilitation) (Table 11) and types of disability services (physical therapy, psychotherapy, behavioral therapy, etc.) (Table 12)

Figure 31 Disabled people registered to UCS FY 2005 – 2016



Source: Disability Access Information and Rehabilitation Services as of September 30, 2016, as analyzed by the Office of Community Health Service Support, as of December 2016

Figure 32 Disabled people registered to the UCS classified by types of disability FY 2016



Source: Claim data for rehabilitation services and instruments, NHSO, December 2016.
Note: A disabled person can have more than one type of disability.

Table 10 Access to assistive devices Classified by equipment received. FY 2014-2016

Aids for the disabled	2014		2015		2016	
	cases	Pieces	cases	Pieces	cases	Pieces
Physical Disabilities; artificial limb	13,091	15,123	8,037	8,102	8,087	8,281
Hearing impaired; hearing aid	7,774	8,165	5,806	6,096	8,824	9,167
Visual Impairment; Stick for the blind	1,352	1,352	856	856	670	670
Other aids	17,880	30,842	14,169	15,076	15,416	16,552
Total	**40,097**	**55,482**	**28,868**	**30,130**	**32,997**	**34,670**

Source: Disability Access Information and Rehabilitation Services as of September 30, 2016, as analyzed by the Office of Community Health Service Support, the NHSO as of December 2016.

Table 11 Rehabilitation Services Classified by type of service. FY 2014-2016

Type of service	2014		2015		2016	
	People	Times	People	Times	People	Times
Disabled	189,017	656,900	232,827	649,699	264,008	764,438
Elderly people	179,762	614,438	238,090	679,319	332,635	982,114
Patients need to be rehabilitated	227,946	764,920	317,210	926,667	424,117	1,234,396
Disabled people with Paralysis	-	-	-	-	8,301	40,043
Total	**596,725**	**2,036,258**	**788,127**	**2,255,685**	**1,029,061**	**3,020,991**

Source Disability Access Information and Rehabilitation Services as of September 30, 2016, as analyzed by the Office of Community Health Service Support, the NHSO as of December 2016

Table 12 Rehabilitation Services Classified by Type of Rehabilitation FY 2014-2016

Type of service	2014		2015		2016	
	People	Times	People	Times	People	Times
Physical Therapy	381,810	1,391,837	494,632	1,586,250	625,727	2,070,430
Psychotherapy	95,326	254,667	153,400	302,216	213,739	442,868
Behavior Therapy	39,010	127,952	47,710	109,972	55,619	125,393
Occupational Therapy	36,717	153,484	41,087	154,905	49,929	187,192
Hearing Rehabilitation	12,396	20,994	14,057	19,040	21,015	27,968
Early Intervention	15,398	47,118	17,608	40,054	27,293	69,267
Visual Rehabilitation	7,841	14,757	6,704	8,410	13,658	20,227
Assessment of Speech Problems	7,307	24,178	10,106	31,952	10,914	34,594
Phebol Block	485	835	387	450	467	610
Total	**596,290**	**2,035,822**	**785,691**	**2,253,249**	**1,018,361**	**2,978,549**

Source: Disability Access Information and Rehabilitation Services as of September 30, 2016, as analyzed by the Office of Community Health Service Support, the NHSO as of December 2016.

11) Thai Traditional Medicine Services

Alongside the use of modern medicine, the NHSO has also continued to promote and support expanding Thai Traditional Medicine (TTM) services; allowing people an alternative medical option. During FY 2016, Thai Traditional Medicine was used by 7,080,709 persons/12,330,479 times (Table 13).

Table 13 Thai Traditional Medicine FY 2012-2016

FY	2012		2013		2014		2015		2016	
	No. People	No. Times	No. People	No. Times	No. People	No. Times	No. People	No. Times	No. People	No. Times
1. Traditional Thai Medicine (Herbal massage)	1,282,170	5,248,946	1,649,820	4,017,170	1,857,430	4,648,944	1,800,551	4,477,501	1,713,769	4,217,406
2. Maternity rehabilitation services after childbirth	15,982	53,814	26,725	93,335	35,612	134,100	35,668	132,161	35,855	133,594
3. Herbal Medicine Service	2,882,338	4,124,220	4,926,678	7,509,526	4,929,835	7,517,170	6,258,561	9,950,144	5,331,085	7,979,479
- In the main national medicine account	1,452,759	2,210,164	2,587,407	4,161,154	2,590,896	4,169,217	3,618,412	6,089,216	3,067,295	4,826,880
- Excludes herbal medicine. National Primary Drug Offices	1,429,579	1,914,056	2,339,271	3,348,372	2,338,939	3,347,953	2,640,149	3,860,928	2,263,790	3,152,599
Included Services Of all Thai Traditional Medical	4,180,490	9,426,980	6,603,223	11,620,031	6,822,877	12,300,214	8,094,780	14,559,806	7,080,709	12,330,479
All Thai Traditional Medical (Excludes herbal medicine. National Primary Drug Offices)	2,750,911	7,512,924	4,263,952	8,271,659	4,483,938	8,952,261	5,454,631	10,698,878	4,816,919	9,177,880

Source: 1) FY 2012-2014 Information from the OP/PP individual data, e-claim analysis by the Office of Primary Care Services
2) FY 2015-2016 Information from Fund Management Support Report (M & E for Payment: H0401), Information and evaluation of health outcomes. September 30, 2016. Processed as of December 14, 2016
Note: Thai Traditional Medical Services Only in the NHSO area 1-12 (excluding area 13)

12) Pharmaceuticals and Medical Instruments

The NHSO in collaboration with the Food and Drug Administration (FDA) of the MoPH has continued to promote system development for claims and administration, as well as drug usages in order to improve accessibility to the necessary high cost drugs. In FY2015, there were two groups of drugs separately managed to promote accessibility, i.e. essential, high-cost drugs category of the national list of essential medicines (NLEM)), and orphan drugs and antidotes.

1. In FY2016, there were 17 items of drugs under the high-cost category list. Conditions needed in prescribing these drugs including specification of patients, authorized doctors and developed hospitals . The number of new patients accessed to the drugs in the high-cost category had continually increased since FY2012, (Table 14).

2. Orphan drugs and Antidotes To solve the whole system orphan drugs since the drug supply, distribution of drugs to the reserve, and distribution of drugs throughout the country; the drugs were managed via the VMI system of the Pharmaceutical Organization. In FY 2016, there was one additional benefit, Diphenhydramine inj. (Table 15).

Since the year 2010, the government has been able to save THB35,863.35 million on drug costs (Table 16).

Table 14 The number of new patients accessing high-cost drugs from the national list of essential medicines FY 2012-2016

List	2012	2013	2014	2015	2016
1. Letrozole	1,330	1,382	2,282	2,452	3,042
2. Docetaxel	1,439	1,447	2,892	1,684	2,768
3. IVIG	1,059	1,318	1,307	1,267	1,513
4. Botulinum toxin type A	690	677	690	750	1,115
5. Leuprorelin	200	204	200	242	265
6. Liposomal Amphothericin B	134	133	198	212	190
7. Verteporfin	22	61	-	-	-
8. Bevacizumab	-	2,694	3,908	4,535	6,979
9. Voriconazole	-	216	470	444	374
10. Thyrotropin alpha	-	21	25	67	77
11. Peginterferon	-	559	771	1,869	1,817
12. ATG	-	56	100	105	137
13. Linezolid	-	4	16	17	13
14. Imiglucerase	-	5	4	5	6
15. Trastuzumab	-	-	-	352	791
16. Nilotinib	-	-	-	519	169
17. Dasatinib	-	-	-	42	73
Total	**4,874**	**8,777**	**12,863**	**14,562**	**19,329**

Source: *Bureau of Medicines Medical Supplies and Vaccines Management, NHSO*
Note: *1) Item 8 – 14 were included in the benefit package since FY2013*
2) Item 15 – 17 were included in the benefit package since FY2015
3) Only new E(2) patients are admitted

Table 15 Number of patients treated with orphan drugs and antidotes FY 2013-2016

List	2013	2014	2015	2016
1. Sodium nitrite inj.	32	7	7	17
2. Sodium thiosulfate 25% inj.	32	16	8	33
3. Succimer cap. (DMSA)	15	1	1	6
4. Methylene blue inj.	59	14	31	69
5. Glucagon kit	3	2	0	0
6. Dimercaprol inj. (British Anti-Lewisite; BAL)	3	11	5	4
7. Digoxin-specific antibody fragments	2	1	1	4
8. Sodium Calcium edetate (Calcium disodium edetate) (Ca Na2 EDTA)	11	15	7	18
9. Botulinium antitoxin	3	5	2	0
10. Diptheria antitoxin	240	105	51	94
11. Esmolol inj.	18	21	25	42
12. Polyvalent antivenum for hematotoxin)	92	509	691	1,041
13. Polyvalent antivenum for neurotoxin)	31	98	159	208
14. Green Pit Viper antivenin	355	1,754	1,952	2,227
15. Malayan Pit Viper antivenin	337	2,239	2,007	2,498
16. Russell's Viper antivenin	13	156	165	165
17. Cobra antivenin	126	521	577	672
18. Malayan Krait antivenin	9	30	19	13
19. Diphenhydramine inj.	-	-	-	30
Total	**1,381**	**5,505**	**5,708**	**7,141**

Source: Bureau of Medicines Medical Supplies and Vaccines Management, NHSO
September 30, 2016

Table 16 Government budget saved from central management on specific drugs FY 2010-2016

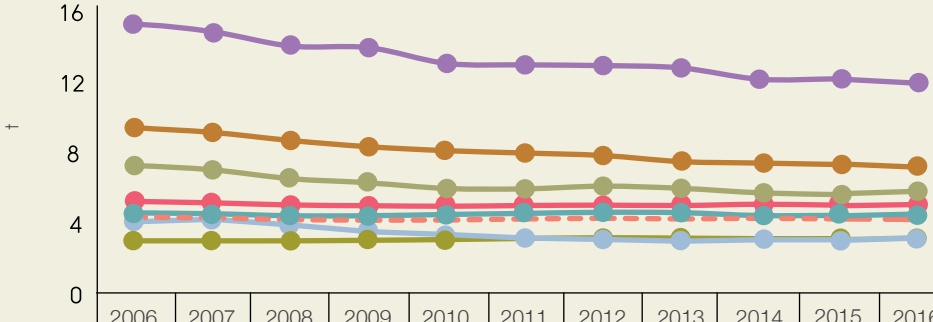
FY	Value of saved budget					Total
	ARV Non CL[1]	ARV CL[2]	E (2) and Clopidogrel[3]	Influenza vaccines[4]	Serums[5]	
2010	311,768,680	866,282,286	108,014,711	-	-	1,286,065,677
2011	625,511,700	1,732,833,511	1,738,476,361	-	-	4,096,821,572
2012	1,032,528,666	2,318,995,360	1,172,558,860	65,668,964	-	4,589,751,850
2013	1,531,090,725	2,377,051,300	1,429,000,342	95,052,500	55,368,760	5,487,563,627
2014	1,827,692,222	2,870,030,790	2,382,318,247	105,750,000	23,518,810	7,209,310,069
2015	1,562,743,030	3,748,425,392	588,033,199	33,236,250	39,167,500	5,971,605,371
2016	1,680,223,293	2,655,555,463	2,886,455,372	-	-	7,222,234,128

Source: Bureau of Medicines and Medical Supplies Management, NHSO
Note: 1.) calculated based on budget spent in FY2009
2.) calculated based on drug price before compulsory licensing (CL) announced by the government
3.) calculated based on drug price before having vertical program on E(2) category list and before CL on Clopidogrel
4.) calculated based on budget spent in FY2012
5.) calculated based on value of serums that hospitals paid to the Queen Saovabha Memorial Institute (producer of serums under the Thai Red Cross Society) and the Government Pharmaceutical Office (GPO) before having vertical program on serums under the UCS

1.1.3 Health service efficiency

The average length of stay (LOS) is one of the indicators reflecting effectiveness of IP services, as a longer LOS consumes more resources. The average LOS for patients under the UCS during FY2006-2016 fluctuated between 4.07 and 4.23 days. Classifying by types and affiliation of hospitals, in FY2016, hospitals with high average LOS were other government hospitals (not under the office of permanent secretary/OPS) in Ministry of Public Health (MoPH) with 11.08 days (decreasing from 15 days in 2006), university hospitals with 6.95 days, other government hospitals outside MOPH with 3.08 days, and regional hospitals with 3.01 days per admission, as shown in Figure 33.

Figure 33 Average length of stay (LOS) classified by types and affiliations of hospitals, FY 2006-2016



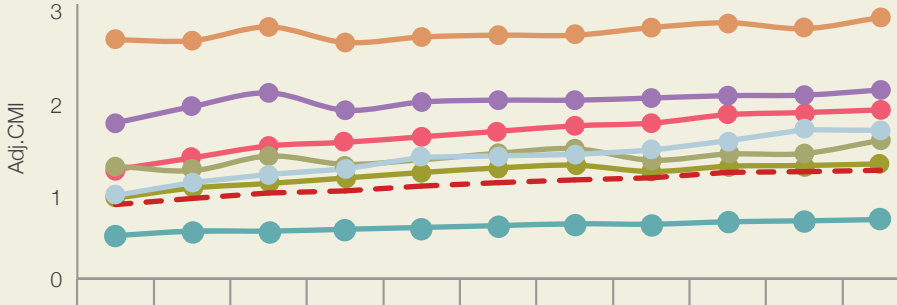
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gov. Regional hosp.	5.12	5.04	4.92	4.88	4.85	4.89	4.91	4.89	4.96	4.93	4.83
Gov. Local hosp.	4.48	4.43	4.32	4.32	4.39	4.45	4.51	4.49	4.33	4.33	4.27
Gov. Community hosp.	2.92	2.92	2.92	2.95	2.99	3.05	3.09	3.07	3.04	3.07	3.01
Other Gov. Hosp. in MoPH	15.00	14.59	13.79	13.70	12.82	12.74	12.70	12.57	11.94	12.01	11.08
Gov. hosp. outside MoPH	7.12	6.88	6.39	6.16	5.84	5.82	5.97	5.85	5.60	5.51	6.09
University hosp.	9.24	8.97	8.52	8.17	7.95	7.82	7.68	7.34	7.26	7.19	6.95
Private hospital	3.98	4.13	3.81	3.43	3.27	3.07	2.99	2.89	2.98	2.98	3.08
Total	4.23	4.19	4.11	4.07	4.09	4.15	4.17	4.14	4.17	4.17	4.16

Source: In-patient data, NHSO, January 2017.

Case Mix Index (CMI) is an indicator for measuring severity of diseases calculated from Relative Weight (RW) or Adjusted Relative Weight (AdjRW) of all IP cases within a specific period of time to reflect effectiveness of service system. Admission may be more necessary in patients with higher RW or AdjRW.

Calculated with DRG application version 5, Adj.CMI of IP service under the UCS had increased from 0.81 in 2006 to 1.24 in 2016. This increasing pattern would still be true if classified by types and affiliation of hospitals, as shown in Figure 34.

Figure 34 Adjusted CMI of in-patient services under the UCS, FY 2006 -2016



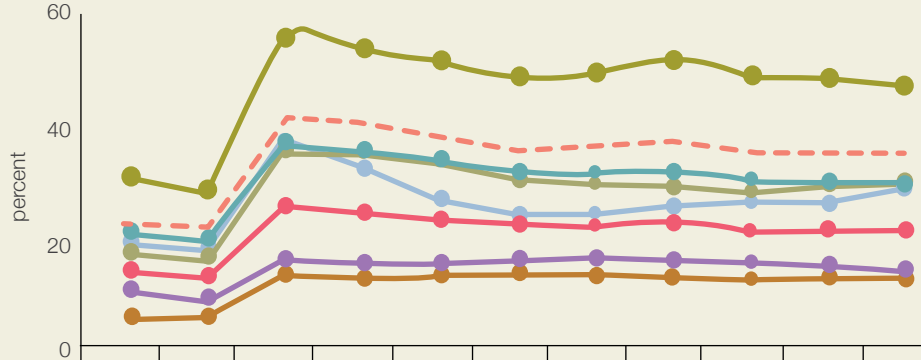
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gov. Regional hosp.	1.19	1.32	1.45	1.49	1.55	1.61	1.67	1.70	1.79	1.81	1.91
Gov. Local hosp.	0.88	0.99	1.04	1.10	1.16	1.21	1.24	1.17	1.23	1.24	1.27
Gov. Community hosp.	0.47	0.52	0.52	0.54	0.56	0.58	0.60	0.60	0.62	0.63	0.64
Other Gov. Hosp. in MoPH	1.70	1.88	2.03	1.84	1.93	1.95	1.95	1.97	2.00	2.01	2.14
Gov. hosp. outside MoPH	1.23	1.18	1.34	1.25	1.30	1.37	1.42	1.29	1.36	1.37	1.45
University hosp.	2.61	2.60	2.75	2.58	2.64	2.66	2.66	2.74	2.80	2.73	2.88
Private hospital	0.91	1.05	1.14	1.20	1.33	1.34	1.36	1.41	1.51	1.63	1.60
Total	0.81	0.88	0.94	0.96	1.01	1.05	1.08	1.10	1.16	1.17	1.24

Source: In-patient data, NHSO, January 2017

Relative weight (RW) refers to the average resources required for DRG treatment versus the average cost of patient treatment. For patients with a low relative weight (RW), the severity of the disease and the need for hospitalization is low.

In cases of admission having less severity with a Relative Weight (RW) less than 0.5 in FY2016, most cases (49.33%) were admitted at district hospitals, an increase from 31.27% of cases in 2006. Next highest were other government hospitals not under the MOPH (30.66%), and general hospitals (30.38%) (Figure 35).

Figure 35 Percentage of UCS admissions having RW<0.5 classified by types and affiliation of hospitals FY 2006-2016

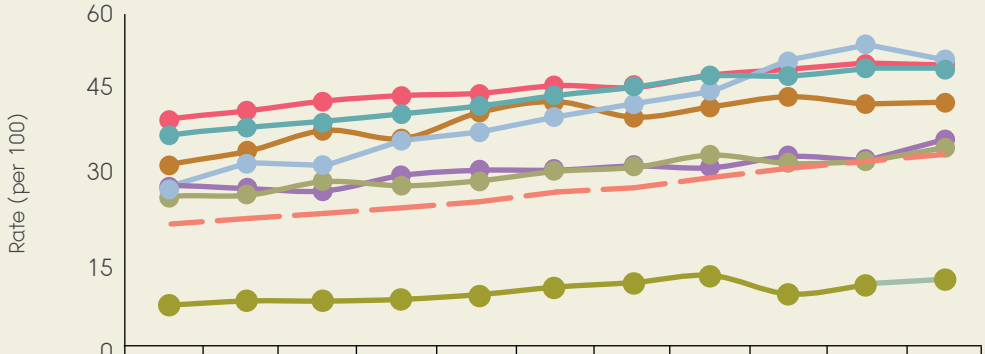


	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gov. Regional hosp.	14.45	13.30	26.49	25.33	24.83	23.46	23.00	23.27	21.76	21.87	21.93
Gov. Local hosp.	20.31	19.44	37.83	36.46	34.86	32.85	32.07	32.65	30.75	30.54	30.38
Gov. Community hosp.	31.27	30.00	57.98	55.94	53.70	50.83	51.56	54.21	51.23	50.25	49.33
Other Gov. Hosp. in MoPH	10.43	8.90	16.22	16.04	16.38	16.26	16.62	16.25	16.00	14.68	14.30
Gov. hosp. outside MoPH	17.16	17.62	36.57	35.86	35.02	32.16	30.33	29.84	28.76	30.33	30.66
University hosp.	5.67	6.09	13.64	13.37	14.16	13.98	13.69	12.60	12.65	13.09	12.59
Private hospital	19.62	18.13	38.44	33.64	27.56	24.89	24.73	26.84	27.05	27.01	29.34
Total	23.45	22.40	43.51	41.94	40.09	37.67	37.63	39.01	36.71	36.37	36.26

Source: *Inpatient Information (IP-Research) FY 2006-2016 Information Security Administration, January 2017, NHSO.*
Note: *1) Exclude Z380 code (well-being)*
2) In 2008, DRG changed from Ver. 3 to 4; in 2012, it was changed to Ver. 5

Cesarean section requires more resources and the costs are higher than natural childbirth. The percentage of cesarean sections, under the UCS , increased from 20.20% in FY2006 to 30.95% in FY2016; this pattern was also over all classifications, types and affiliation of hospitals, as shown in Figure 36. This shows that elective cesarean section delivery exists.

Figure 36 Cesarean sections (UCS) classified by hospital types FY 2006-2016



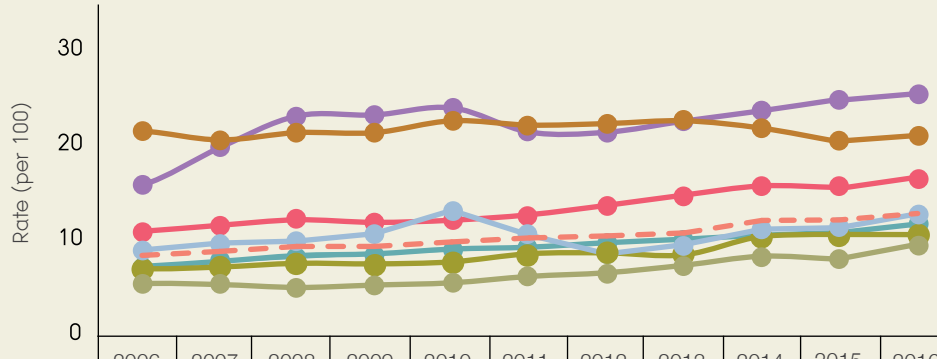
	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gov. Regional hosp.	36.89	38.20	39.76	40.62	40.98	42.20	41.91	43.88	44.80	45.89	45.92
Gov. Local hosp.	34.30	35.56	36.55	37.72	38.97	40.64	41.96	43.72	43.73	44.89	45.27
Gov. Community hosp.	7.29	7.94	7.92	8.20	8.97	10.16	10.88	11.99	9.05	11.06	11.76
Other Gov. Hosp. in MoPH	26.28	25.81	25.46	27.92	28.73	28.75	29.41	29.13	30.92	30.24	33.39
Gov. hosp. outside MoPH	24.56	24.77	26.94	26.27	27.07	28.57	29.19	31.14	29.81	30.06	32.02
University hosp.	29.65	31.77	35.09	33.77	37.95	39.63	37.17	38.82	40.43	39.11	39.22
Private hospital	26.22	29.95	29.52	33.52	34.80	37.25	39.36	41.24	46.28	48.68	46.11
Total	20.20	21.06	21.90	22.80	23.70	25.32	25.95	27.58	29.05	30.54	30.95

Source: In-patient data, NHSO, January 2017

5.2.4 Quality and service outcome

Re-admission within 28 days of a previous discharge is another indicator reflecting quality of IP care or effectiveness of the last treatment. In FY2016, the average re-admission rate was 15.48%. The highest re-admission rates were in hospitals outside the MoPH with 25.09%, next highest were university hospitals and regional hospitals with 21.75% and 18.38 respectively. (Figure 37)

Figure 37 Re-admission within 28 days for patients under the UCS classified by type and affiliation of hospitals, FY 2006-2016



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Gov. Regional hosp.	14.28	14.73	15.14	14.95	15.11	15.52	16.22	16.99	17.67	17.55	18.38
Gov. Local hosp.	11.57	11.94	12.37	12.50	12.85	12.99	13.32	13.58	13.87	14.06	14.67
Gov. Community hosp.	11.41	11.52	11.79	11.75	11.90	12.50	12.56	12.42	13.78	13.83	13.93
Other Gov. Hosp. in MoPH	17.85	20.68	23.09	23.17	23.71	21.87	21.86	22.71	23.49	24.36	25.09
Gov. hosp. outside MoPH	10.22	10.16	9.95	10.12	10.29	10.76	11.03	11.58	12.24	12.02	12.96
University hosp.	21.96	21.33	21.85	21.85	22.70	22.39	22.50	22.70	22.17	21.19	21.75
Private hospital	12.83	13.36	13.49	14.03	15.80	13.94	12.54	13.22	14.39	14.49	15.55
Total	12.42	12.70	13.10	13.07	13.42	13.70	13.86	14.08	15.01	15.04	15.48

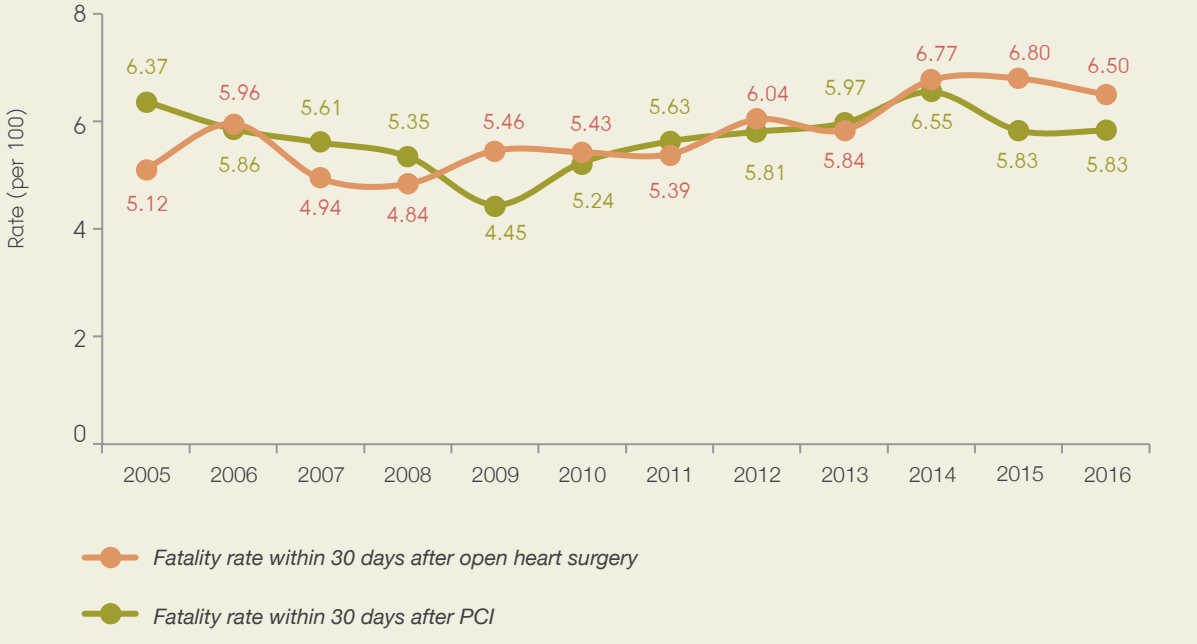
Source: *In-patient data, NHSO, January 2016*

Note: *1) In-patient data where discharge type "improved" on last admission was selected.*

2) Planned or unplanned admissions cannot be classified. Therefore, the second admission may be planned for follow-up treatment.

Adverse effects that occur from errors during treatment, and/or delays in diagnosis or treatment can evaluate the quality of care. Fatality rate within 30 days of treatment is one of the indicators that reflect quality of care in a health system. Figure 38 shows fatality rates within 30 days of their last admission in heart disease patients receiving open heart surgery or PCI procedures during FY2006-2016. Fatality rates within 30 days of their last admission in both treatments remained relatively stable which reflects service quality. However, there are other contributing factors such as delays, behaviors and "disease-related" complications.

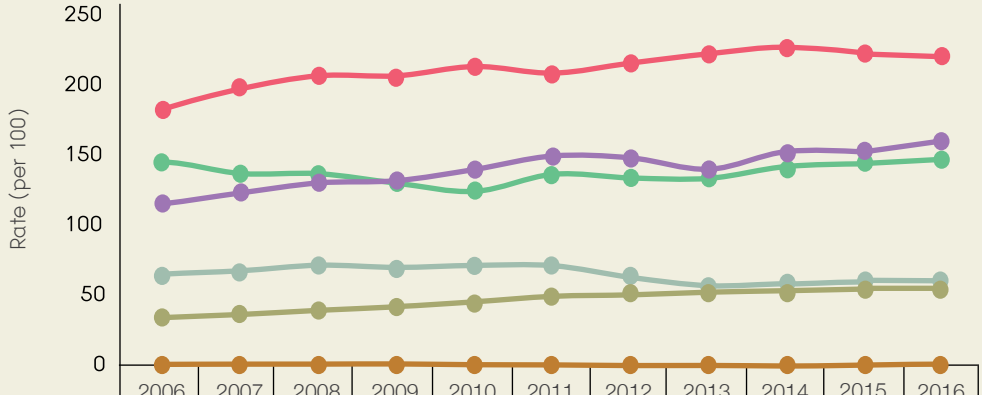
Figure 38 Fatality rates within 30 days last admission in patients receiving open heart surgery or PCI procedures, FY 2006-2016



Source: 1) *NHSO Health Service Indicator (H0301) , 30 September 2016 Bureau of Insurance Information Management 30 November 2016, Analysis by Health Information and Evaluation Office, NHSO.*
2) *Inpatient Information (IP-Research) FY 2006-2016 . January 2017, Analysis by the Office of Information and Evaluation Health Results NHSO.*

Admission rate of patients with ACSC (Ambulatory care sensitivity condition: ACSC) is one of the indicators that reflect efficiency and effectiveness of services. Providers at OPD should control symptoms of chronic diseases to prevent admissions from complications. The diseases under the ACSC group include DM, hypertension, asthma, chronic obstructive pulmonary diseases (COPD), epilepsy, and heart failure with pulmonary emphysema condition. By analyzing data of the UCS from FY2006 to FY2016, it has been found that admission rates of DM, COPD and epilepsy tended to increase, but the rates of asthma and heart failure with pulmonary emphysema conditions tended to decrease, and the rate of HT tended to be stable (Figure 39).

Figure 39 UCS Admission rates of chronic disease ACSC FY 2006- 2016

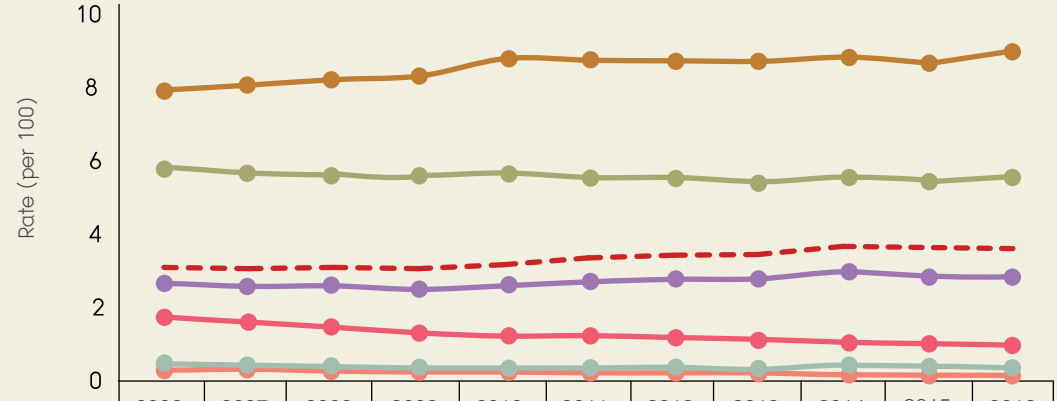


	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
DM	178.56	192.47	201.27	201.24	207.51	203.07	209.88	216.13	220.45	215.82	213.98
HT	141.02	133.54	133.39	127.18	121.84	133.03	130.60	130.38	138.16	140.94	142.16
Asthma	63.88	66.07	69.63	68.24	69.52	69.33	61.79	56.49	57.67	56.79	58.54
COPD	113.20	120.55	127.26	128.79	136.33	145.37	144.05	136.43	148.38	148.75	155.59
Epilepsy	34.44	36.48	39.21	41.52	44.79	48.37	49.32	51.08	52.05	53.80	54.37
Heart failure with pneumonia	1.17	1.23	1.24	1.28	1.08	1.03	0.85	0.88	0.73	0.60	0.56

Source: 1) *NHSO Health Service Indicator: H0301) September 2016.*
2) *Inpatient Information (IP-research) FY 2006-2016 Bureau of Information and Insurance , January 2017, analyzed by the Office of Information and Evaluation of Health NHSO.*

For overall outcome of IP services, fatality rates in hospitals are not only an indicator of disease severity, but also one that reflects efficiency, quality of care and disease monitoring in the catchment area. Figure 40 shows fatality rates in hospitals of patients under the UCS during FY2006-2016. This rate increased from 2.79% in FY2006 to 3.60% in FY2016. However, in FY2016, most of the deaths were the elderly aged 70 years and older (8.59%) and the elderly aged 60-69 years (5.36%)

Figure 40 Fatality rate of patients under the UCS classified by age groups, FY 2006-2016



	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
< 1 year	1.55	1.44	1.33	1.21	1.14	1.15	1.11	1.07	1.01	0.97	0.91
1 – 4 year	0.28	0.29	0.27	0.26	0.26	0.25	0.25	0.25	0.23	0.23	0.21
5- 14 year	0.42	0.40	0.38	0.36	0.36	0.36	0.37	0.34	0.40	0.32	0.31
15 – 59 year	2.41	2.35	2.36	2.29	2.36	2.44	2.49	2.50	2.64	2.59	2.61
60 – 69 year	5.48	5.37	5.33	5.32	5.37	5.28	5.28	5.20	5.29	5.21	5.36
More than 70 year	7.42	7.53	7.65	7.73	8.11	8.07	8.06	8.05	8.14	8.10	8.39
Total	2.82	2.79	2.81	2.79	2.88	3.01	3.07	3.08	3.26	3.24	3.26

Source: *Inpatient Information (IP-research) FY 2006-2016 Bureau of Information and Insurance, January 2017, analyzed by the Office of Information and Evaluation of Health NHSO*

Note: *Patient fatality less than 1 year excluded Z380 (well-being))*

6. Consumers' Rights Protection and Stakeholder Participation

6.1 Promoting local community participation

To protect the consumer's rights regarding the use of and access to health services, the NHSO had opened various channels for inquiries, complaints, and coordination through hotlines (call 1330), letters, fax, e-mail, or direct contact. In the FY2016, there were 579,338 cases divided into

1) 560,293 inquiries, 526,092 items by consumers and 34,201 by service providers;

2) 4,405 complaints related to general management;

3) 11,035 complaints related to quality of care; and

4) 3,605 referral issues (Table 17)

Table 17 Number of inquiries or complaints related to management, quality of care, and referral issues serviced, FY 2012-2016

Service Type	2013	2014	2015	2016	2017
1. Inquiries (cases)	607,050	612,510	583,260	467,190	560,293
- from consumers	570,220	574,777	541,309	432,915	526,092
- from providers	36,830	37,733	41,951	34,275	34,201
2. Complaints related to general management (cases)	4,370	4,420	3,828	4,269	4,405
3. Complaints related to quality of care (cases)	6,514	6,616	11,029	14,025	11,035
4. Referral issues (persons)	4,980	3,653	3,090	3,117	3,605
Total	**622,914**	**627,199**	**601,207**	**488,601**	**579,338**

Source: Consumer rights protection data, NHSO, 30 September 2016

6.1.1 Inquiries

Inquiries from consumers

In the FY2016, the total number of inquiries was 526,092 of which 504,239 (95.85%) concerned UCS. There were 256,760 (50.92%) inquiries about their rights; 100,393 (19.91%) about registration and service unit selection; and 85,933 (17.04%) about how to access services (Table 18).

Table 18 Consumer inquiries classified by callers and issues, FY 2012-2016

Callers & Issues	2012	2013	2014	2015	2016
1. Consumers in UCS	559,946	557,690	512,490	410,140	504,239
1.1 Registration & choosing provider	141,399	136,596	94,798	85,267	100,393
1.2 Benefit package & accessing to it	93,426	117,989	114,362	89,808	85,933
1.3 Early payment for damage from health service in accordance with section 41 of the act	196	259	301	239	261
1.4 Health insurance status confirmation	264,993	244,245	244,111	179,920	256,760
1.5 Hospital information	19,156	19,106	15,793	14,790	16,471
1.6 Organization information	2,180	3,076	3,869	2,352	2,987
1.7 Emergency Medical Claim for All	3,579	7,359	10,321	6,535	11,368
1.8 Others (news, other organizations, follow-up cases, etc.)	35,017	29,060	28,935	31,229	30,066
2. Consumers in CSMBS	2,497	5,290	5,350	4,082	3,743
3. Consumers in SSS	7,777	11,285	12,175	14,440	10,622
4. Consumers in Local Administrative Organization Scheme (LAOS)	-	512	11,294	4,253	7,488
Total	**570,220**	**574,777**	**541,309**	**432,915**	**526,092**

Source: Consumer rights protection data, NHSO, 30 September 2016
Note: 1) NHSO Starts 3 Emergency Funds Policy April 1, 2012
2) NHSO Starts Local Social Policy October 1, 2014

Inquiries from providers

In FY2016, the total number of inquiries from providers was 34,201 of which 30,898 (90.34%) concerned UCS. Of these 9,895 (33.53%) concerned data verification; 11,243 (36.39%) cocnerned general inquiries such as relevant news, matters of other organizations; and 3,396 (12.93%) concerned registration and facility selection (Table 19).

Table 19 Inquiries from providers classified by schemes and issues FY 2012-2016

Schemes and Issues	2012	2013	2014	2015	2016
1. Providers in UCS	35,649	36,407	33,586	29,515	30,898
1.1 Registration & choosing provider	2,276	2,333	4,239	5,088	3,996
1.2 Benefit package	4,846	4,354	3,407	3,296	3,750
1.3 Receiving refund	1,074	491	637	665	736
1.4 Early payment for damage from health service in accordance with section 41 of the act	28	27	27	29	22
1.5 Early payment for damage from health service in accordance with section 18(4) of the act	21	22	79	18	38
1.6 Health insurance status confirmation	17,064	18,988	15,605	9,895	11,243
1.7 Hospital information	447	415	433	409	448
1.8 Organization information	436	444	651	482	523
1.9 Emergency Medical Claim for All	1,096	308	390	367	460
1.10 Others (news, other organizations, follow-up cases, etc.)	8,361	9,025	8,118	9,266	9,682
2. Providers in CSMBS	534	555	1,476	1,207	1,071
3. Providers in SSS	647	678	775	1,014	899
4. Providers in LAOS	-	93	6,114	2,539	1,333
Total	**36,830**	**37,733**	**41,951**	**34,275**	**34,201**

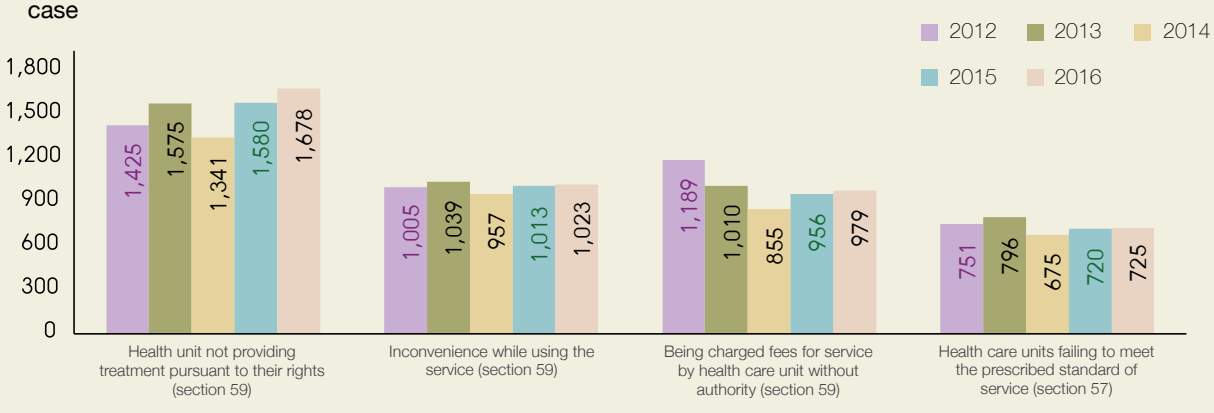
Source: *Consumer rights protection data, NHSO, 30 September 2016*
Note: *1) NHSO Starts 3 Emergency Funds Policy April 1, 2012*
2) NHSO Starts Local Social Policy October 1, 2014

6.1.2 Complaints services

Receiving and responding to complaints are mechanisms of consumer rights protection that provide channels for solving problems between consumers and providers and improving the system.

In the FY2016, the NHSO had received 4,405 complaints. Of these, 1,678 (38.09%) complaints were about "health unit not providing treatment pursuant to their rights" (section 59) 1,023 (23.22%) were about "inconvenience while using the service"; 979 (22.22%) were about "being charged fees for service by health care unit without authority"; and 725 (16.46%) were about "health care units failing to meet the prescribed standard of service" (section 57) (Figure 41). The number of complaints resolved was 3834, of which 3,062 (74.79%) were resolved within 25 working days (Table 20).

Figure 41 The number of complaints concerning quality of care classified by issues, FY 2012-2016



Source: Consumer rights protection data, NHSO, 30 September 2016

Table 20 Number and percentage of complaints resolved within 25 working days FY 2012-2016

Complaints	2012*	2013*	2014*	2015**	2016**
1. Total	4,370	4,420	3,828	4,269	4,405
2. Already been executed	4,173	4,133	3,346	3,585	3,834
2.1 Already been executed within 25 days	4,102	4,051	3,268	2,862	3,062
2.2 Being in the process more than 25 days	71	82	78	723	772
3. Complaint pending	197	287	482	684	571
3.1 The complaint is still pending in25 days	143	248	482	404	311
3.2 complaint pending in excess more than 25 days	54	39	0	280	260
4 Already been executed within 25 days	97.04	97.10	97.67	74.05	74.79

Source: *Consumer rights protection data, NHSO, 30 September 2016*

Note: *1) * Year 2011-2014 Percentage of amended complaints = Recipes (m 57, 59) Completed within 30 business days x 100/ (all complaints - pending complaints that are less than 30 business days)*

*2) ** Year 2015-2016 Percentage of complaints that have been corrected. Formula = Complaint (M 57, M 59) Completed within 25 working days x 100/(all complaints - pending complaints not yet 25 working days)*

6.1.3 Petition

In the FY2016, NHSO had received 11,035 petitions. Of these, 10,722 petitions (97.16%) concerned UCS; 8,053 petitions (75.11%) concerned consumer rights issues; 961 petitions (8.96%) concerned requests for assistance,; and 808 petitions (7.54%) concerned registration and service unit selection (Table 21).

Table 21 Service for complaints Classified by rights FY 2012-2016

Complaints	2012	2013	2014	2015	2016
1. UCS	5,963	6,012	10,100	13,408	10,722
1.1 registration and selecting service unit	737	779	767	1,340	808
1.2 having right status problem	3,330	3,373	7,343	8,474	8,053
1.3 asking for help	1,252	991	1,040	1,604	961
1.4 consult/recommend	351	504	464	834	371
1.5 being refused to use EMCO service	288	362	224	209	262
1.6 etc.	5	3	262	947	267
2. CSMBS	477	499	510	312	140
3. SSS	74	105	100	158	78
4. LAOs	-	-	319	147	95
Total	**6,514**	**6,616**	**11,029**	**14,025**	**11,035**

Source: Consumer rights protection data, NHSO, 30 September 2016
Note: 1) NHSO Starts 3 Emergency Funds Policy April 1, 2012
2) NHSO Starts Local Social Policy October 1, 2014

6.1.4 Patient Referral Service

In FY2016, the coordination center for referring accident & emergency cases had received 3,605 patient referral requests. Of these 3,340 (92.65%) were in UCS; 2,483 (74.34%) were from private hospitals outside EMCO; and 600 cases (17.96%) were from undercompetency service units. This center also coordinated referral patients in other schemes and patients without health insurance. Reasons for terminating some referral cases: patients were better; they want to go home; they died; and they changed their decision. (Table 22)

Table 22 Number of referrals classified by schemes & reasons, FY 2012-2016

Schemes & Reasons for referral	2012	2013	2014	2015	2016
1. Refer to UCS	4,538	3,255	2,832	2,891	3,340
1.1 being in private hospitals outside EMCO service	3,588	2,537	2,215	2,177	2,483
1.2 no bed	211	140	120	120	171
1.3 not enough competency	644	505	447	516	600
1.4 want to go back to contracting unit	95	73	50	78	86
2. Refer to CSMBS	297	263	184	144	199
3. Refer to SSS	80	64	34	51	34
4. Refer to LAOs	-	-	17	10	4
5. Etc.	65	71	23	21	28
Total	**4,980**	**3,653**	**3,090**	**3,117**	**3,605**

Source: *Consumer rights protection data, NHSO, 30 September 2016*
Note: *1) NHSO Starts 3 Emergency Funds Policy April 1, 2012*
2) NHSO Starts Local Social Policy October 1, 2014

6.1.5 Compensation and Healthcare service negligence.

Section 41of the National Health Security Act concerns the payment of preliminary aid in cases where a beneficiary is injured by medical treatment, provided by a service unit where no wrongdoer is identified, or where the wrongdoer is identified but the beneficiary has not received compensation within a reasonable period of time.

In FY2016, of the 1,069 complaints lodged, 885 (82.79%) people received compensation, totaling THB212.95 million. Of these cases, 457 (51.64%) were compensated an amount totaling THB162.34 million because of death or permanent disability; 310 (35.03%) were compensated THB 21.66 million for injury or continuing illness; and 118 (13.33%) were compensated THB25.86 million for loss of organ or partial disability (Table 23)

Table 23 **Consumers & providers and preliminary assistance due to their damages from health service FY 2012-2016**

Cases	2012		2013		2014		2015		2016	
	cases	THB	cases	THB	cases	THB	cases	THB	cases	THB
1 Lodging petition	951		1,182		1,112		1,045		1,069	
2 Receiving compensation	834		995		931		824		885	
2.1 death/complete disability	401	69,360,000	533	149,926,000	478	166,370,000	442	157,188,000	457	162,344,000
2.2 organ loss/partial disability	140	15,250,000	125	20,311,200	116	24,631,800	105	22,878,800	118	25,856,000
2.3 injury/continuing illness	293	11,254,000	337	17,936,100	337	23,875,000	277	20,061,500	310	21,658,500
3. Being in appeal	88	2,763,000	98	3,402,000	112	3,562,400	82	2,801,000	102	3,093,500
Total	**834**	**98,627,000**	**995**	**191,575,300**	**931**	**218,439,200**	**824**	**202,929,300**	**885**	**212,952,000**

Source: Consumer rights protection data, NHSO, September 30, 2016

6.2 Consumer Rights Protection

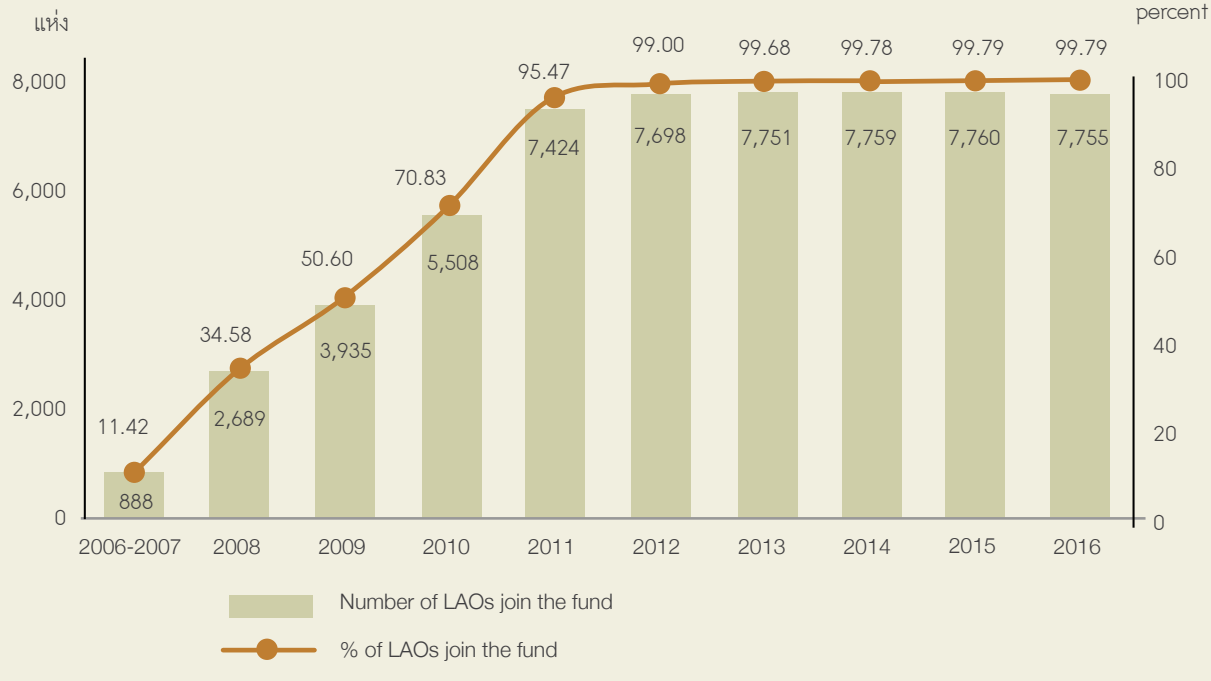
6.2.1 Promoting local community participation

Promoting local community participation is one of the key mechanisms, in accordance with Section 47 of the National Health Security Act, to respond to health needs of a local community by including local community in the decision making and co-funding of health-related programs. The number of Local Administrative Organizations/ LAOs (Sub district Administrative Organizations/ SAOs and Sub district Municipalities/ SMs) co-funding in community health security funds has increased from 888 sub districts (11.42%) in FY2006 to 7,755 sub districts or 99.79% of all local administrative organizations, as shown in figure 42. The community health security funds were set up to promote health related activities suitable for the health needs of each community. Consumers and related organizations in each of the communities were not only contributing financially to the community health security funds but also engaging in the related decision-making processes.

The budget for local health coverage is THB3,824 million (including interest) thatcame from three main sources: NHSO, Local Administrative Organizations, and others (such as interest, consumers and the community). THB2,575 million (67.34%), THB1,214 million (31.75%) and THB35 million (0.92%), respectively (Figure 43).

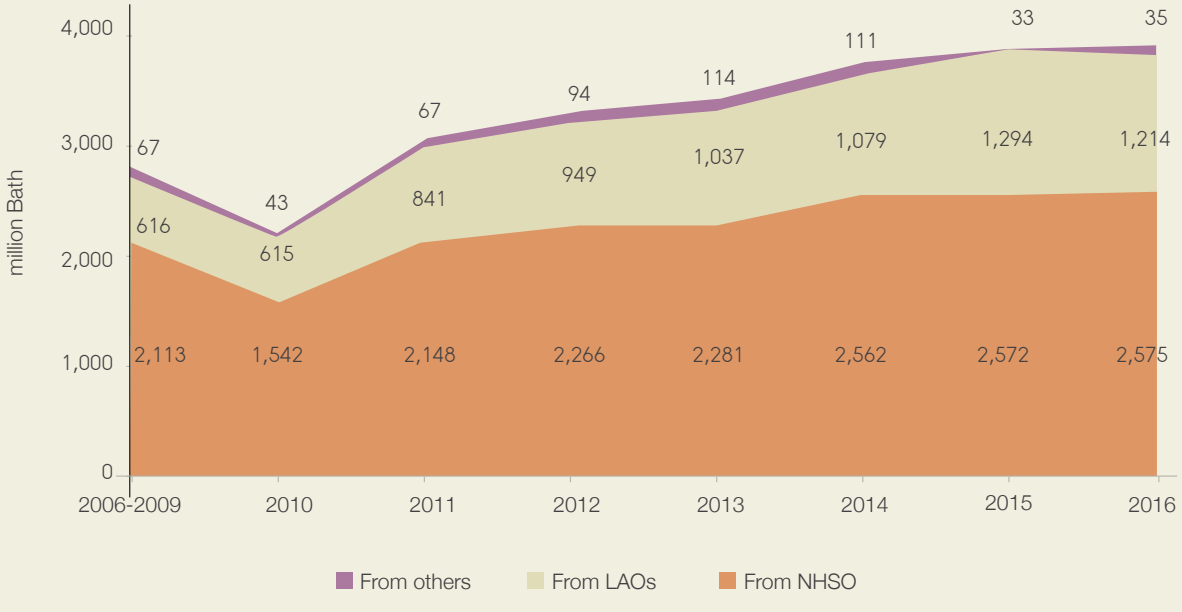
Classified by target groups, a budget of 32.96% was used for people most at risk. The budgets for the youth, the elderly, and the working age were 14.49%, 11.59% and 10.74%, respectively (Figure 44).

Figure 42 Number of local administrative organizations co-funding community health funds. FY 2006-2016



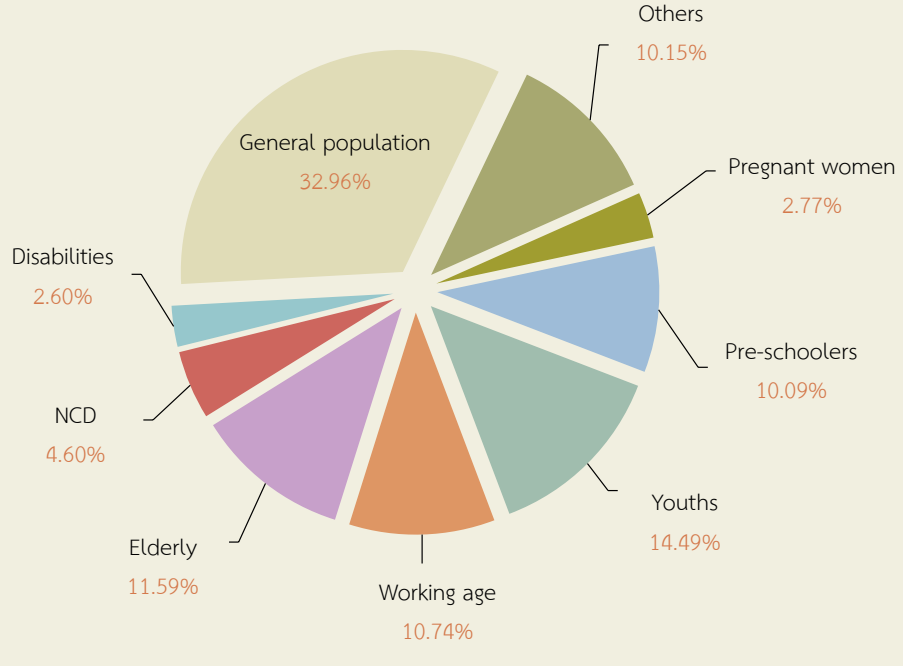
Source: Information on health insurance systems at the local or regional level. Bureau of Information Management Information Security, September 30, 2016, analyzed by Bureau of Community Health Service Support, NHSO.

Figure 43 Contribution to local health insurance fund, categorized by source. FY 2006-2016



Source: Information on health insurance systems at the local or regional level. Bureau of Information Management Information Security, September 30, 2016, analyzed by Bureau of Community Health Service Support, NHSO.

Figure 44 Proportion of local health insurance fund, classified by target group. FY 2016



Source: Information on health insurance systems at the local or regional level. Bureau of Information Management Information Security , September 30, 2016, analyzed by Bureau of Community Health Service Support, NHSO.

6.2.1 Participation of network partners

Establishment of a network of rights protection in the national health insurance system

1) There are 818 health centers in the NHSO, 98 in general hospitals and 720 in community hospitals operated by service personnel.

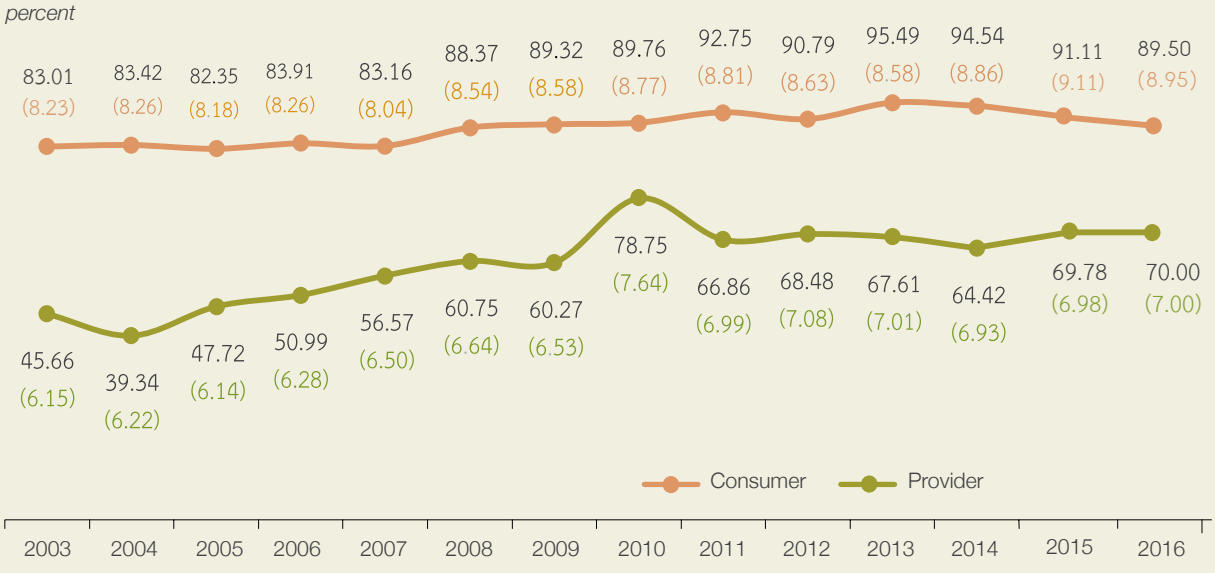
2) There are coordination Centers for Public Health in 146 locations across 77 provinces. They form a partnership operating under a joint development strategy and management for the protection of rights. These foster the development of quality standards for public health services; creates partnerships; and links to public sector partners, local government and professional organizations.

3) There are 115 Complaints units, independent of the complainant under Section 50(5), 76 provinces nationwide (Except Mae Hong Son Province). This collaboration between the public sector and the National Health Security Office is an important channel for the protection of the rights of the people and provides basic assistance to the recipient.

6.3 Satisfaction of consumers and health care providers

Each year the surveys are taken to assess satisfaction levels of both UCS consumers and healthcare providers. Results indicated that the satisfaction level of consumers increased from 8.23 out of 10 (83.01%) in the FY2003 to 8.95 (89.50%) in FY2016. During the same period providers scores rose from 6.15 (45.66%) to 7.00 (70.00%) (Figure 45). There may be several factors that affect why UCS consumer satisfaction levels were higher than those of providers. However, from these results can be surmise that, although the UCS implementation is doing well at accommodating the needs of consumers, some areas of management need improving in order to better satisfy the providers. Whatever the changes, the benefit of the consumer must always come first.

Figure 45 Consumers' and providers' satisfaction scores, FY 2003-2016



Source:
1) *FY2003 – 2013: Satisfaction survey report, Academic Network for Community Happiness Observation and Research (ANCHOR), Assumption University of Thailand (May-Jun 2003, Apr-Jun 2004, Jun 2005, May-June 2006, Jun-Jul. 2007-2008, Aug-Sep 2009-2010, September 9-25, 2011, Aug-Sep 2012, Aug-Sep 2013)*
2) *FY2014, Satisfaction survey report, NIDA poll, National Institute of Development Administration, Thailand*
3) *Year 2015-2016 Surveying by the Institute for Social and Economic Sciences, Dhurakij Pundit University , May-August 2015, April-July 2016*

Note:
1) *Percentage of satisfaction in 2003-2014 based on TRIS's evaluation criteria, calculated from respondents rated at 7-10 points.*
2) *Percentage of Satisfaction in 2015-2016, based on FPRI's criteria, calculated from respondents who rated their satisfaction at all grades (1-10 points).*

UHC is the basic right for all Thai citizens that:

- ☑ Be able to aooess to health benefit paokage
- ☑ Have Thai nationality and Thai ID number
- ☑ Are not under other health sohemes

National Health Security Office (NHSO)

"The Government Complex" Building B, 2-4 Floor

120 Moo 3 Chaengwattana Road, Lak Si District, Bangkok 10210 Thailand

Tel 662 141 4000 (Office hours)

Fax 662 143 9730-1

Website : www.nhso.go.th