NHSO
Annual Report

Fiscal Year 2013

NHSO
National Health Security Office

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Translated from the Thai version
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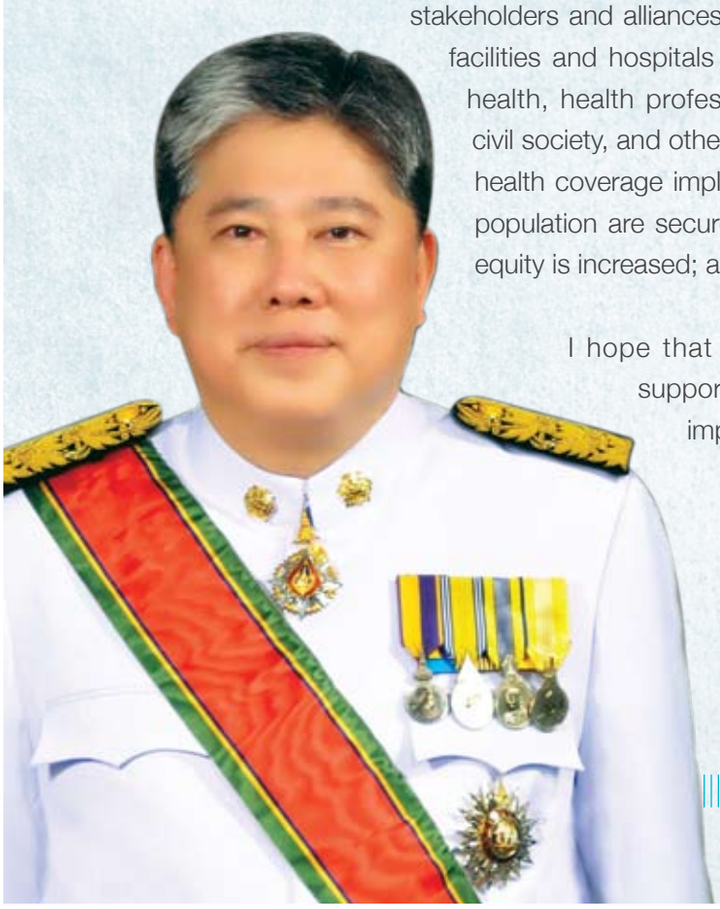
NHSO's Vision

"All residents in Thailand
are assured under the Universal Health Coverage"

Message from the Chair of the National Health Security Board

Miss Yingluck Shinawatra, the prime minister has given policy direction for the “30 Baht for all diseases” scheme to the National Health Security Board on January 9, 2012 in order to have same understanding and to strengthen policy movement in universal health coverage. The government policy for universal health coverage is to improve efficiency of the “30 Baht scheme” by improving performance and promoting health promotion and disease prevention. By promoting health promotion and disease preventaion, we expect that consumer risk behaviors to health problems will be reduced which, in long-term, sickness from preventable diseases would be reduced and health service cost could be controlled.

The board has continued to support the government policy direction. Key decisions of the board include 1) to improve efficiency of fund management in order to promote accessibility to necessary health services (especially the government services) responded to regional needs; 2) to support benefit package development in order to cover health services as needed, e.g., developing long term care system for dependent elders, expanding target risk groups for seasonal flu vaccines to pregnancies (from 4 months or up) and children (from 6 months to 2 years old); 3) to continue to improve other health service system, e.g., to develop accident and emergency system (EMCO project), to increase accessibility to primary care service in Bangkok Metropolitan Area.



These achievements are happened because of supports and collaborations from stakeholders and alliances. I would like to thank executives and staffs of health facilities and hospitals both government and private, the ministry of public health, health professional institutes, local administration organizations, civil society, and other related organizations for their support in the universal health coverage implementation of the government policy. As a result, the population are secured; standard quality of care can be accessed; health equity is increased; and, benefit package can cover more target groups.

I hope that all stakeholders and alliances will continue their supports and their ownership to universal health coverage implementation. I also wish you all the best of happiness.

(Pradit Sintavanarong, M.D.)
Minister of Public Health Ministry
Chair of the National Health Security Board

Message from the Chair of the Health Service Standard and Quality Control Board

Health service challenges have been analyzed and reviewed by the health service standard and quality control board since 2012 when the new members joined the board. This is done in order to continue duties as authorized by the National Health Security Act, B.E. 2545. These duties are referred to section 50(1)-(10), section 57, and section 59 in order to promote health service standard and quality control, as well as to protect consumer right to access to quality of care as mandated by the Act.

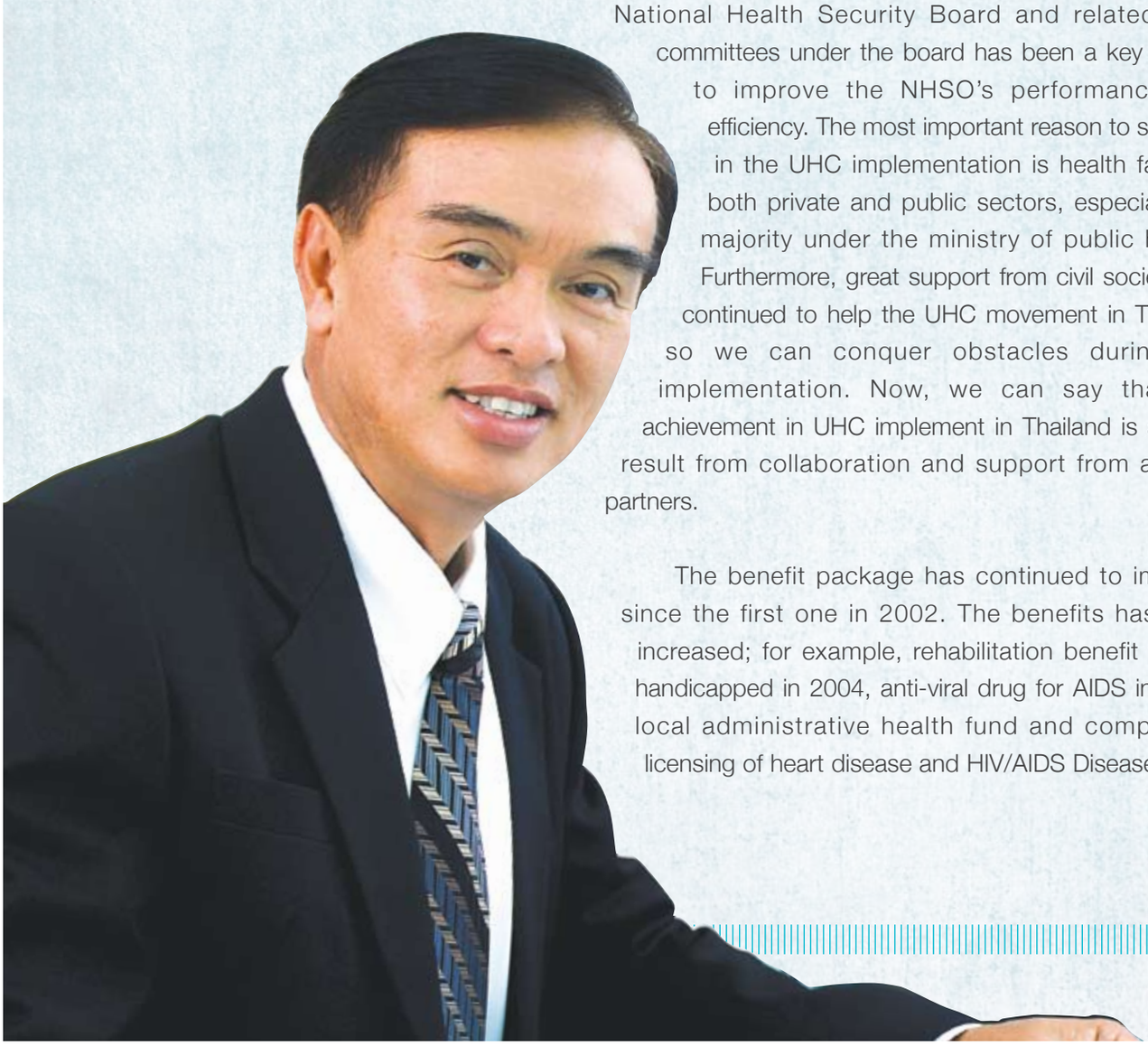
The health service standard and quality control board has urged appointment processes for the provincial health service standard and quality control sub-committees in 76 provinces in order to perform duties in health service standard and quality control, health service network, and guideline development for capacity building at provincial level. It is important for the provincial sub-committee to align their performance in quality control to the national standard. Since the national health security board has adjusted type of losses or injuries from health services according to the section 41 of the Act and expanded maximum compensation for the losses or injuries, the health service standard and quality control board in collaboration with the provincial sub-committees has developed standard guideline for basic compensation that can be approved by the provincial sub-committees.

I would like to appreciate great supports from members of the health service standard and quality control board, members of working groups or sub-committees, e.g., sub-committee on health service quality development, sub-committee on health information system development (in quality, public relation and consumer protection system), sub-committee on civil society and health network participation development, sub-committee on health system management to reduce negative impacts from health service, special sub-committee to adjudicate appeals, the provincial sub-committees, basic compensation sub-committee, investigate committeess, other related stakeholders, and the national health security office. All great support from stakeholders and alliances has the same goal to benefit to all people living in Thailand.

(Associate Prof. Prasobsri Ungthavorn, M.D.)
Chair of the health service standard
and quality control board

Message from the Secretary-General of the National Health Security Office

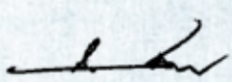
"How to achieve the goals in the 11-year-implementation? This question was raised on the Modern 9 TV's show "This afternoon has an answer" (translated from "บ่ายนี้มีคำตอบ") at 1400 hours. The show was hosted by Mr. Wisan Dilokwanich and Ms. Soontree Atthasuk. Here is "my response." The key objective of universal health coverage system is to increase accessibility to standard and quality of health services and at the same time can protect the invulnerable people from financial disaster caused by health care cost. The international expert has evaluated our performance as "first-class" or "excellent"; as a result of that accessing to health service is now a standard right for Thai citizens, not a government aid to the poor as prior to the universal health coverage implementation. This is really benefit to Thai citizens not only in equity to access to health care but also in protection from financial disaster. The time of having to sell their cattle or their rice fields in order to pay for healthcare cost had gone when the universal health coverage (UHC) policy was implemented. This happen because of high commitment from the government to support the universal health coverage policy. The National Health Security Office (NHSO) was established to be an organization to mange a great budget for the universal health coverage. Managing under the National Health Security Board and related sub-committees under the board has been a key reason to improve the NHSO's performance and efficiency. The most important reason to success in the UHC implementation is health facilities both private and public sectors, especially the majority under the ministry of public health. Furthermore, great support from civil society has continued to help the UHC movement in Thailand so we can conquer obstacles during the implementation. Now, we can say that the achievement in UHC implement in Thailand is a great result from collaboration and support from all Thai partners.



The benefit package has continued to improve since the first one in 2002. The benefits has been increased; for example, rehabilitation benefit for the handicapped in 2004, anti-viral drug for AIDS in 2005, local administrative health fund and compulsory licensing of heart disease and HIV/AIDS Disease drugs

in 2006. Next, 8,000 heart surgeries to cerebrate the King's 80th birthday anniversary in order to reduce waiting list for heart surgeries from 2 years to 6 months was introduced in 2007. Treatments for end-stage kidney diseases including kidney dialysis and kidney transplantation was started in 2008. The benefit package for end-stage kidney diseases has also inspired the CSMBS and Social Security Scheme to have the same benefit as the UCS scheme. In 2009, other benefits were added, e.g., high cost drug in J(2) sub-list of the national drug account, kidney stones and seasonal flu vaccines. Benefit package for stateless people and accessibility to other drugs such as Botulinum antitoxin were included in 2010. The Botulinum antitoxin is an antitoxin for botulinum that found in canned bamboo shoot. There was a news that more than 100 people living in Nan province were sick from eating canned bamboo shoot. Another, benefit on transplantation of liver and heart in children was added in 2011. Still another, the same standard access to health care in case of accident and emergencies for the three main government health insurance schemes was started in 2012. Finally, the national clearing house concept was implement at the NHSO in 2013.

Collaboration and support from all stakeholders as mentioned above has created positive impact to our citizens which reflect to result of the household survey by the national statistics office. The survey found that a number of household protected from financial disaster from healthcare cost has been reduced from 120,000 households in 2002 to only 39,750 households in 2009. Furthermore, utilization rate of out-patient and in-patient service has continued to increase every year. Although the NHSO has many success stories, we still have weaknesses that can be improved in many aspects. The most weakness is "don't know our weakness". The great success in the past cannot guarantee the future success. Lesson learned from the "past mistakes" is important for analysis and transferring knowledge to the next generation. There should be a sustainable direction for the future UHC. The 11-year-performance was a result from the believe that we can promote Thai health with dignity and have a standard right to healthcare. Therefore, we can continue to overcome all obstacles toward the UHC together. I finally hope we all and our families are happy and healthy in 2013 and beyond.



(Winai Sawasdivorn, M.D.)
Secretary General of the NHSO

Executive Summary

Universal Health Coverage Performance in FY2013 (October 1, 2012 – September 30, 2013)

The following summary report was approved to be a public report by the Universal Coverage Evaluation Sub-committee and the National Health Security Board on March 24, 2014 and April 3, 2014, respectively.

The approved government budget for universal coverage scheme in FY2013 is THB108,744 millions. The budget is for health services to the beneficiaries according to the benefit package. The summary report is described follow:

1. The overview of health security fund management

The coverage of universal health coverage for Thai citizens is 99.87%. There are 13,551 of registered hospitals from primary care, main contactors, and referral hospitals. Most of these registered hospitals (92.27%) are government hospitals under the ministry of public health. Most of out-patient services are accessed at health centers (47.68%) and district hospitals (35.99%), respectively. Most of in-patient services are accessed at district hospitals (48.01%) and regional/general hospitals (40.05%), respectively. Total fatality rate is 2.82%. Most of the cause of death is infectious diseases, cancers, behavioral diseases, respectively. Most of death occurred in elders. Fatality rate in children is reduced.

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

In accessibility aspect, utilization rate of out-patient and in-patient service are increased to 151.86 million visits (or 3.12 visits/person/year), and to 5.79 million admissions (or 0.119 admission/person/year), respectively. Health services in vertical programs for specific diseases have also increased; for example, 1) increasing in accessibility to necessary treatments (Primary PCI and Thrombolytic treatment) for acute myocardial infarction type ST-elevation from 6.38% in 2005 to 65.65 in 2013, 2) increasing in accessibility to health services in DM and Hypertension comparing to prevalence rate from 55.0% and 29.0% in 2009 to 95.72% and 69.67% in 2013, respectively, 3) the number of Instruments reimbursed for the handicapped in 2013 is 56,705 items for 30,865 handicapped people, 4) the number of health services in Thai traditional medicines is 10,192,388 visits for 6,747,843 people, and 5) fatality rate with important diseases, e.g., cerebo-vascular disease, cardio-vascular diseases, AIDS, is reduced. In efficiency aspect, the results found that 22-24% of all admissions are admission with 0-1 day-stay; a number of refers that should not be referred (with Relative Weight (RW) < 0.5) is 3.95% of all refer cases. Furthermore, there are increasing rate of Cesarean section (27.58%) and ruptured appendicitis (34.81%).

3. Consumers' right protection, stakeholder participations, and consumers' and providers' satisfaction

The overall of community participation is better than before. The number of local administration organizations (LAO) joined the community health security funds is 99.68% (7,751 out of 7,776 organizations) or THB956 millions of co-funding from the LAO comparing to THB2,281 millions of the NHSO budgets for community health funds. The community health funds are set up in order to solve the community health problems. The most of community activities to solve their health problem is for DM and hypertension diseases (46.99%). The rest activities are related to rehabilitation, cancers, and AIDS at 23.8%, 21.48%, and 4.41%, respectively. Provincial rehabilitation fund is established in order to manage and promote accessibility to rehabilitation services in 23 provinces. In right protection aspect, there are 4,420 complaints in FY2013. The number of these complaints that are solved within 30 days is 4,291 complaints (97.1%). The number of consumers who request for compensation from losses or injuries caused from health care is 1,182 cases; which of these, 995 cases are - approved and compensated in a total of THB 191.58 millions. In satisfaction aspect, according to satisfaction survey on UHC system by the community happiness research and academic observatory network center of Assumption University, it found that satisfaction level of both consumers and health providers to the UHC system have been increased to 95.49% (or the average score at 8.58), and 67.61% (or the average score at 7.01), respectively.

4. Conclusion and suggestions for improvement

The suggestions for improvement are follow: 1) high density of health services in provincial hospitals is need appropriate management in order to increase efficiency and to reduce cost of care and bed occupancy rate of acute infectious diseases or other diseases with less than one day of admission that can be prevented, 2) accessibility management for specific group, e.g., handicapped people, psychosis patients, dependent elders, 3) quality of service improvement to expand life expectancy age especially in ischemic heart diseases and head injuries, and 4) rapid health screening, e.g., DM, hypertension, HIV/AIDS, chronic kidney diseases, asthma, chronic obstructive pulmonary diseases in order to reduce future burdens to the system.

The National Health Security Board has agreed to present the summary report to the cabinet and to add the following comments: 1) Integrating related community health services for learning disorders people, 2) reducing high density of health service in Bangkok metropolitan area, and 3) other development issues for efficiency, e.g., aging society issue, and promoting health promotion and disease prevention should be added.

Highlight activities in FY2013

The **NHSO** is an organization established by law to responsible on health security fund management under the supervision of the National Health Security Board in order to promote health service accessibility for the population as needs with equity and dignity concern. By achieving the goals of accessibility, financial protection, and standard quality of care concerns according to its responsibilities, the NHSO has won as the organization with best working capital management from the ministry of finance for six consecutive years since 2008. The award is aimed to promote high efficiency of fund managers in financing,

operations, responding to stakeholders' needs, and development of working capital management. In FY2013, there are 108 of working capital management evaluated by expert committee and external consultants. The national health security fund is THB108,507 millions, covers about 48 million people, and includes comprehensive care from prevention, curative and rehabilitation services. The next step of implementation is to increase accessibility and service quality improvement targeting to protect financial risk from health care for Thai citizens. The ceremony to the FY2013 award was held on Wednesday, December 18, 2013 at Centara Hotel at the Government complex, Chaengwattana Road.

Furthermore, the government has assigned the Thai Rating and Information Services Co., Ltd (TRIS) to evaluate performance of government organizations established by specific laws, including the NHSO. The evaluation include the following four aspects: 1) financial performance, 2) operation performance, 3) responding to stakeholder needs, and 4) development of working capital management. The overall score performance of each aspect is 5 point with a relative weight of each aspect is 20 : 40 : 20 : 20, respectively. In FY2013, the scores for each aspect of the NHSO are 5 points for financial performance, 4.9425 points for operation performance, 4.6280 points for responding to stakeholder needs, and 4.7025 points in development of working capital management, or the overall score of all aspects at 4.8431 points from a full score at 5 points. The level of the average score is at good-excellent level.

In FY2013, The NHSO has urged to improve efficiency in fund management as assigned by the government policies in the following aspects:

Increasing right protection for the local administrative organization (LAO) under the civil service medical benefit scheme (CSMBS)

The prime minister has assigned the ministry of public health and the NHSO to discuss with other related organizations to develop CSMBS system for the employees of the LAO in order to promote accessibility, equity, and standard quality of care aiming to reduce problem in having to pre-pay for health care cost of the beneficiaries, especially for comprehensive high cost of care and employees of small size of LAO with limited of health benefit fund. The following procedures have done in order to support this decision:

1. National guidelines for management, budgeting, and steps of operation are discussed and prepared between representatives from decentralization committee office, the LAO, the Office of the Council of State, related academias, and other related organizations.

2. A memorandum of understanding (MOU) for health security of the beneficiaries of the employees of LAO under the CSMBS scheme was signed between director general of the related organizations, i.e., the department of local administration, the NHSO, and representatives from local administration offices at the government cabinet building. The prime minister was a chair of the event.

3. The working group on preparing guideline for "the decree of health benefits for employees of the local administrative organization as declare in section 9 of the National Health Security Act, B.E. 2545" is to propose the guideline to be signed by the cabinet and submitted to the cabinet meeting in order to agree on the guideline and legislated as a decree so the related organizations can revise related rules and regulations in order to be effective by October 1, 2013.

4. The cabinet approved the proposed guideline and presented to the King approval and had announced in the Royal Thai Government Gazette on November 13, 2013 for "the decree of health benefits for employees of the local administrative organization as declare in section 9 of the National Health Security Act, B.E. 2545"

5. Discussion on fund management between the decentralization committee office and the local administrative organizations (LAO) has done. The decentralization committee office has agreed to cut the budget on general support item before transferred to the LAO and

transferring this fund to the Comptroller's General Office to be forwardly transferred to the department of local administration in the amount of THB 4,061.95 millions. This amount of budget will be transferred to the NHSO by divided into two installations, i.e., 50% for the first installation in October 2013, and 50% for the second installation by February 2014.

6. The NHSO has prepared the following internal management:

6.1) Database of the beneficiaries of the local administrative organizations under the CSMBS scheme, claims and reimbursement system to hospitals, revision of rules and related laws for fund management, structure management, roles and responsibilities of related committees, registered computer application, system design between hospitals and related sub-funds, as well as clearing system between sub-funds are prepared.

6.2) Preparation on supporting system for hospitals:

- 15 - 20 telephone lines are prepared (the starting telephone number is 0-2142-3100)
- Capacity building on LAO benefit package for Call Center
- Capacity building on LAO benefit package and national clearing house for Help Desk

6.3 Right protection system and complaint management system for the LAO issues

6.4) Related beneficiary registration system, and claims and reimbursement system

6.5) Workshops to promote under-standing with consumers and health providers nationwide

6.6) Auditing system design for DRGs on in-patient services, and capitation on out-patient services

6.7) The Regional offices of the NHSO preparation

6.8) Monitoring and warning system is done by appointing a working group on "monitoring working group to monitor problems from operations according to the cabinet decisions and right protection management for the employees of the LAO under the CSMBS scheme" to monitor operation progress from beneficiary database system, claims and reimbursement system, supporting system for complaint management, payment rules, as well as monitoring and evaluation system.

Increasing efficiency in management of the three main government schemes.

I. National Clearing House System in order to have an organization to act as healthcare purchaser and to responsible for national health information system.

The National Health Security Board has assigned the NHSO to act according to the section 26(14) of the national health security Act, B.E. 2545 to be a national clearing house and claim center for healthcare services of beneficiaries under the CSMBS scheme including the local administrative organizations and other voluntary government offices.

Progress report:

1. The cabinet has approved the NHSO to act as the National clearing house

2. The NHSO has planned and designed the system with the related organizations:
   - Discussion with the Social Security Office regarding to claims transactions and health information managed by the National Clearing House
   - Signing the memorandum of understanding (MOU) on “National Clearing House in claims and health information for beneficiaries under the CSMBS scheme” between the

director general of the Comptroller's general office, ministry of finance and the NHSO in order to develop synchronized database system and claim system with the related organizations including the Central office for Healthcare Information (CHI), and to integrate information from E-Claim system of the NHSO and GFMIS system of the Comptroller's general office for transferring reimbursement to hospitals.

- public hearing and workshop for understanding with university hospitals (UHOSNET) about issues, drug data, and Standard dataset.
- workshop for understanding with hospitals nationwide, and discussion on claim system design with representatives from hospitals. The system was piloted in some hospitals both in the central and regional areas.

3. The operation plan to be a National Clearing House is prepared by the NHSO as follow:
   - to rent more space in the Government complex from the Dhanarak Asset Development Company Limited,
   - to prepare registration database of all beneficiaries and to develop a new system to support direct payment for the CSMBS schemes,
   - to design a payment system between hospitals and related funds, as well as clearing system within the fund,
   - to prepare standard data set and to discuss with software vendors in order to improve processing systems in order to be able to link with the E-Claim system and other related central processing systems,
   - to prepare the NHSO regional offices to be ready to support the National Clearing House and beneficiaries of the local administrative organizations under the CSMBS scheme,
   - to appoint "monitoring working group to monitor problems from operations according to the cabinet decisions and right protection management for the employees of the LAO under the CSMBS scheme" to monitor progress on problem analysis and resolutions in order to increase operation efficiency.

II. Harmonizing benefit package for cancer treatments to reduce inequity

In order to reduce inequity in the universal health coverage system, to increase survival rate in cancers, to increase quality of life, to prepare community to home care and palliative care for cancer patients, and to control health expenditures in the long term, harmonizing benefit package between government health insurance schemes is promoted.

Progress report:

1. Health service system design and development have been operated by the NHSO.
   - Problem analysis and situation reviews are done with experts and related health providers. Treatment protocols are revised. New protocols for three new groups, i.e., cholangiocarcinoma and liver cancer, bladder cancer, and prostate cancer, covered ten diseases are included,
   - public hearing on clinical guideline and claim guideline according to the protocols is done with related health providers,
   - new claim guideline for new protocols of ten diseases is announced and effective on January 1, 2013,
   - working group on claim guideline development for leukemia and lymphoma has revised the clinical guideline and claim guideline for FY2014, as well as public hearing among hematologist specialists,
   - appointing new preparatory committee on "Harmonizing national disease management for cancer" to prepare policy proposal on benefit package for cancer of the three main government health insurance schemes to be proposed to the cabinet. **National cancer prevention and control plan by the National Cancer Institute** and the National Strategic Plan on Health Promotion for Good Dead by the National Health Commission Office of Thailand are going to be proposed to the cabinet.

2. Collaboration with the three main government health insurance schemes
   - Discussion on harmonizing in seven aspects, i.e., public relation, health promotion, disease prevention, disease screening, palliative care, registration database, and plan for medical claims,
   - Preparing proposal for the Comptroller's General Office in order to prepare standard treatment plan for their beneficiaries,
   - Discussion with representatives from the ministry of public health in order to propose the draft guideline for harmonizing national treatment standard for cancers to the minister.

III. Harmonizing and a national standard for government health insurance scheme: a case of accident and emergency service on *"When emergency threatened to life occurs, go to the nearby hospital, no question on health insurance"* project (Translated from Thai: *"เจ็บป่วยฉุกเฉิน ถึงแก่ชีวิต ไม่ถามสิทธิ ใกล้ที่ไหน ไปที่นั่น"*)

The project is aimed to protect the citizens in emergency, so they can access to necessary health care at the nearby hospital without question on their health insurance scheme and without pre-payment for the care; and, referral system to higher capacity of health care is available as needed.

Progress report:

1. Memorandum of Understanding (MOU) was signed by stakeholders and alliances, including the main government health insurance schemes (the CSMBS, SSS, and the UCS scheme), and other government and private organizations such as the ministry of public health, the ministry of defense, the Royal Thai Police, medical universities (UHOSNET), the Bangkok Metropolitan Administration office, and private hospital association. The event was held at the government building and chaired by Miss Yingluck Shinawatra, the prime minister,

2. Definition of Emergency criteria is discussed with the private hospital association. Pre-Authorize system and payment adjustment to reflect unit cost are also prepared.

3. Public hearing with hospitals about the Pre-Authorize system and screening guideline for emergency cases is done.

4. Revising operation guideline:
   - The National Institute for Emergency Medicine (NIEMS) is responsible to revise the definition of Emergency criteria and to prepare two versions of guidelines, one for consumers and another for doctors and health team.
   - The NHSO is responsible for preparing appropriate payment rates to be reviewed by the three main government health insurance schemes and the private hospital association.

- Managing system for hospital bed reserved for patients after the crisis should be prepared. The department of medical services is responsible to prepare the system in Bangkok and perimeter areas; and the office of permanent secretary, ministry of public health is responsible for other provinces.

5. Workshop on service system and reimbursement rate with fifteen private hospitals, The National Economic and Social Advisory Council (NESAC), and related stakeholders was convened; the following suggestions are proposed:

- the guideline should be revised to classify by disease orientation and the most frequently found should be listed in the first order for convenience.
- other impacts should be considered; for example, if the guideline is too rigid there may be more conflict between hospitals and patients, or the hospital cannot refer the patients to their registered hospitals.
- The doctor who diagnoses the patient should have right to decide the patient condition; and, there should be confident in doctor's diagnosis. Public relation should be promoted; and, the information on media should be more clear, not too broad but right to the point.
- The affiliated office of the government officers should be arranged, since they are the group with more problems in implementation.
- Payment system should be reflect the unit cost and should not affect private hospitals too much. The existing systems for emergency, such as claims for the Section 7 of the Act of the UCS scheme, or the 72-hours system of the SSS scheme seem to be better.
- There should be workshop(s) for staffs of private hospitals in order to promote understanding and able to evaluate patient conditions in details.
- There should be defition of the crisis condition and increase public relations; but, there should not over definition the policy.
- Road accident insurance fund should also be responded for the healthcare cost. The NHSO is assigned to responsible to the management.
- Managing system for hospital bed reserved at the patients' registered hospital should be prepared.
- Payment rate should be appropriated and should not less than other package.
- There should have only one price for all type of hospitals; since, the service cost is fluctuated and may not reflect unit cost depending on pricing policy of private hospitals, high workload of services, and irrelevant to diagnosis.
- There should be only one payment rate for every government health insurance scheme.

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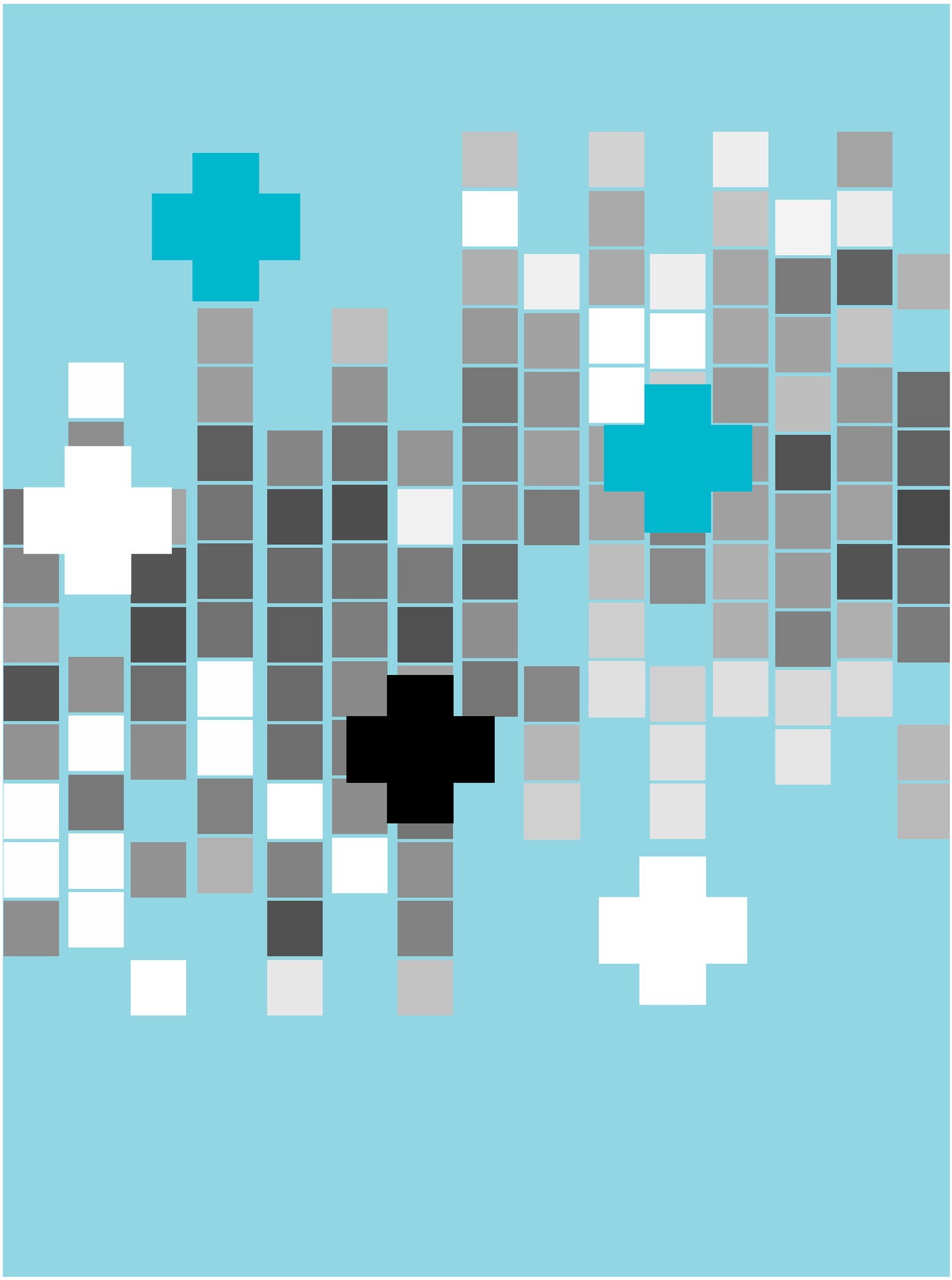
Abbreviation list

ARV	Antiretroviral Therapy
CAPD	Continuous Ambulatory Peritoneal Dialysis
CHI	Central office for Healthcare Information
CKD	Chronic Kidney Disease
COPD	Chronic Obstructive Pulmonary Disease
CSMBS	Civil Servant Medical Benefit Scheme
CUP	Contracting Unit Provider
DM	Diabetes Mellitus
DM/HT	Diabetes Mellitus / Hypertension
HD	Hemodialysis
HT	Hypertension
IHPP	International Health Policy Program
KT	Kidney Transplantation
LAO	Local Administration Organization
MOPH	Ministry of Public Health
NESAC	National Economic and Social Advisory Council
NHSO	National Health Security Office
NIEMS	National Institute for Emergency Medicine
OPS, MOPH	Office of Permanent Secretary, Ministry of Public Health
PCI	Percutaneous Coronary Intervention
PCU	Primary Care Unit
PEF	Peak Expiratory Flow test
SSS	Social Security Scheme
STEMI	Acute myocardial infarction type ST-elevation
THB	Thai Baht
TRIS	Thai Rating and Information Services Co., Ltd
UCS	Universal Coverage Scheme
UHC	Universal Health Coverage



PART ONE

Improving Universal Health Coverage Overview

- 1 -

Concept towards the Universal Health Coverage

Concept towards the Universal Health Coverage

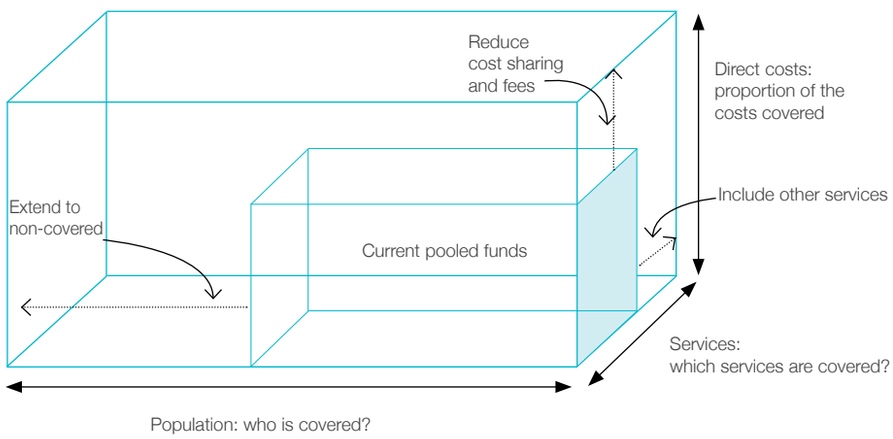
A basic concept towards Universal Health Coverage is to extend coverage to population so they can access to health services as needed without financial barriers. Health financing systems are important mechanisms to promote universal health coverage by removing (or reducing) financial risks and barriers to access to health services.

According to the World Health Organization (WHO)[1], the path to universal health coverage involves important policy choices and inevitable trade-offs. The way that pooled funds – which can come from a variety of sources, such as general government budgets, compulsory insurance contributions (payroll taxes), and household and/or employer prepayments for voluntary health insurance - are organized, used and allocated, influences greatly the direction and progress of reforms towards universal coverage.

Figure 1 shows the three dimensions proposed by the WHO in order to be considered when moving towards universal coverage. Pooled funds can be used to extend coverage to those individuals who previously were not covered, to services that previously were not covered or to reduce the direct payments needed for each service. These dimensions of coverage reflect a set of policy choices about benefits and their rationing that are among the critical decisions facing countries in their reform of health financing systems towards universal coverage. Choices need to be made about proceeding along each of the three dimensions, in many combinations, in a way that best fits their objectives as well as the financial, organizational and political contexts.

Extending the coverage from pooled funds along the three dimensions calls for

Figure 1 Three dimensions to consider when moving towards universal coverage



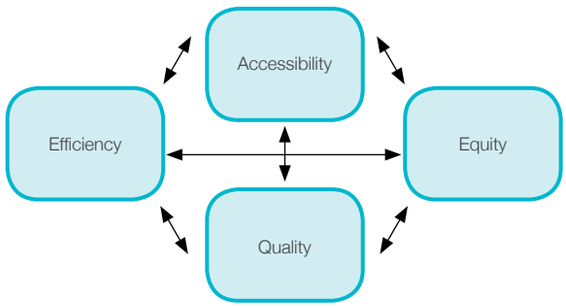
[1] WHO, Health financing for universal coverage: universal coverage-three dimensions, http://www.who.int/health_financing/strategy/dimensions/en/

health financing reforms and actions leading to an increase of available funds for health, to an increase in the share of these funds collected through prepayment and the arrangements for pooling them, to efficiency gains and to upholding and increasing the quality of health services.

Benefit package in a desirable universal health coverage should include health services from health promotion, disease prevention, curation, and rehabilitation. However, extending these health service coverage will affect coverage of the other dimensions. It is difficult to cover 100% of these dimensions. Therefore, some services may not cover or require co-payment. In order to balance the coverage of these dimensions, four related dimension of effectiveness outcomes may be considered. The four dimensions of effective outcomes in healthcare system is shown in figure 2.

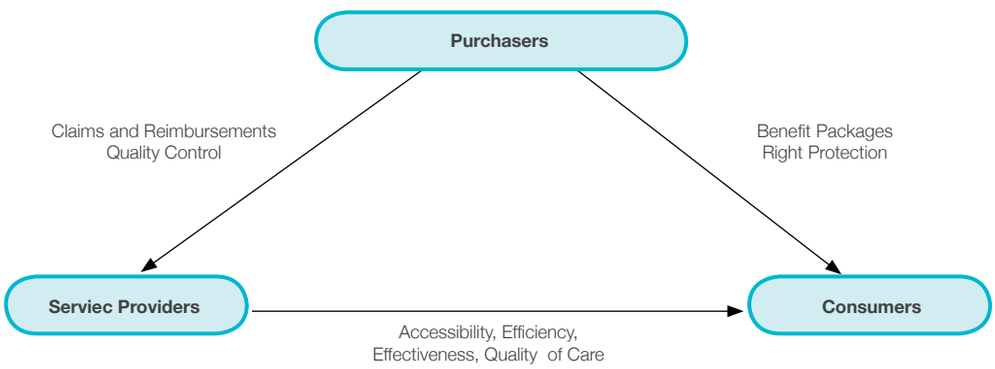
Towards universal health coverage implementations are not only using financial mechanisms to extend coverages but also promoting new relationship of key stakeholders in universal health coverage. The key

Figure 2 Four dimensions of effective outcomes in healthcare system



stakeholders in universal health coverage includes purchasers, service providers, and consumers. Roles of purchasers include to reimburse health care cost to service providers according to service agreements, to prepare optimal benefit packages to be able to promote effective outcomes and remove financial risks from the beneficiaries, to ensure appropriate distribution of services between regions. Furthermore, consumer right protections and stakeholder participations are also important to promote good relationship with stakeholders. These relationships are summarized in figure 3.

Figure 3 Relationships of key stakeholders in universal health coverage



The above concepts are applied for creating framework to present the annual report for universal health coverage. The annual report is divided into 5 parts as follow (Figure 4):

1. Health Financing and Budgeting for Universal Health Coverage

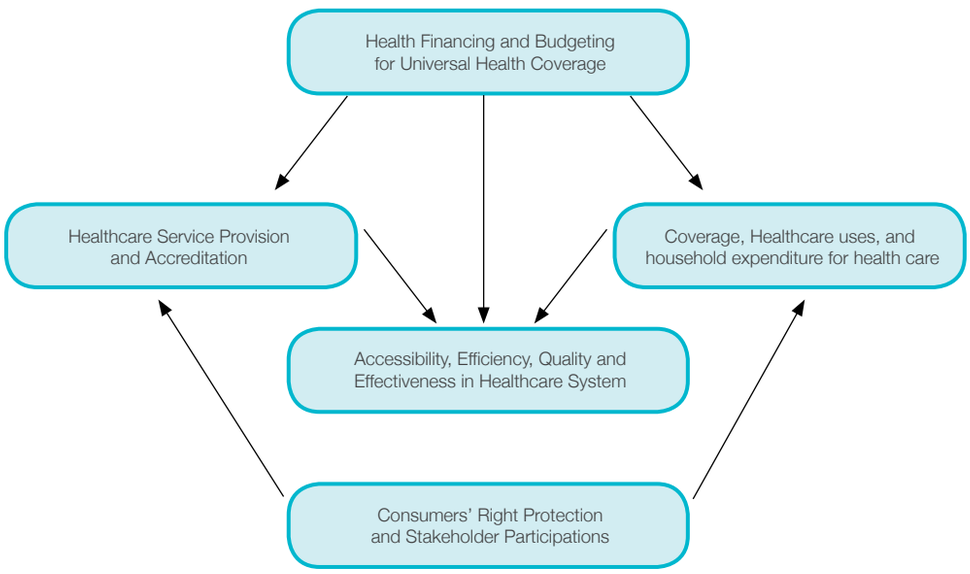
2. Coverage, Healthcare uses, and household expenditure for health care

3. Healthcare Service Provision and Accreditation

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

5. Consumers' Right Protection and Stakeholder Participations

Figure 4 Framework to present the Annual Report for the UHC



- 2 -

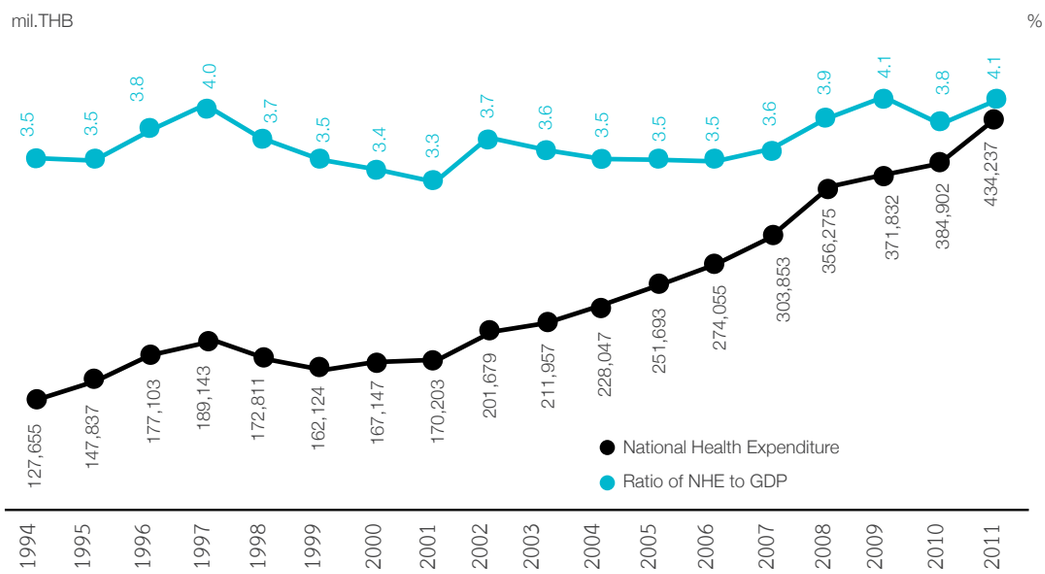
Health Financing and Budgeting for Universal Health Coverage

2.1 Overview of National Health Expenditures

Health financing policies are important mechanisms for universal health coverage (UHC) implementation to protect households from financial risks. Government is an important party towards the UHC. However, it is important for the government to carefully manage the system for sustainability implementation. National health expenditures during FY1994 – 2011 shown in figure 5 have been increased from THB127 billion in FY1994 to THB434 billion in FY2011. However, when compared as a ratio to gross domestic product (GDP), the ratio has steadily increased between 3.3% – 4.2% of the GDP that is comparatively lower than other developed countries.

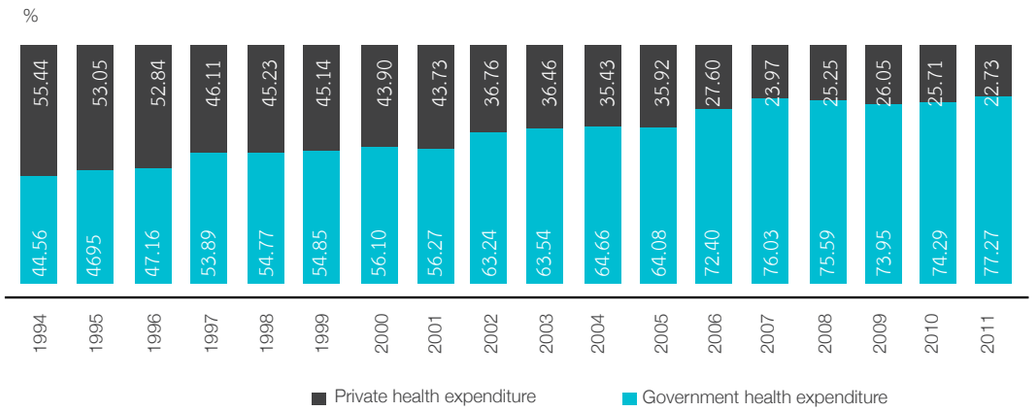
Government health expenditure has continued to increase from 44.56% of the national health expenditure in FY1994 to 77.27% in FY2011, as shown in figure 6. Annual health expenditure per capita at current price is also increased from THB2,160 (or USD86) in FY1994 to THB6,777 (or USD222) in FY2011, as shown in figure 7.

Figure 5 Thai National Health Expenditures, FY2004 - 2011



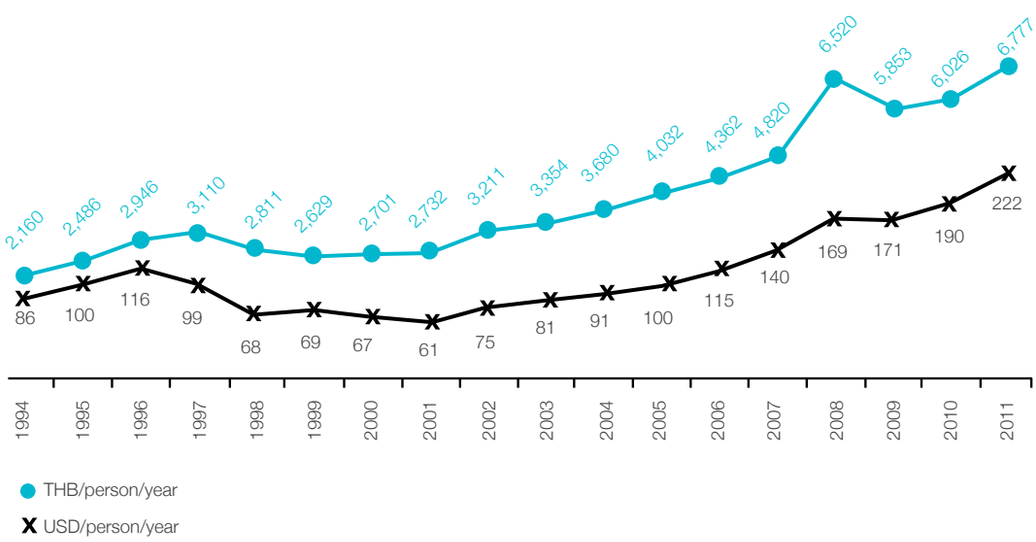
Source: Thai National Health Account FY2002-2011, International Health Policy Program (IHPP), Ministry of Public Health, Thailand
Note: The FY2008-2011 data were adjusted with new data from some organizations, e.g., local administration offices, non-government organizations, international grants.

Figure 6 National Health Expenditure ratio between government sector and private and household sector, FY1994 – 2011



Source: National Health Account FY1994-2010, International Health Policy Program (IHPP), Ministry of Public Health, Thailand

Figure 7 National Health Expenditure, FY1994 – 2011



Source: National Health Account FY2002-2010, International Health Policy Program (IHPP), Ministry of Public Health, Thailand
Note: According to the National Health Account Report, average annual exchange rates were used, i.e., 25, 25, 25, 31, 42, 38, 40, 44, 43, 41, 40, 40, 38, 35, 33, 34, 32 and 30 for FY1994 to FY2011, respectively.

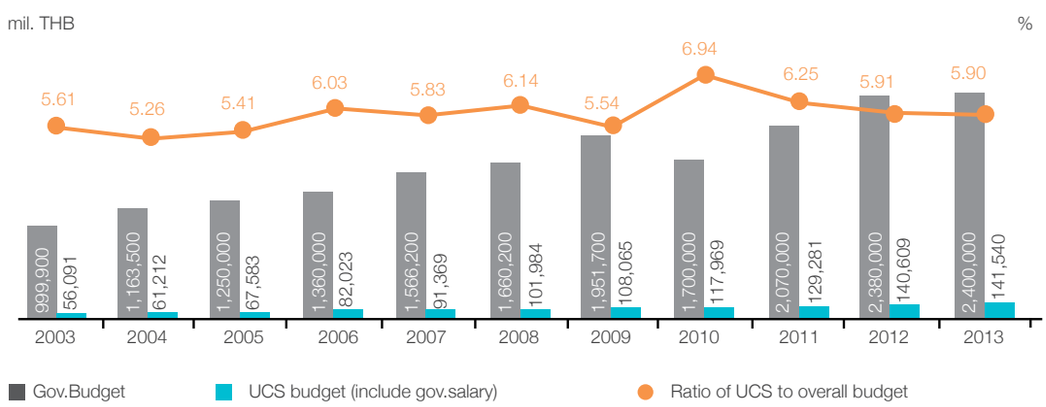
2.2 The Universal Coverage Scheme's Budgeting

All budgets for implementing the UHC in Thailand through the UCS have been supplied by the government. Ratio of the UCS budget to the overall government budget during FY2003 – FY2013 is quite steady at the rate from 5.26% to 6.94%. The government budget for the UCS has been increase from THB56,091 million or at 5.61% of the overall government budget in FY2003 to THB140,609 million or at 5.91% of the overall government budget in FY2013 as shown in figure 8.

The UCS budget has been included salaries of health staffs under the Office of permanent secretary, the ministry of public health (MOPH) since FY2002. A total amount of these salaries were ranged from THB23.8 – 32.8 billion per year. However, the percentage of the the salaries has decreased from 46.3% in FY2002 to 23.3% in FY2013. The net budget for the UCS scheme has been increased as shown in figure 9.

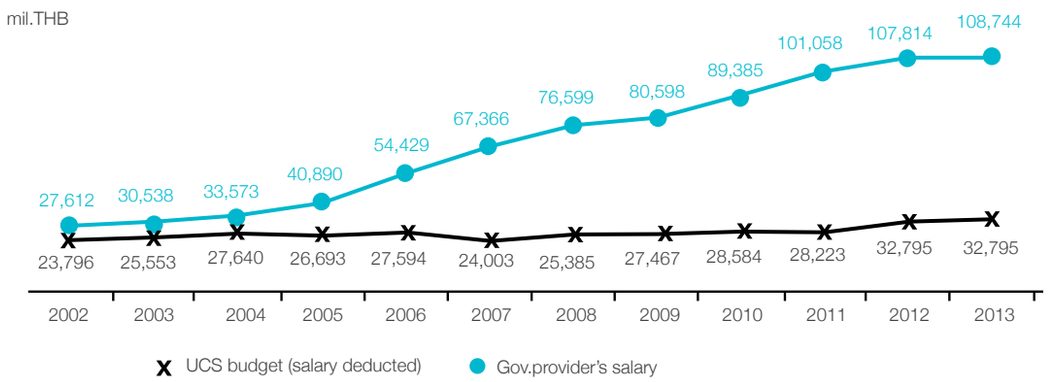
After deducted with salaries of health staffs under the Office of permanent secretary, MOPH, the net UCS budget is classified into sub-fund for management. More than 90% of the net budget is managed as capitation for general health services. The rest of the budgets are managed as vertical programs for system management and disease management, e.g., central reimbursement fund, HIV/AIDS management, kidney replacement services, chronic disease-management (DM/HT prevention), psychosis medicines. Details are shown in figure 10.

Figure 8 Government budget for the UCS and ratio to the overall government budget, FY2003 – 2013



Source: Bureau of Plan and Evaluation, NHSO

Figure 9 Approved UCS Budget, FY2002 – 2013



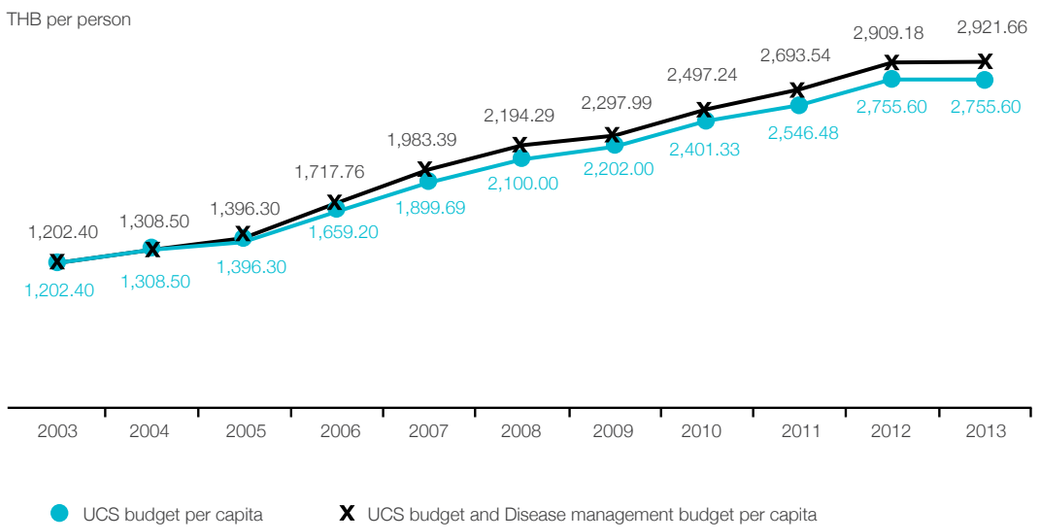
Source: Bureau of Plan and Evaluation, NHSO

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

1. Revisions for health staffs under the office of permanent secretary, MOPH were done in FY2004 and FY2010.

2. Revisions for health staffs under other affiliated departments or ministries were done in FY2004 and FY2011.

Figure 10 UCS Budget per capita, FY2002 - 2013



Source: Bureau of Plan and Evaluation, analyzed by Bureau of Executive Information Administration, NHSO

In the past decade, the net UCS budget on capitation for general health services has been increased from THB1,202.40 per capita of the UCS beneficiary in FY2003 to THB2,755.60 per capita of the UCS beneficiary in FY2013 or THB2,921.66 per capita of the UCS beneficiary included other vertical programs. Budgets for other vertical programs were started in FY2006 for HIV/AIDS management. Other vertical programs were included later, i.e., kidney replacement services for chronic kindey disease (CKD) in FY2009, chronic disease management (DM/HT prevention) in FY2010, psychosis medicines in FY2011. However, budgets for vertical programs can be adjusted to health problems and policies, e.g., seasonal influenza vaccines, drug management to increase accessibility to critical or high cost drugs, system development to support primary care or to promote referral system. Details of the net UCS budget and subcategories per capita are shown in table 1.

Table 1 Details of the net UCS Budget and subcategories per capita, FY2002 - 2013

(unit : Baht per UCS beneficiary)

Budget subcategories	2005	2006	2007	2008	2009	2010	2011	2012	2013
1. Capitation	1,396.30	1,659.20	1,899.69	2,100.00	2,202.00	2,401.33	2,546.48	2,755.60	2,755.60
2. HIV/AIDS health service package	-	58.56	83.70	94.29	63.45	58.66	62.46	60.83	67.64
3. CKD health services package	-	-	-	-	32.54	30.81	67.22	79.82	89.95
4. Chronic diseases (DM, HT) health service package	-	-	-	-	-	6.45	13.14	9.06	8.47
5. Psychosis service package	-	-	-	-	-	-	4.24	3.87	-
Total	1,396.30	1,717.76	1,983.44	2,194.29	2,297.99	2,497.24	2,693.54	2,909.18	2,921.66

Source: Bureau of Plan and Evaluation, NHSO

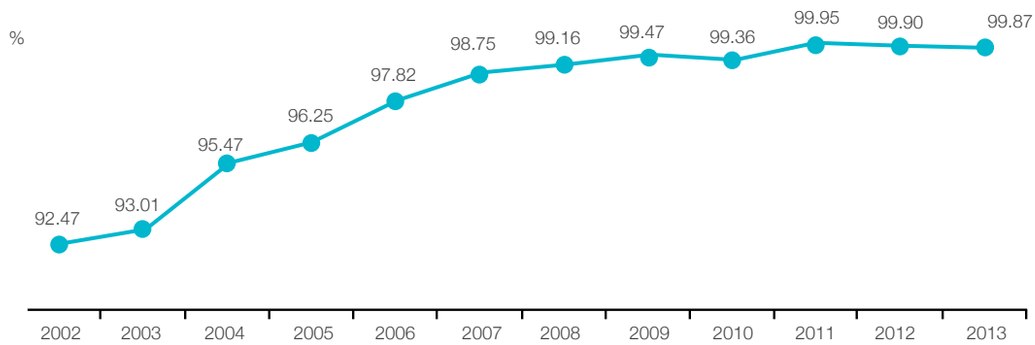
- 3 -

Coverage, Healthcare uses, and household expenditure for health care

3.1 National Universal Health Coverage

The ultimate goal of the Universal Health Coverage (UHC) implementation is to cover all population. In the past decade, the national UHC coverage of Thai citizens in Thailand has been increased dramatically from 71.00% in FY2001 to 99.87% in FY2013 as shown in figure 11. This coverage was not included stateless group living in Thailand, Thai citizens living aboard, and other foreigners. However, the Thai citizens who are eligible to enroll to the universal coverage scheme (UCS) but have not enrolled in FY2013 is 81,983 people (0.12% of all population) as shown in table 2.

Figure 11 The national UHC coverage of Thai citizens, FY2002 - 2013



Source: Bureau of Registration Administration, NHSO

Table 2 A number of Populations in Thailand classified by health insurance status, FY2002 - 2013

(unit : mil.people)

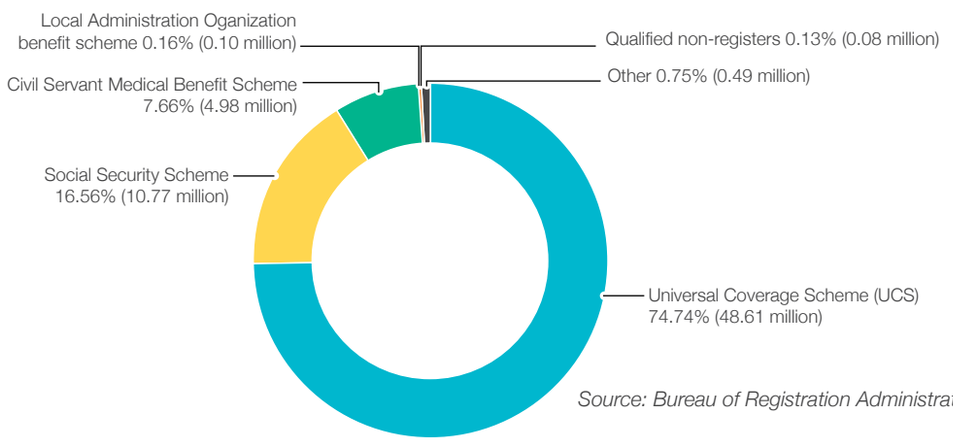
Status	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
UCS	45.35	45.97	47.10	47.34	47.54	46.67	46.95	47.56	47.73	48.12	48.62	48.61
SSS	7.12	8.09	8.34	8.74	9.20	9.58	9.84	9.62	9.90	10.17	10.33	10.77
CSMBS	4.05	4.02	4.27	4.15	4.06	5.13	5.00	4.96	4.92	4.96	4.97	4.98
Local Administration Office	-	-	-	-	-	-	-	-	-	-	-	0.10
Others	-	-	-	0.22	0.23	0.24	0.24	0.23	0.52	0.64	0.61	0.49
Qualified non-registered UCS	4.60	4.37	2.83	2.36	1.36	0.78	0.52	0.33	0.41	0.03	0.06	0.08
Total coverage	**61.12**	**62.45**	**62.54**	**62.81**	**62.39**	**62.41**	**62.55**	**62.70**	**63.47**	**63.92**	**64.59**	**65.04**
Unknown citizen status	-	-	-	0.00	0.45	0.90	1.16	1.44	1.35	1.20	0.79	0.62
Thais living abroad	0.03	0.03	0.06	0.06	0.06	0.06	0.06	0.01	0.02	0.02	0.01	0.02
Foreigners	-	-	0.26	0.27	0.28	0.30	0.31	0.32	0.18	0.11	0.11	0.12
Total of others	**0.03**	**0.03**	**0.32**	**0.34**	**0.80**	**1.25**	**1.52**	**1.78**	**1.54**	**1.32**	**0.91**	**0.77**
Total population	**61.15**	**62.48**	**62.86**	**63.15**	**63.19**	**63.66**	**64.07**	**64.47**	**65.01**	**65.24**	**65.50**	**65.80**

Source: Bureau of Registration Administration, NHSO

When classified into the main government health insurance schemes, i.e., the Civil Servant Medical Benefit Scheme (CSMBS), Social Security Scheme (SSS), and the Universal Coverage Scheme (UCS), coverage of every scheme in the past decade has been increased as shown in table 2. A proportion of each government schemes in FY2013 is 74.74% of the UCS, 16.56% of the SSS, 7.66% of the CSMBS, and the rest are other small government schemes such as local administration offices and stateless group as shown in figure 12.

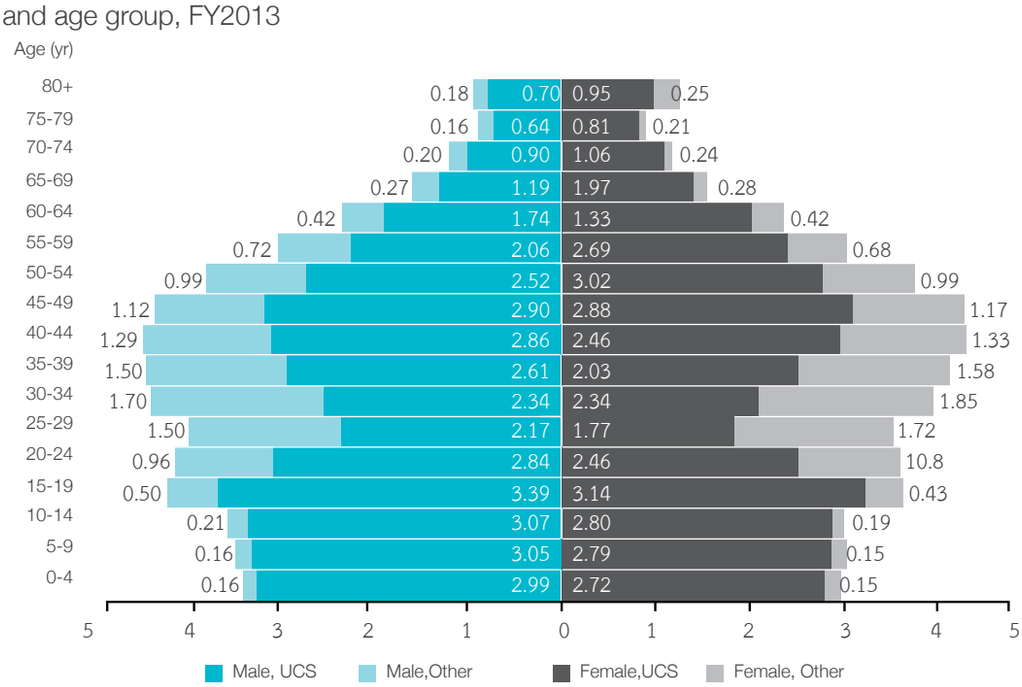
Comparing proportion of population of the UCS and other government health insurance schemes classified by gender and age group found that most of the UCS are in children and elderly group (10-19 year-old groups, and older than 59 year-old groups), while most of other schemes are in 20-54 year-old groups as shown in figure 13.

Figure 12 Proportion of the government health insurance schemes, FY2013



Source: Bureau of Registration Administration, NHSO

Figure 13 Proportion of population of the UCS and other government schemes classified by gender and age group, FY2013



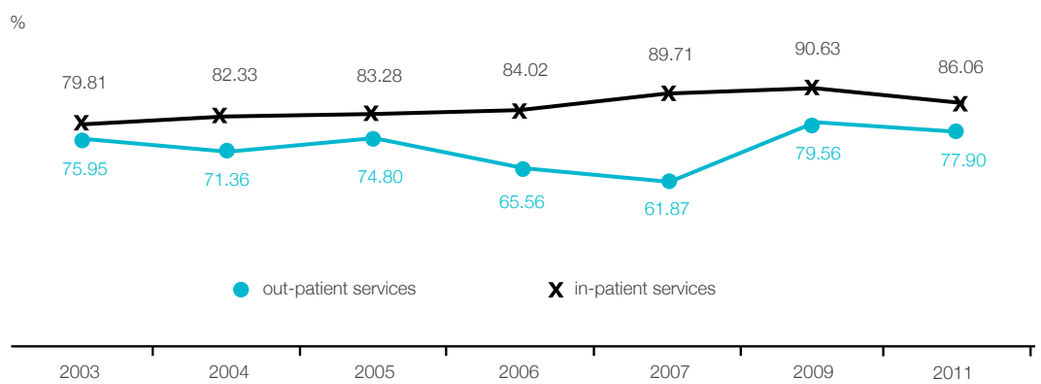
Source: Bureau of Insurance Information Technology, NHSO

3.2 Healthcare uses of patients under the Universal Coverage Scheme

In order to achieve UHC implementation, it is important that the beneficiaries are not only covered by related government health insurance schemes but also disbursed for their health service according to the benefit packages. However, there are three main reasons that beneficiaries are willing to pay out of pocket for their health services. Firstly, they want to access to care at a specific health facility, i.e., private clinics that are not registered to their health insurance. Secondly, they access to service at their main contract hospital but do not want to utilize according to their benefit package. Thirdly, they access to service at their main contract hospital but the service was not covered under their benefit package.

According to health survey by the National Statistics Office and services data submitted to the NHSO, acceptance rate of out-patient service and in-patient services are analyzed shown in figure 14. acceptance rate of in-patient services has been increase 79.81% in FY2003 to 86.06% in FY2011. However, a peak rate of the acceptance rate of in-patient services during FY2003 to FY2011 was 90.63% in FY2009. In the same period, acceptance rate of out-patient services has been increase 75.95% in FY2003 to 77.90% in FY2011. However, the acceptance rate of out-patient services were downward from FY2003 to FY2004, FY2005 to FY2007, and FY2009 to FY2011. In the same period, the acceptance rate of in-patient services was higher than that of out-patient services.

Figure 14 Acceptance rate of out-patient service and in-patient service, FY2003–FY2011

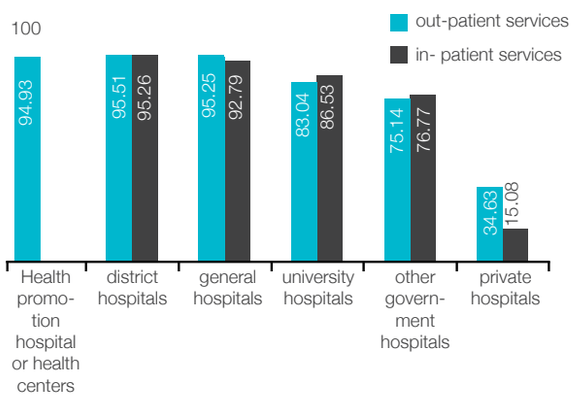


Source: Health and welfare survey, National Statistics Office
Analyzed by Bureau of Plan and Policy, NHSO

According to results of survey by the National Statistics Office, when classified the acceptance rate of out-patient service and in-patient services according to affiliates of hospitals, hospitals affiliated to the office of permanent secretary of the ministry of public health (MOPH); i.e., regional/provincial hospitals, district hospitals, health promotion hospitals or health centers; have higher rate (>90%) than others as shown in figure 15.

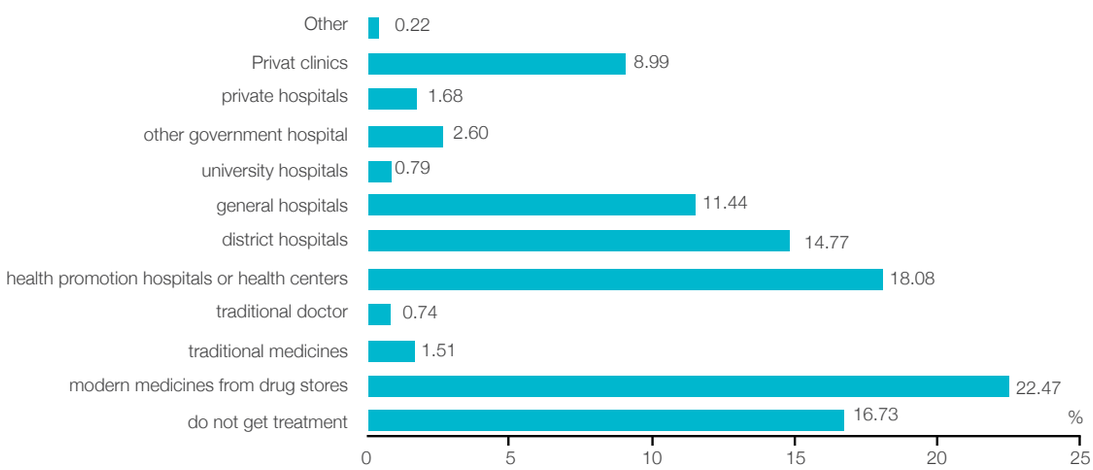
According to the health survey by the National Statistics Office in FY2011, choices of care the respondents chose when they were sick and did not admit to hospitals were "modern medicines from drug stores" (22.47%), "access to care at health promotion hospital or health centers" (18.1%), "do not get treatment since the symptoms are minor or cannot access to care" (16.7%), "access to care at district hospitals" (14.8%), respectively as shown in figure 16. For the respondents who chose to access to care in health facilities, types of the health facilities were classified as shown in figure 17. Most of out-patient services were accessed at health promotion hospitals or health center (30.88%), district hospitals (25.22%), general hospitals (19.5%), and private clinics (15.36%), respectively. Most of in-patient services were accessed at general hospitals (46.86%), district hospitals (35.10%), private hospitals (7.40%), other government hospitals (5.8%), respectively.

Figure 15 Acceptance rate of out-patient service and in-patient service classified by affiliates of hospitals, FY2011



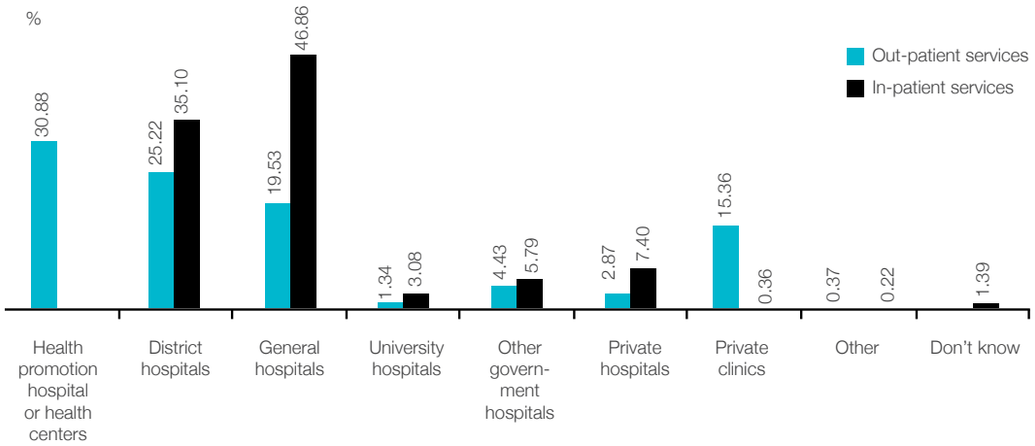
Source: Health and welfare survey, National Statistics Office, 2011
Analyzed by Bureau of Plan and Policy, NHSO

Figure 16 Choices of care the consumers chose when they were sick and did not admit to hospitals, FY2011



Source: Health and welfare survey, National Statistics Office, 2011
Analyzed by Bureau of Plan and Policy, NHSO

Figure 17 Percentage of out-patient service and in-patient service classified by health facility types, FY2011

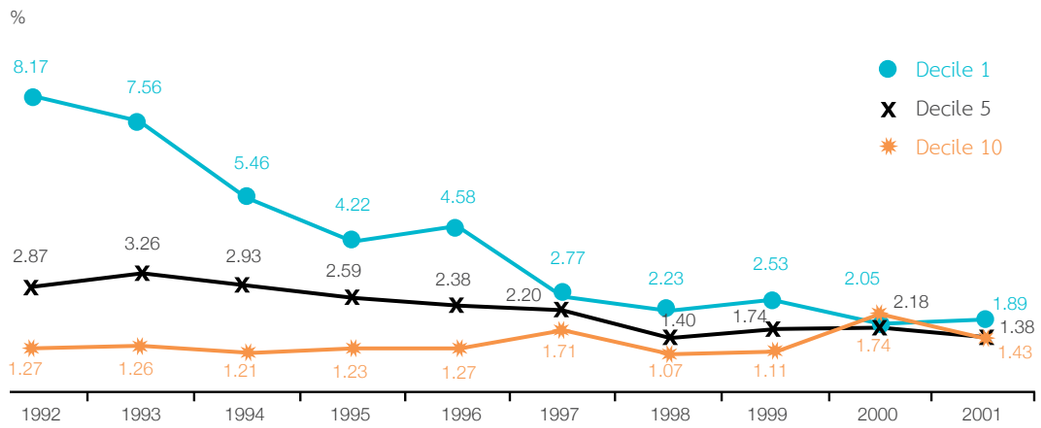


Source: Health and welfare survey, National Statistics Office, 2011
Analyzed by Bureau of Plan and Policy, NHSO

3.3 Household's Burden on Health expenditures

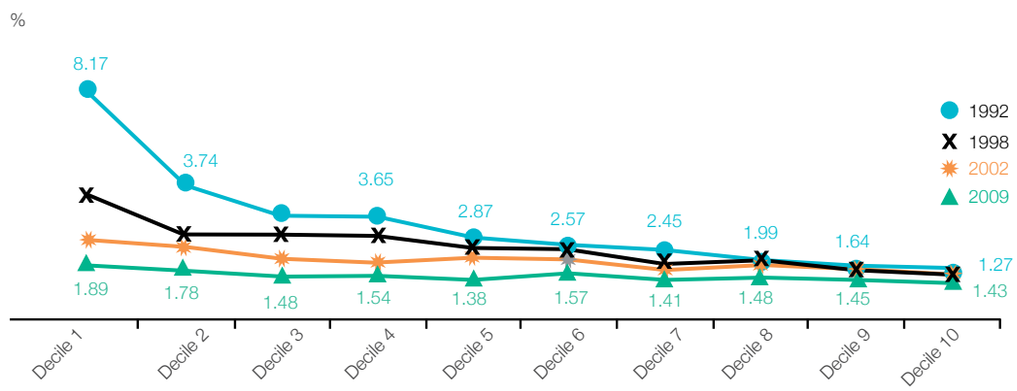
According to analysis report by Associate Prof. Supon Limwattananonta of Khon Kaen University using data from the national survey of the National Statistics Office as shown in figure 18. Percentage of household's health expenditure to household's income in the poorest group (Decile 1 group) was dramatically reduced from 8.17% in FY1992 to 1.89% in FY2009 while this in the richest group (Decile 10 group) was quite steady between 1.1% and 2.18% (1.43% in FY2009). The household's health expenditure to household's income in the middle income group (decile 5 group) was also reduced from 2.87% in FY1992 to 1.38% in FY2009. The above results mean that householde's burden on health expenditure has been reduced especially in the poorest group that the rate was closer to the richest group. To show household's burden on health expenditures between each income group, the percentage of household's health expenditure to household's income in each income groups (decile 1 to decile 10 group) in FY1992, FY1998, FY2002, and FY2009 were compared (figure 19) and ratio of the percentage of the poorest group to the richest group was calculated (figure 20). The difference of household's burden on health expenditure of the poorest group to the richest group was dramatically reduce from 6.4 times in FY1992 to 1.3 times in FY2009.

Figure 18 Percentage of household's health expenditure to household's income, FY1992 – 2009



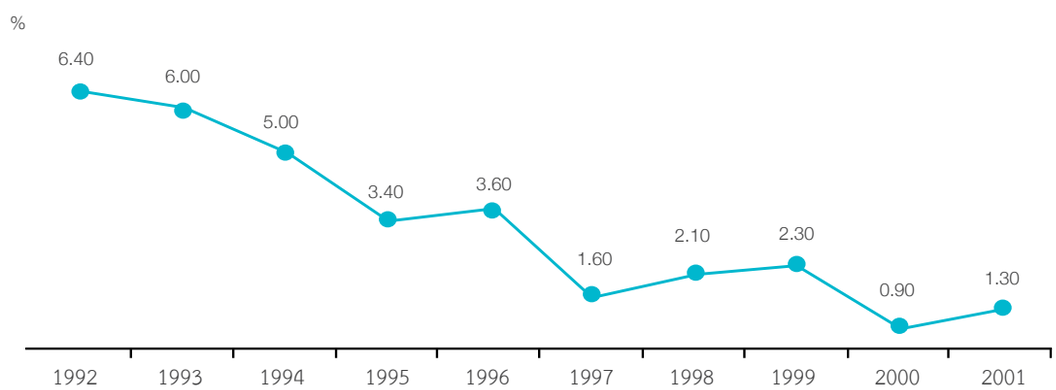
Source: Supon Limwattananonta analyzed from Household socio-economic survey of the National Statistics Office, FY1992 - 2009

Figure 19 Comparison of household's health expenditure to household's income classified by income groups



Source: Supon Limwattananonta analyzed from Household socio-economic survey of the National Statistics Office, FY1992 - 2009

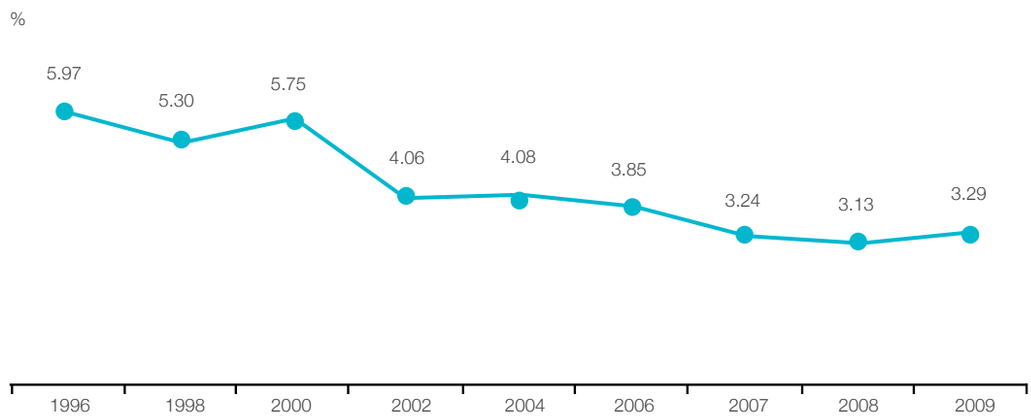
Figure 20 Ratio of Percentage of household's health expenditure to household's income of the poorest group to the richest group, FY1992 – 2009



Source: Supon Limwattananonta analyzed from Household socio-economic survey of the National Statistics Office, FY1992 - 2009

The UHC implementation in Thailand not only can increase equity in health care regardless of income status but also reduce financial disaster of household from health expenditures from 5.97% in FY1996 to 3.29% in FY2009 as shown in figure 21. The reduction was reduced from 280,000 households in FY2000 to 88,000 households in FY2008. (source: Study of Supon Limwattananonta and Viroj Tangcharoensathien, 2010, and Household socio-economic survey, National Statistics Office, 2011)

Figure 21 Percentage of households experienced financial disaster from health expenditures, FY1996 – 2009



Source: Supon Limwattananonta analyzed from Household socio-economic survey of the National Statistics Office, FY1992 - 2009

- 4 -
Healthcare Service Provision and Accreditation

4.1 Healthcare Service Provision

In order to promote accessibility to health care, promoting health facilities and providers so that the beneficiaries can really access to the care is also important. Registered hospitals under the UCS scheme are classified into three categories, i.e., primary care facilities, main contactors, and referral hospitals. Most of the providers and hospitals are affiliated to the ministry of public health; 94.76% (11,404 units) of primary care facilities, 72.34% (1,186 units) of the main contractors, and 87.30% (961 units) of referral hospitals. Details of the registered hospitals are described in Table 3.

The number of main contractors that are not primary care units (PCUs) affilialated to the ministry of public health and other government affiliations is quite constant, while the number of private main contractors is reduced from 61 hospitals in FY2006 to 38 hospitals in FY2013. However, the number of private primary care units is increased from 116 units in FY2006 to 191 units in FY2013, while the number of government primary care units not affiliated to the ministry of public health is reduced from 76 units in FY2006 to only 7 units in FY2013. Details of the number of main contractors classified by their affiliation are shown in table 4.

Table 3 The number of registered health facilities under the UCS scheme, FY2013

Affiliation	Type of hospitals					
	Primary care		Main contractors		Referral Hospitals	
	# of units	%	# of units	%	# of units	%
Ministry of public health	10,806	94.76	858	72.34	839	87.30
Other government affiliations	171	1.50	84	7.08	76	7.91
Private	246	2.16	229	19.31	43	4.47
Local Administration Organization	181	1.59	15	1.26	3	0.31
Total	11,404	100	1,186	100	961	100

Source: Bureau of Registration Administration, NHSO, September 2013

Table 4 The number of main contractors classified by their affiliation, FY2006 – 2013

Main contractors by affiliation	2006	2007	2008	2009	2010	2011	2012	2013
Ministry of public health	830	834	849	839	844	850	855	858
- hospitals	826	830	836	830	831	831	832	834
- health center/PCUs	4	4	13	9	13	19	23	24
Other government affililations	148	153	155	83	81	83	83	84
- Hospitals and networks	72	73	75	72	75	76	75	77
- health center/PCUs	76	80	80	11	6	7	8	7
Private	177	212	205	217	218	211	227	229
- Hospitals and networks	61	60	55	50	49	44	40	38
- health center/PCUs	116	152	150	167	169	167	187	191
Local Administration Organization	-	-	-	10	12	14	15	15
- Hospitals and networks				10	2	2	3	3
- health center/PCUs				-	10	12	12	12
Over all	1,155	1,199	1,209	1,149	1,155	1,158	1,180	1,186
- Hospitals and networks	959	963	966	962	957	953	950	952
- health center/PCUs	196	236	243	187	198	205	230	234

Source: Bureau of Registration Administration, NHSO, September 2013

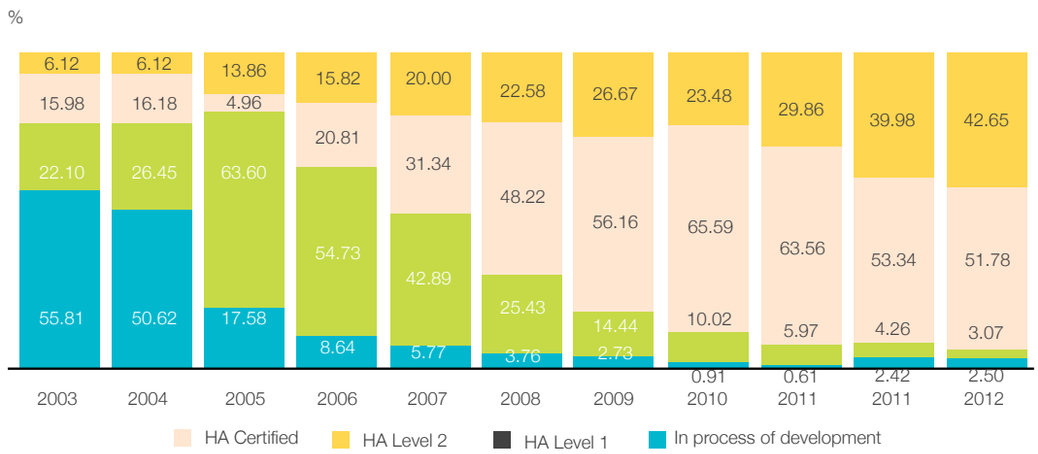
4.2 Quality Audit and Hospital Accreditation

The NHSO has continued to promote quality improvement for its' main contractors and referral hospitals by using hospital accreditation (HA) processes. A proportion of main contractors and referral hospitals that are accredited has continued to increase from only 6.12% in FY2003 to 42.65% in FY2013. When including hospitals that are in level 2 of the accreditation, the proportion of the accredited hospitals is increased from 22.10% (6.12% + 15.98%) in FY2003 to 94.43% (42.65% + 51.78%) in FY2013, as shown in figure 22.

In order to guarantee standard quality of health care to be accessed by the beneficiaries, hospital assessment classified by registered types is performed. The result of the assessment in FY2013 shows that 16.50% of the primary care units are passed while 77.96% of them are conditionally passed; 55.14% of the main contractors are passed while 44.68% of them are conditionally passed; and 7.03% of referral hospitals are passed while 92.50% of them are conditionally passed, as shown in figure 23.

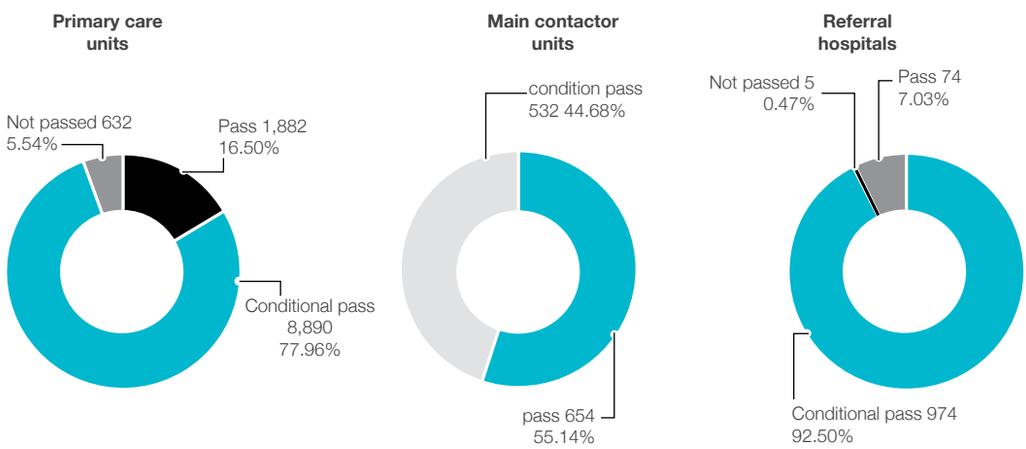
When affiliation of the hospitals is considered, the primary care units and main contractor hospitals both under the ministry of public health and other government affiliation are passed the assessment more than other type of affiliations. However, the referral

Figure 22 Percentage of registered hospitals of the UCS scheme that are accreditted, FY2003-2013



Source: The Healthcare Accreditation Institute, FY2013, analyzed by Bureau of Quality and Health Outcome Monitoring, NHSO

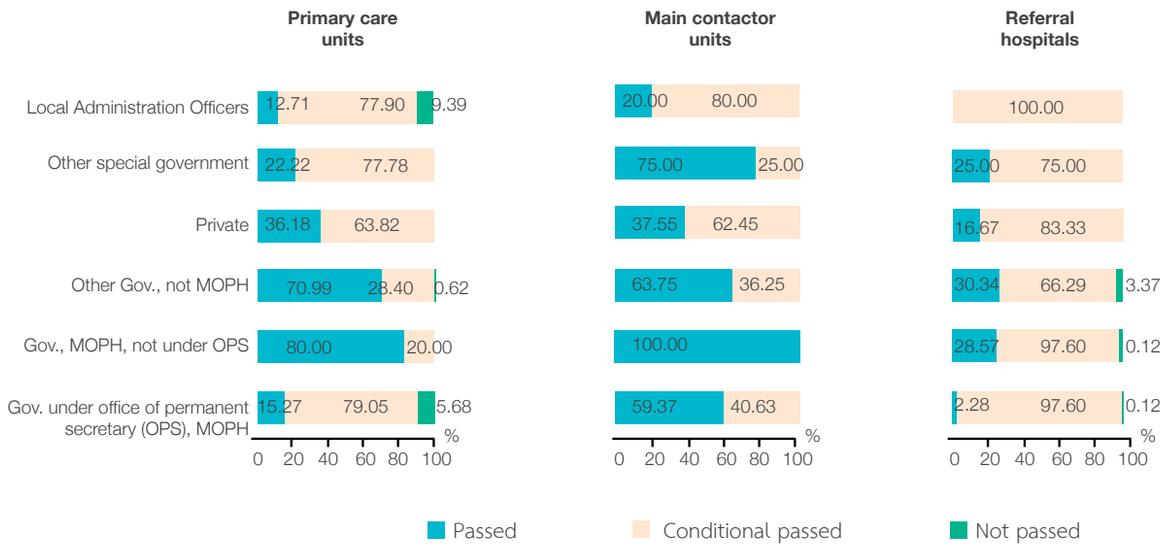
Figure 23 Results of hospital assessment classified by type of registration, FY2013



Source: Bureau of Registration Administration, NHSO, September 2013

hospitals under other government affiliations are passed more than the ones under the ministry of public health. Details of the assessment classified by hospital's affiliation are shown in figure 24.

Figure 24 Percentage of hospital assessment results classified by hospital's affiliation, FY2013



Source: Bureau of Registration Administration, NHSO, September 2013

- 5 -

Accessibility, Efficiency, Quality and Effectiveness in Healthcare System

In the UHC implementation in order to promote health security to the population, accessibility to quality of care without financial risk to their household while also promoting equity and efficiency of the system are important aspects. The benefit packages for the UHC implementation are covered comprehensive care from promotion, prevention, curative and rehabilitation services. Therefore, this report is described performance of the UHC imple-mentation in the following seven main categories.

1. Out-patient Services
2. In-patient Services
3. Disease Management or Vertical Programs
   - 3.1. Heart diseases and cerebo-vascular diseases
   - 3.2. HIV/AIDS
   - 3.3. Tuberculosis
   - 3.4. Carcinoma
   - 3.5. Chronic Kidney Diseases
   - 3.6. Diabetes Mellitus and Hypertension
   - 3.7. Other disease management or vertical programs
4. Health Promotion and Disease Prevention
5. Medical Rehabilitation Services
6. Thai Traditional Medicines
7. Drug and Medical Instruments

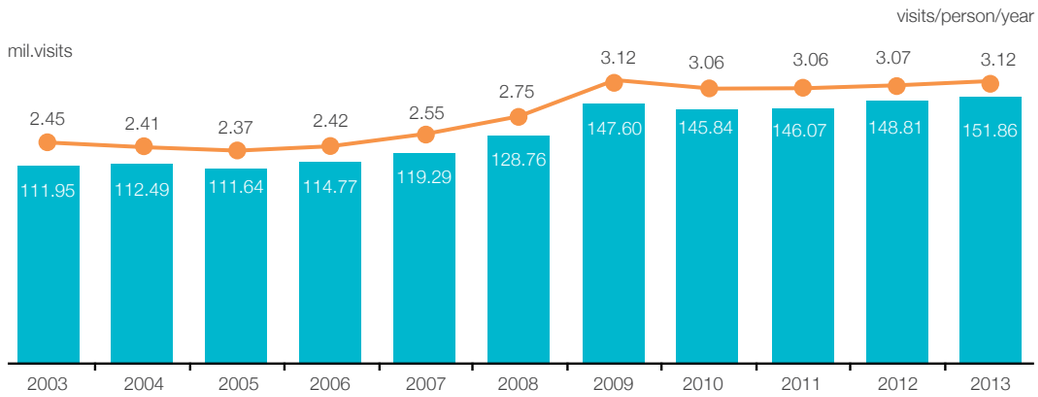
To ease report understanding, details in sections of out-patient services, in-patient services, disease management/vertical programs, and health promotion and disease prevention are described as linked topics from all aspects including accessibility, effec-tiveness, quality of care, and outcome. For example, health services in some diseases may include from disease screening, diagnosis, and treatment in order to reflect service rate, quality of care, and health outcome, e.g., fatality rate, complication rate.

5.1 Out-patient Services

Accessibility to out-patient service can be used to measure the overall access to health services since it is accessed by most people when comparing to other types of health services. It is expected that accessing to out-patient services would be increased causing from implementing the UHC and increasing of chronic disease patients. Out-patient services data between FY2003 and FY2013 found that the number of beneficiaries under the UCS scheme have been increased from 111.95 million visits or 2.45 visit/person/year in FY2003 to 151.86 million visits or 3.12 visit/person/year in FY2013, as shown in figure 25.

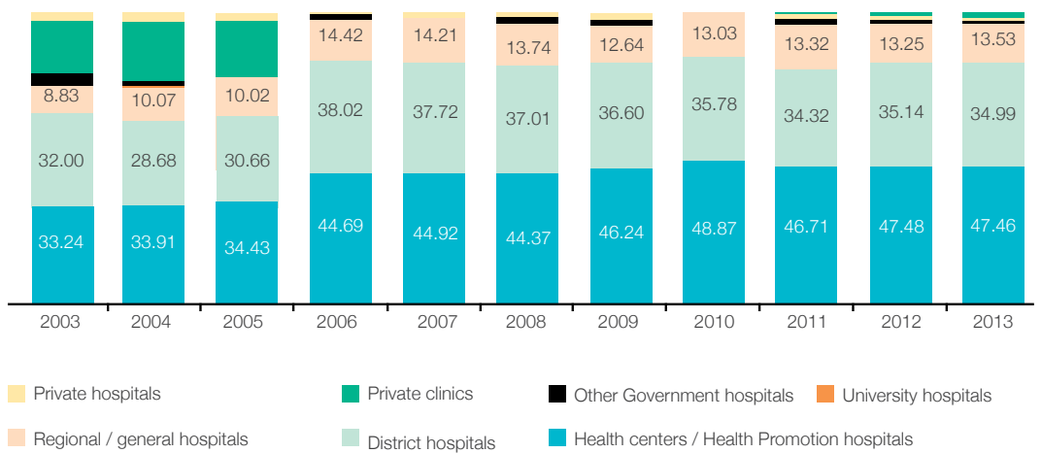
When classifying out-patient service at health center or PCU, and at district or general hospitals, the result found that accessing to out-patient service at health center or PCU is more often than other types of hospitals; increasing from 33.24% in FY2003 to 47.46% in FY2013. The rest of accessing to the services in FY2013 are district hospitals (34.99%) and regional/general hospitals (13.53%), respectively as shown in figure 26.

Figure 25 The number of out-patient visits and utilization rate per person per year of the UCS scheme, FY2003 – 2013



Source: 1) Out-patient data of FY2003-2009 are from 0110RP5 Report, ministry of public health
2) Out-patient data of FY2010 – 2013, NHSO

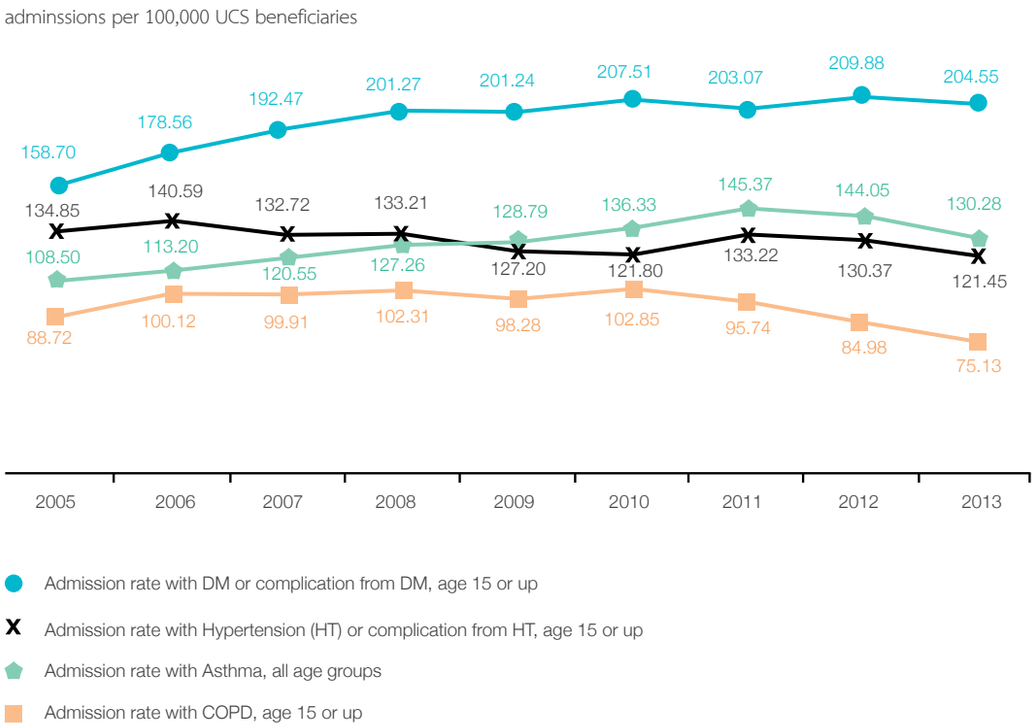
Figure 26 Percentage of out-patient services classified by type of health facilities, FY2003 – 2013



Source: 1) FY2003-2005 data are from health and welfare survey, the National Statistice Office
2) FY2003-2005 data are from 0110RP5 Report, ministry of public health
3) FY2010 – 2013 data are from NHSO, FY2013 is estimated from 8 month of services

Admission rate of preventable admission diseases with ambulatory care sensitivity condition (ACSC) is one of indicator to measure health service performance from quality of care to efficiency and effectiveness of services at primary care level in order to prevent admissions from complicated symptoms of chronic diseases (e.g., DM, hypertension, asthma, and chronic obstructive pulmonary diseases) . By analyzing admission rate with the ACSC conditions in the UCS patients during FY2005-2013, the results found that the admission rate of these conditions have tended to increase during this period. However, the admission rate of the ACSC conditions of asthma and hypertension in FY2013 are lower that they were in FY2005, as shown in figure 27.

Figure 27 Admission rate of the UCS scheme with ACSC conditions of chronic diseases, FY2005-2013



Note: Asthma has been managed as vertical program under the UCS scheme since FY2009
Source: In-patient data, NHSO, date of data on December 22, 2013

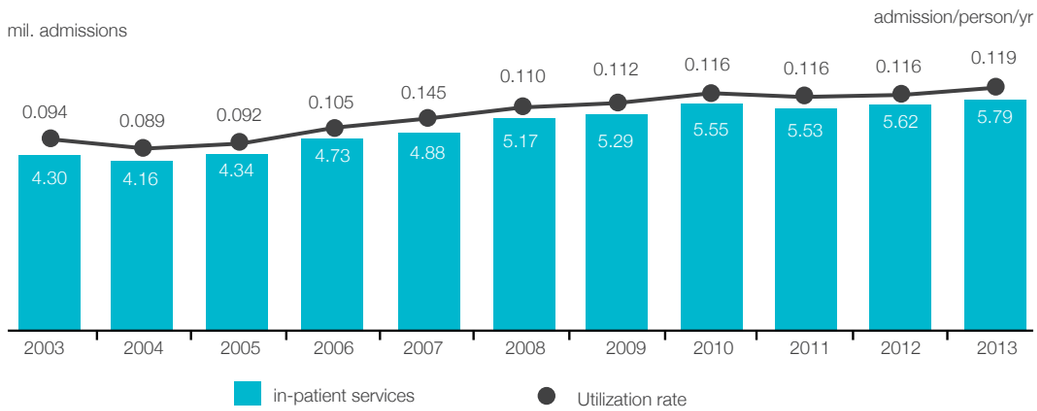
5.2 In-patient Services

Utilization rate of in-patient services under the UCS scheme has continued to increase from 4.30 million admissions or 0.094 admissions/person/year in FY2003 to 5.79 million admissions or 0.119 admissions/person/year in FY2013, as shown in figure 28. However, the rate is slightly increase during FY2008 – 2013; this is a good sign of efficiency of the UHC system since cost of in-patient service is high, therefore, its' high rate of increase may cause inefficiency of the system in long term.

When classifying in-patient service by type of hospitals, the result found that most of in-patient services FY2013 are accessed at district hospitals (48.01%) and regional/general hospitals (40.05%), respectively as shown in figure 29.

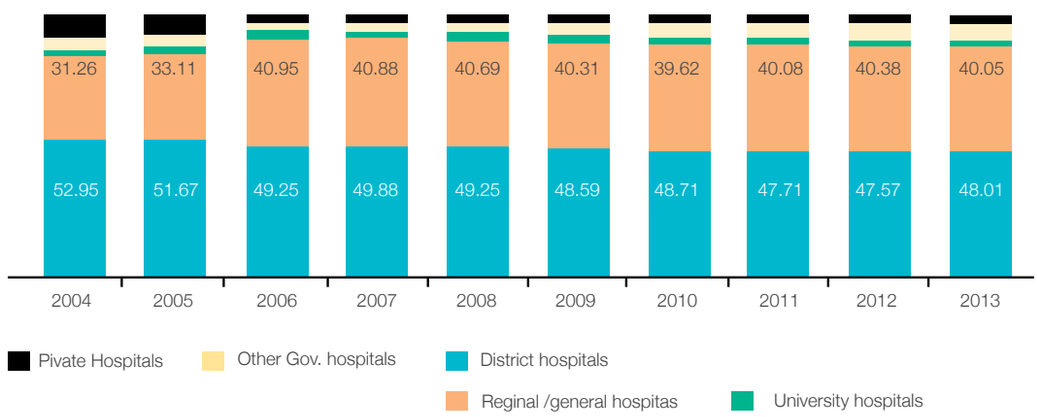
Average days per admission is one of indicator to measure effectiveness of in-patient services since longer admission days will consume more resources. Average days per admission of patients under the UCS scheme

Figure 28 In-patient service under the UCS scheme, FY2003 – 2013



Source: In-patient data, NHSO, date of data on December 2013

Figure 29 In-patient service under the UCS scheme classified by hospital types, FY2003 – 2013



Source: In-patient data, NHSO, date of data on December 2013

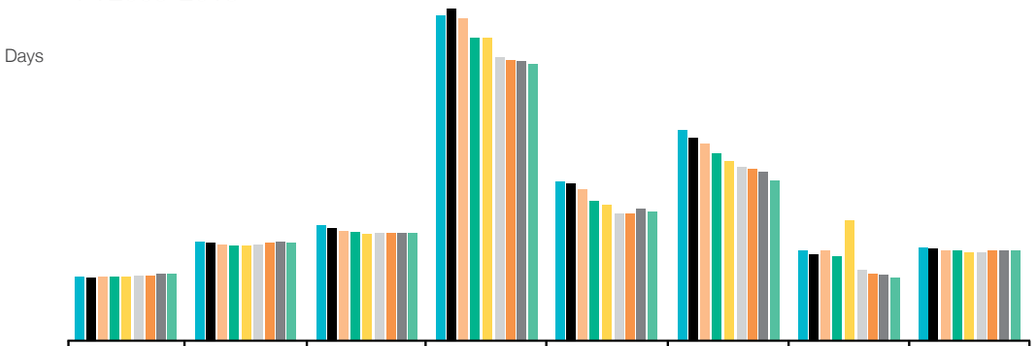
during FY2005-2013 is tended to reduce from 4.27 days per admission in FY2005 to 4.14 days per admission in FY2013. When classify by types and affiliation of hospitals, most of average days per admission are at other government hospitals not under the office of permanent secretary ministry of public health(12.57 days in FY2013), at hospital under medical universities (7.34 days in FY2013), at hospitals under the ministry of defense (5.85 days in FY2013), as shown in figure 30.

Average days per admission classified by most diseases as shown in table 5 is also tended to reduce. However, this seems to be more efficiency since service quality and fatality rate of these diseases have not been reduced.

Case Mix Index (CMI) is an indicator to measure severity of diseases calculated from Relative Weight (RW) or Adjusted Relative Weight (AdjRW) of all in-patient 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 in-patient service under the UCS scheme is increased from 0.81 in FY2006 to 1.09 in FY2013; this increasing patthern is also true if classifying by types and affiliation of hospitals, as shown in figure 31.

Figure 30 Average days per admission classified by types and affiliations of hospitals, FY2005-2013



	District Hospitals	General Hospitals	Regional Hospitals	Other gov. not under OPS, MOPH	Military Hospitals	Universiry Hospitals	Private	Total
2005	2.91	4.54	5.24	14.78	7.21	9.62	4.13	4.27
2006	2.92	4.48	5.12	15.00	7.12	9.24	3.98	4.23
2007	2.92	4.43	5.04	14.59	6.88	8.97	4.13	4.19
2008	2.92	4.32	4.92	13.79	6.39	8.52	3.81	4.11
2009	2.95	4.32	4.88	13.70	6.16	8.17	5.43	4.07
2010	2.99	4.39	4.85	12.82	5.84	7.95	3.27	4.09
2011	3.05	4.45	4.89	12.74	5.82	7.82	3.07	4.15
2012	3.09	4.51	4.91	12.70	5.97	7.68	2.99	4.17
2013	3.07	4.49	4.89	12.57	5.85	7.34	2.89	4.14

Source: In-patient data, NHSO, date of data on December 2013

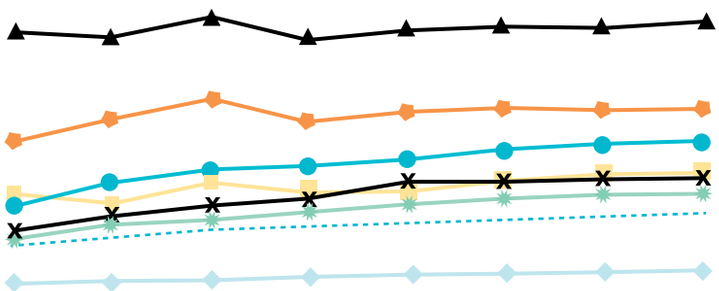
Table 5 Average days per admission classified by diseases, FY2005-2013

ID	Disease	2005	2006	2007	2008	2009	2010	2011	2012	2013
1	Tuberculosis	7.29	7.18	7.21	7.23	8.01	8.22	8.21	8.18	7.92
2	AIDS	7.57	7.60	7.63	7.49	7.54	7.75	7.67	7.66	7.66
3	Liver cancer	5.55	5.46	5.35	5.25	5.26	5.39	5.12	5.14	4.84
4	Lung cancer	7.08	6.86	6.74	6.25	5.96	6.09	6.27	6.00	5.80
5	Breast cancer, malignant in adult aged 30 years and older	5.17	5.20	4.91	4.60	4.72	4.89	5.13	4.95	4.75
6	Cervix cancer, malignant in adult aged 30 years and older	7.96	7.55	6.71	6.28	6.28	5.98	6.20	5.67	5.66
7	leukaemia	9.29	9.21	8.88	8.40	8.63	8.55	8.33	8.02	7.91
8	lymphoma	8.14	7.98	7.61	7.59	7.20	7.61	7.05	6.72	6.83
9	DM or complications from DM,5.124.96 aged 15 years and older			4.71	4.48	4.34	4.21	4.18	4.03	3.84
10	Ischaemic heart diseases	4.40	4.30	4.26	4.13	4.13	4.07	4.07	4.01	3.94
11	Stroke, aged 15 years and older	7.30	7.22	6.99	6.65	6.70	6.74	6.61	6.60	6.46
12	Chronic Renal Failure (CRF)	4.12	4.06	3.81	3.53	3.44	3.34	3.32	3.70	3.93
13	Head injury: intracrania injury type	5.69	5.38	5.26	5.11	5.23	5.16	5.32	5.46	5.35
14	COPD, aged 15 years and older	4.64	4.55	4.43	4.31	4.61	4.14	4.23	4.22	4.21

Source: In-patient data, NHSO, date of data on December 2013

Unnecessary surgeries, e.g., cesarean section, are usually consume higher resources than normal cases. Unit cost for cesarean section is higher than normal labour. Cesarean section under the UCS scheme has continued to increase from 18.20% in FY2005 to 27.58% in FY2013; this increasing patthern is also true if classifying by types and affiliation of hospitals, as shown in figure 32. This shows that elective cesarean delivery is existed.

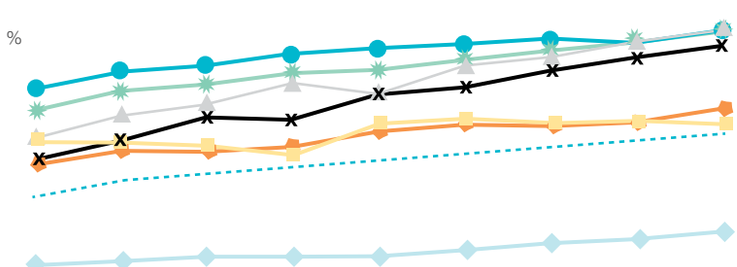
Figure 31 Adjusted CMI of in-patient service under theUCS scheme, FY2006-2013



	2006	2007	2008	2009	2010	2011	2012	2013
District hospitals	0.47	0.52	0.52	0.54	0.56	0.58	0.60	0.62
General hospitals	0.88	0.99	1.04	1.10	1.13	1.21	1.24	1.26
Regional hospitals	1.19	1.32	1.45	1.49	1.55	1.61	1.67	1.70
University hospitals	2.61	2.60	2.75	2.58	2.64	2.66	2.66	2.71
Other gov. not under MOPH	1.70	1.88	2.03	1.84	1.93	1.95	1.95	1.97
Military hospitals	1.23	1.18	1.34	1.25	1.30	1.37	1.42	1.43
Private	0.91	1.05	1.14	1.20	1.33	1.34	1.36	1.38
Total	0.81	0.88	0.94	0.96	1.01	1.05	1.08	1.09

Source: In-patient data, NHSO, date of data on December 2013

Figure 32 Cesarean section rate under the UCS scheme classified by hospital types, FY2005- 2013



	2005	2006	2007	2008	2009	2010	2011	2012	2013
District hospitals	6.61	7.29	7.94	7.92	8.20	8.97	10.16	10.88	11.99
General hospitals	31.36	34.30	35.56	36.55	37.72	38.97	40.64	41.96	43.72
Regional hospitals	34.50	36.89	38.20	39.76	40.62	40.98	42.20	41.91	43.88
Other gov. not under MOPH	25.70	26.28	25.81	25.46	27.92	28.73	28.75	29.41	29.13
Military hospitals	22.61	24.56	24.77	26.94	26.27	27.07	28.57	29.19	31.14
University hospitals	26.35	29.65	31.77	35.09	33.77	37.95	39.63	37.17	38.82
Private	23.21	26.22	29.95	29.52	33.52	34.80	37.25	39.36	41.24
Total	18.20	20.20	21.06	21.90	22.80	23.70	25.32	25.95	27.58

Source: In-patient data, NHSO, date of data on December 2013

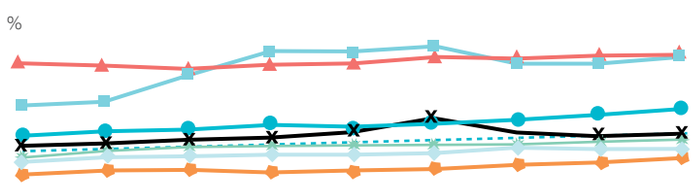
Re-admission rate within 28 days after last discharge is another indicator to measure quality of in-patient care or effectiveness of last treatment. In FY2013, the average re-admission rate is 14.08%; most of re-admission rates are in university hospitals (22.70%), hospitals not under the ministry of public health (22.70%), regional hospitals (16.99%), general hospitals (13.58%), and private hospitals (13.22%), as shown in figure 33.

When consider re-admission rate within 28 days after last discharge classified by six specific diseases, diseases with high re-admission rate in FY2013 ranked in ascending order are COPD (25.68%), chronic renal failure (20.85%), asthma (15.14%), DM or complication from DM (8.81%), respectively. Re-admission rate within 28 days after last discharge of hypertension or complication from hypertension is only 2.95%. Re-admission rates within 28 days after last discharge with most diseases, except asthma, tend to be reduced from FY2005 to FY2013, as shown in figure 34.

When classified re-admission rate within 28 days after last discharge with the six specific diseases by types or affiliation of hospitals, the highest rate of re-admission of COPD, chronic renal failure, and ischemic heart disease are at private hospitals (28.07%), district hospital (21.21%), and hospital under the ministry of defense (20.13%), respectively. Details of other diseases are shown in figure 35.

Adverse events that may happen from errors of treatments, and/or delays in diagnosis or treatment can be used to evaluate quality of care. Fatality rate within 30 days after treatments is one of indicators that is used to reflect quality of care in health system. Figure 36 represents comparison between fatality rate

Figure 33 Re-admission rate within 28 days after last discharge, classified by hospital types, FY2005 – 2013

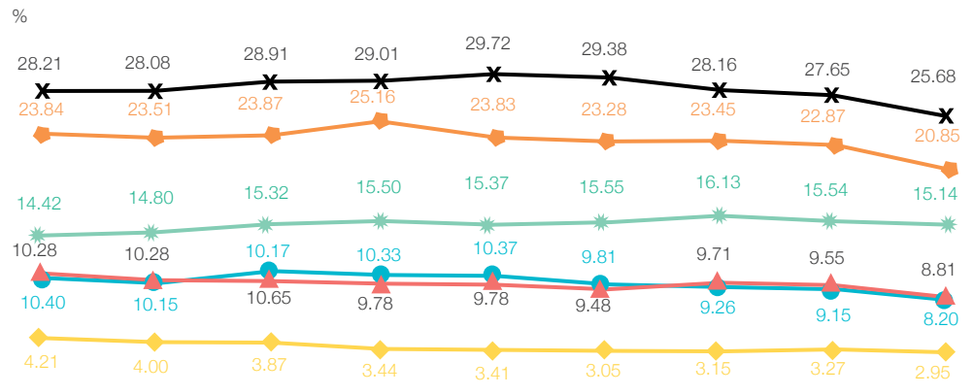


	2005	2006	2007	2007	2008	2009	2010	2011	2012
District Hospitals	10.99	11.41	11.52	11.79	11.75	11.90	12.50	12.55	12.42
General Hospitals	11.29	11.57	11.94	12.37	12.50	12.85	12.99	13.32	13.58
Regional Hospitals	13.98	14.28	14.73	15.14	14.95	15.11	15.52	16.22	16.99
Other gov. not under MOPH	17.17	17.85	20.68	23.09	23.17	23.71	21.87	21.86	22.70
Military Hospitals	9.72	10.22	10.16	9.95	10.12	10.29	10.76	11.03	11.58
University Hospitals	21.89	21.96	21.33	21.85	21.85	22.70	22.39	22.50	22.70
Private	12.68	12.83	13.36	13.49	14.03	15.80	13.94	12.54	13.22
Total	12.04	12.42	12.70	13.10	13.07	13.42	13.70	13.85	14.08

Note: 1) *In-patient data that discharge type of last admission = "improve" are selected.*
2) *Planned or unplanned admissions cannot be classified. Therefore, the second admission may be planned for follow-up treatment.*

Source: In-patient data, NHSO, date of data on December 2013

Figure 34 Comparison of re-admission rate within 28 days after last discharge of six specific diseases under the UCS scheme, FY2005-2013

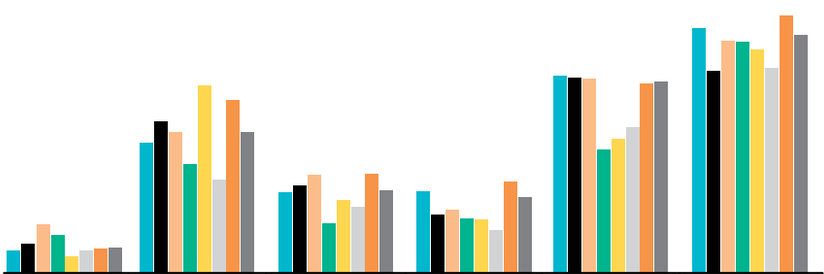


- Re-admission rate withing 20 days after last discharge with **HT or complication from HT**, age 15 or up
- Re-admission rate withing 20 days after last discharge with **ischemic heart diseases**
- Re-admission rate withing 20 days after last discharge with **DM or complication from DM**, age 15 or up
- Re-admission rate withing 20 days after last discharge with **adthma**, all age groups
- Re-admission rate withing 20 days after last discharge with **chronic renal failure**
- Re-admission rate withing 20 days after last discharge with **COPD**, age 15 or up

Note: *1) In-patient data that discharge type of last admission = "improve" are selected.*
2) Planned or unplanned admissions cannot be classified. Therefore, the second admission may be planned for follow-up treatment.

Source: In-patient data, NHSO, date of data on December 2013

Figure 35 Comparison of re-admission rate within 28 days after last discharge with six specific diseases under the UCS scheme classified by hospital types, FY2005-2013



	HT or its complication	Ischemic heart diseases	DIM or its complication	Asthma	Chronic renal failure	COPD
District Hospitals	2.40	14.07	8.53	8.89	21.21	26.53
General Hospitals	3.20	16.19	9.36	6.29	20.98	21.74
Regional Hospitals	5.36	15.27	10.48	6.97	20.84	24.92
Universiry Hospitals	2.58	10.09	7.11	4.47	15.91	22.27
Other gov. not MOPH	4.05	11.83	5.32	6.09	13.26	24.92
Military Hospitals	1.91	20.13	7.94	5.17	14.40	24.06
Private	2.81	18.60	10.56	9.94	20.64	28.07
Total	2.95	15.14	8.81	8.20	20.85	25.68

Note: *1) In-patient data that discharge type of last admission = "improve" are selected.*
2) Planned or unplanned admissions cannot be classified. Therefore, the second admission may be planned for follow-up treatment.

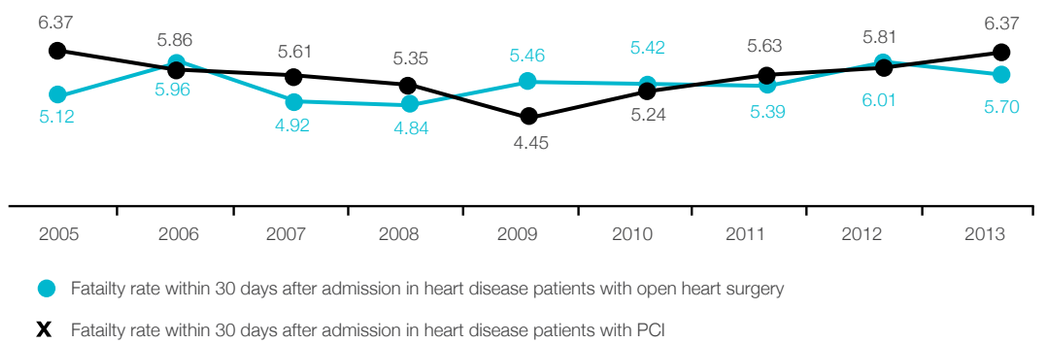
Source: In-patient data, NHSO, date of data on December 2013

within 30 days after last admission in heart disease patients with open heart surgery and PCI procedure during FY2005-2013. Trend of fatality rate within 30 days after last admission in both treatments is quite steady during this period.

Rate of perforated appendix in appendicitis patients and birth asphyxia (mild, moderate, or severe level) under the UCS scheme can also be used to evaluate quality of care. Details of these indicators during FY2005-2013 are shown in figure 37. Surprisingly, these two adverse events have continued to increase during the period.

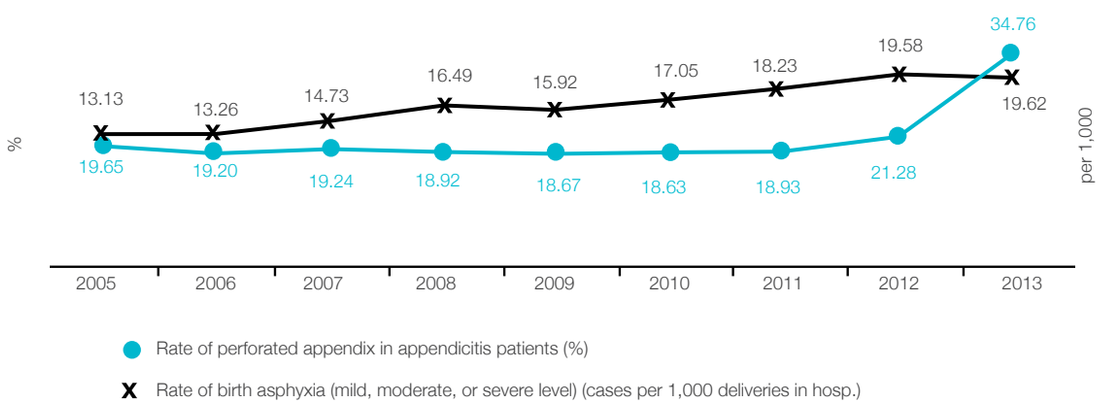
Rate of perforated appendix in appendicitis patients under the UCS scheme classified by types and affiliations of hospitals from FY2005-2013 are shown in figure 38. In FY2013, it is found that most of the rate of perforated appendix are in government hospitals not under the ministry of public health (58.86%), regional hospitals (37.84%),

Figure 36 Fatality rate within 30 days after last admission in heart disease patients with open heart surgery and PCI procedure during FY2005-2013



Source: In-patient data, NHSO, date of data on December 2013

Figure 37 Rate of perforated appendix in appendicitis patients and birth asphyxia (mild, moderate, or severe level) under the UCS scheme, FY2005-2013

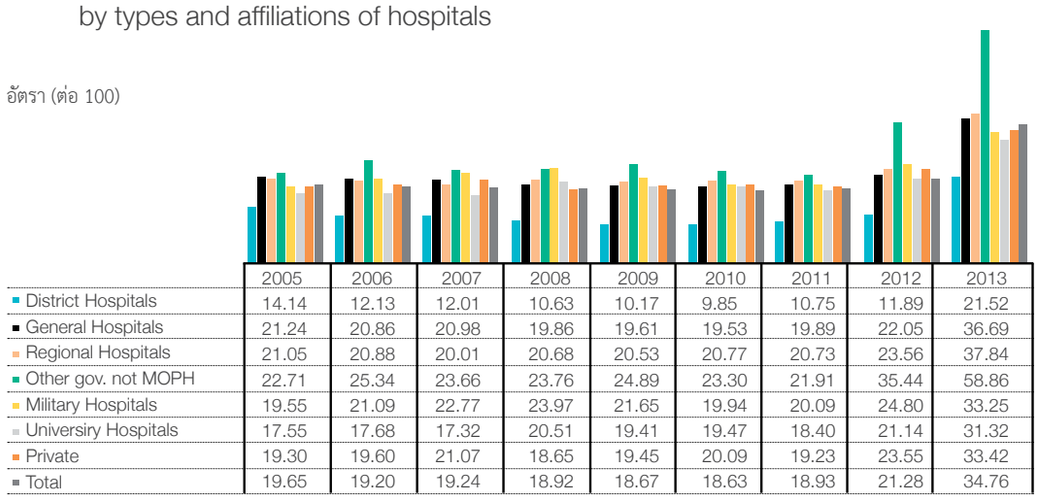


Source: In-patient data, NHSO, date of data on December 2013

provincial hospitals (36.69%), private hospitals (33.42%), and hospitals under the ministry of defense (33.25%), respectively.

For overall outcome of in-patient services, hospital fatality rate or ratio can be used a result from both disease severity and service quality so it can be used as an indicator to measure disease severity reflected from efficiency, quality of care, service system, and local epidemiology of diseases. Figure 39 shows fatality rate within 30 days after last admission of patients under the UCS scheme during FY2005-2013 classified into overall in-patient services, patients aged less than 5 years old, and patients aged 60 years and older; the rate of each group is quite steady and tended to reduce during the period.

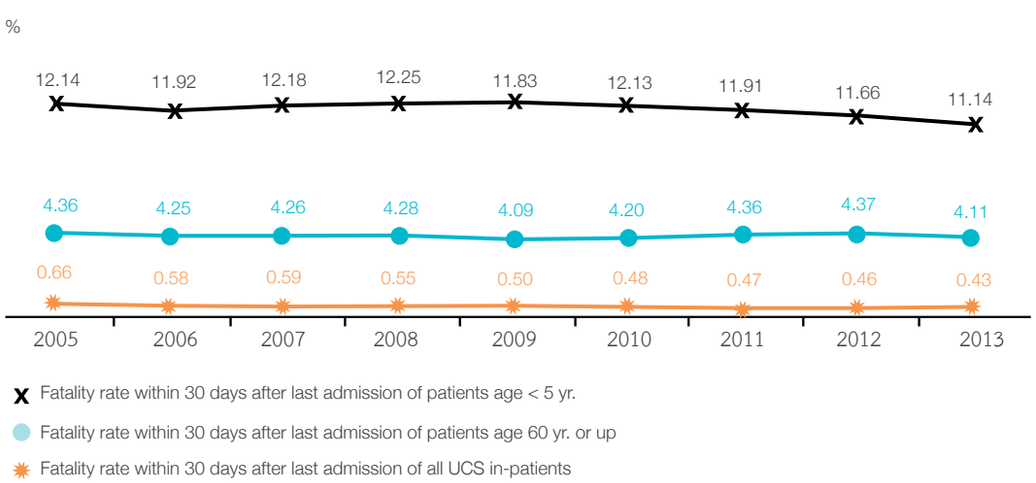
Figure 38 Rate of perforated appendix in appendicitis patients under the UCS scheme classified by types and affiliations of hospitals



	2005	2006	2007	2008	2009	2010	2011	2012	2013
District Hospitals	14.14	12.13	12.01	10.63	10.17	9.85	10.75	11.89	21.52
General Hospitals	21.24	20.86	20.98	19.86	19.61	19.53	19.89	22.05	36.69
Regional Hospitals	21.05	20.88	20.01	20.68	20.53	20.77	20.73	23.56	37.84
Other gov. not MOPH	22.71	25.34	23.66	23.76	24.89	23.30	21.91	35.44	58.86
Military Hospitals	19.55	21.09	22.77	23.97	21.65	19.94	20.09	24.80	33.25
Universiry Hospitals	17.55	17.68	17.32	20.51	19.41	19.47	18.40	21.14	31.32
Private	19.30	19.60	21.07	18.65	19.45	20.09	19.23	23.55	33.42
Total	19.65	19.20	19.24	18.92	18.67	18.63	18.93	21.28	34.76

Source: In-patient data, NHSO, date of data on December 2013

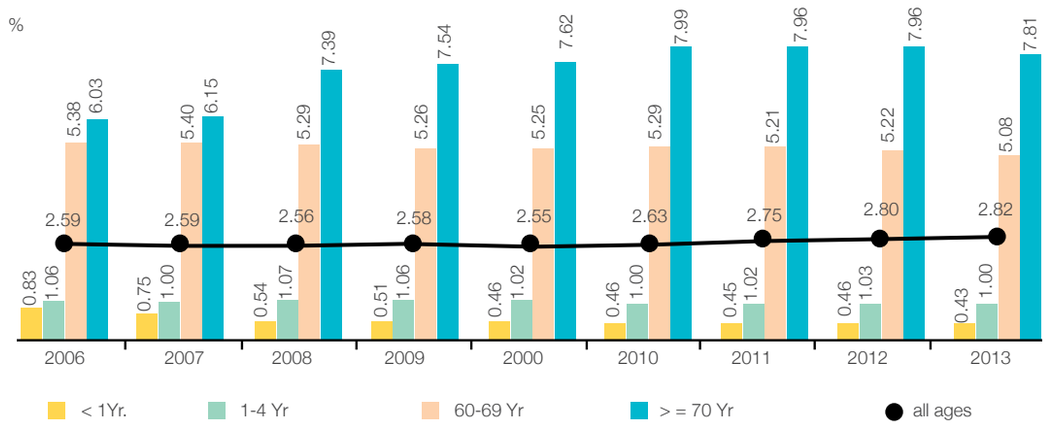
Figure 39 Fatality rate within 30 days after last admission of patients under the UCS scheme during FY2005-2013



Source: In-patient data, NHSO, date of data on December 2013

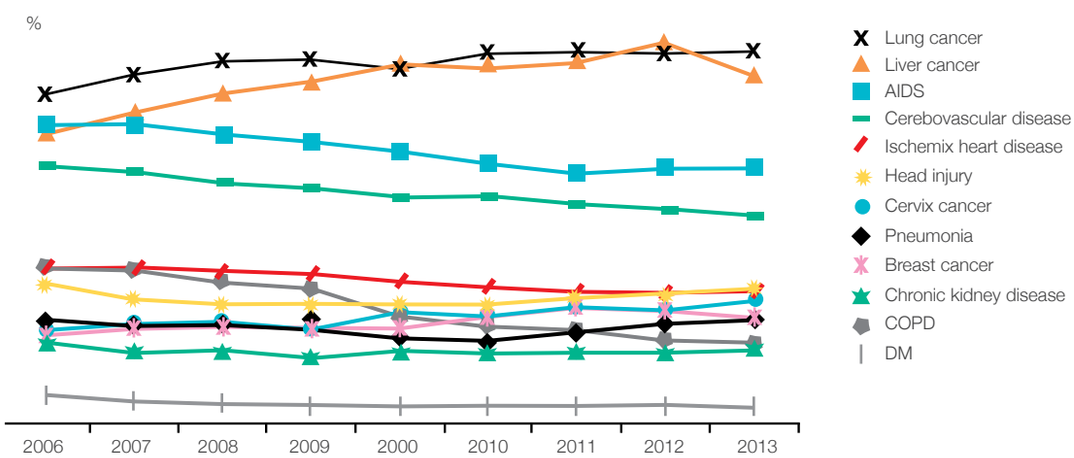
Figure 40 compares fatality rate of overall in-patient services under the UCS scheme classified by age group during FY2005-2013; the rate of overall in-patient service is quite steady between 2.55% and 2.82%. In FY2013, age groups that have high fataliry rate are 70 years and older (7.81%), aged 60-69 years (5.08%), aged 1-4 years (1.00%), and less than 1 year (0.43%), respective. When comparing fatality rate of specific diseases during the same period, the rate in most of diseases tends to reduce or slightly increases during this period except lung cancer and liver cancer that their fatality rates have been increased in the same period of time, as shown in figure 41.

Figure 40 Fatality rate of patients under the UCS scheme classified by age group, FY2005-2013



Source: In-patient data, NHSO, date of data on December 2013

Figure 41 Fatality rate of patients under the UCS scheme classified by specific diseases, FY2005-2013



Source: In-patient data, NHSO, date of data on December 2013

5.3 Disease Management or Vertical Programs

It is important for diseases with high mortality rate, high cost of care, or low utilization rate to require special management in order to improve accessibility, efficiency, effectiveness, or quality of care for the particular diseases. Diseases that are selected for disease management or vertical programs under the UCS schemes, e.g., heart diseases and cerebo-vascular diseases, AIDS, cancers, chronic renal failure, DM, hypertension, and head injuries.

5.3.1 Heart diseases and cerebrovascular diseases

Heart diseases and cerebrovascular diseases is one of top causes of death in Thailand. There are many reasons to select heart diseases and cerebrovascular diseases to a disease management program. For example, they can be cured with on time treatment and available of hospital services; cost of their diagnostic processes, treatment procedures, and surgeries is high. The UCS scheme has continued to promote disease management program on heart diseases and cerebro-vascular diseases not only in improving service quality at tertiary care level but also in increasing effectiveness of treatments and referral system.

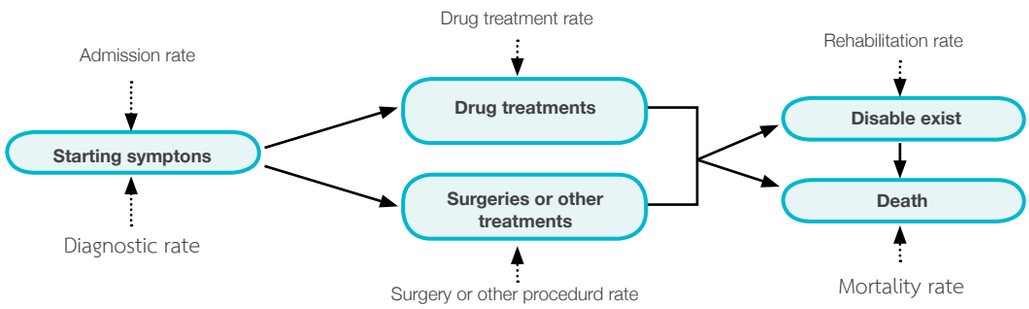
Figure 42 displays concept of follow-up care for heart diseases and cerebrovascular diseases and related indicators that are linked to phasing of diseases from starting symptoms, treatments, and outcome.

The NHSO has continued to support service networks on cardio-vascular diseases in every region since FY2009. There are a total of 24 principle hospitals (or mother nodes) of the networks nationwide; 302 of smaller hospitals (or child nodes) of the networks can provide thrombolytic treatment, while the rest 612 hospitals cannot do.

Accessibility in heart diseases

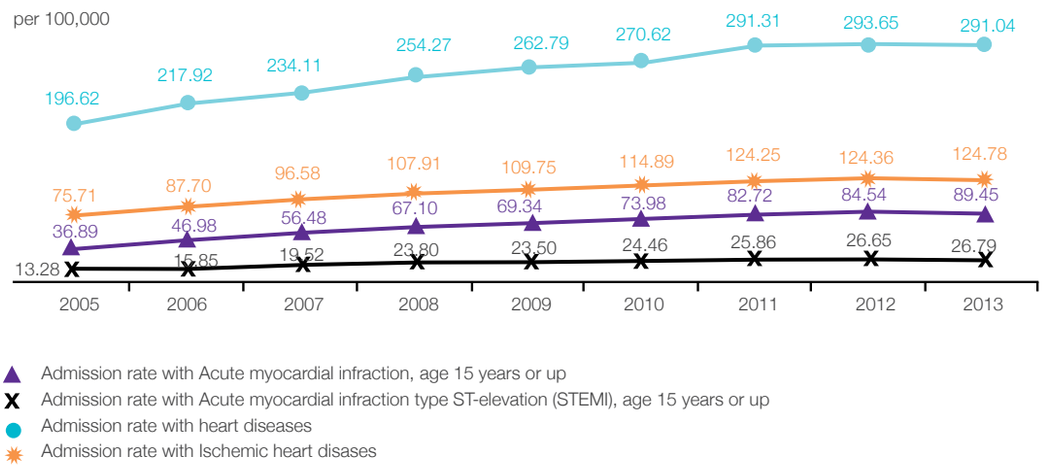
Admission rate of heart diseases, i.e., acute myocardial infarction, acute myocardial infarction type ST-elevation (STEMI),ischemic heart diseases, and heart diseases, under the UCS scheme has been continued to increase

Figure 42 Concept of follow-up care for heart diseases and cerebo-vascular diseases and related indicators



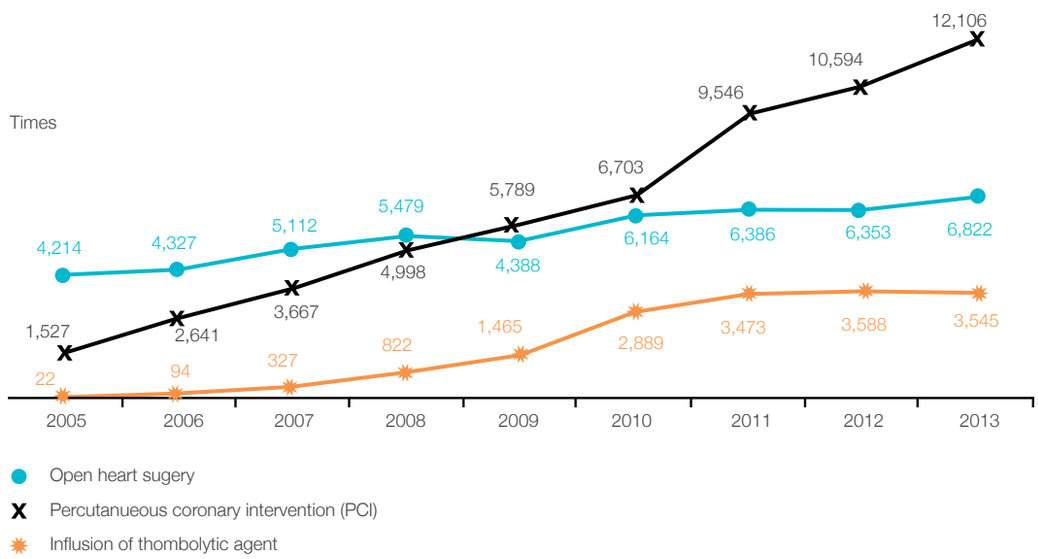
since FY2005, as shown in figure 43. Figure 44 describes the number of heart procedure, i.e., open heart surgery, percutaneous coronary intervention (PCI), and infusion of thrombolytic agent, performed in heart disease patients from FY2005-2013. The number of the procedures done under the UCS scheme has continued to increase since FY2005, i.e., open heart surgeries (from 4,214 times in FY2005 to 6,822 times in FY2013), PCI procedures (from 1,527 times in FY2005 to 12,106 times in FY2013), and infusion of thrombolytic agent (from 22 times in FY2005 to 3,545 times in FY2013).

Figure 43 Admission rate of heart diseases per 100,000 of UCS population, FY2005-2013



Source: In-patient data, NHSO, date of data on December 2013

Figure 44 The number of heart procedures performed in heart disease patients under the UCS scheme, FY2005-2013.



Source: In-patient data, NHSO, date of data on December 2013

When comparing of Fatality rate within 30 days after last admission of heart disease patients with open heart surgery and PCI procedure between FY2005 and 2013, the result found that the rate is quite steady with a very small change during this period of time as shown in figure 45.

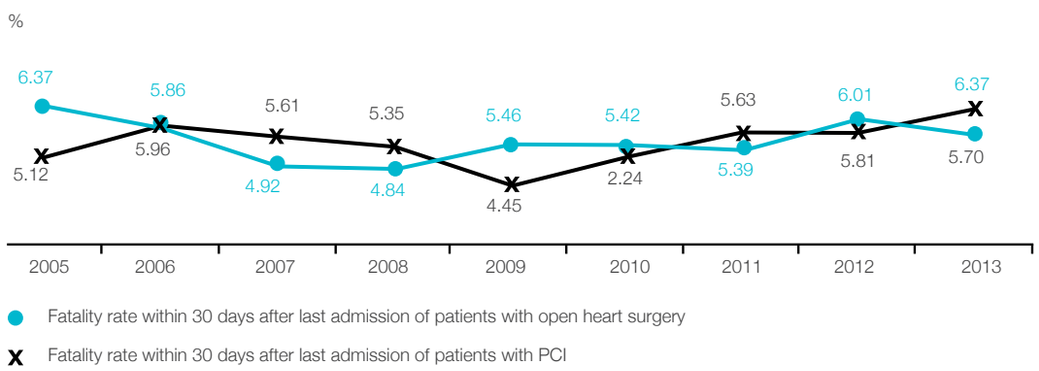
Figure 46 shows admission rate, treatment rate with thrombolytic agent / PCI, re-admission rate within 28 days after the last discharged date, and fatality rate of acute myocardial infarction type ST-elevation (STEMI) aged 15 years and older under the UCS scheme during FY2005 – 2013. The admission rate and the treatment rate have been increases dramatically since FY2005, while the fatality rate is slightly reduced from 16.99% in FY2005 to 15.38% in FY2013. The treatment rate with thrombolytic agent and/or PCI is increases more than 10 times from 6.38 cases per 100,000 of UCS population in FY2005 to 65.65 cases per 100,000 of UCS population in FY2013. The re-admission rate within 28 days during the same period of time is quite steady between 1.62% and 2.55%.

Accessibility in cerebrovascular diseases

Since FY2008, the NHSO has continued to promote capacity improvement in registered hospitals in order to be ready for stroke treatment to prevent disability impacts to the patients. The NHSO has also continued to support service networks on cerebrovascular diseases since FY2009. There are a total of 873 hospitals in the networks (increasing from 843 hospitals in FY2012); 38 of these are principle hospitals (or mother nodes) of the networks; 98 of smaller hospitals (or child nodes) of the networks can provide thrombolytic treatment, while the rest 737 hospital only can diagnose.

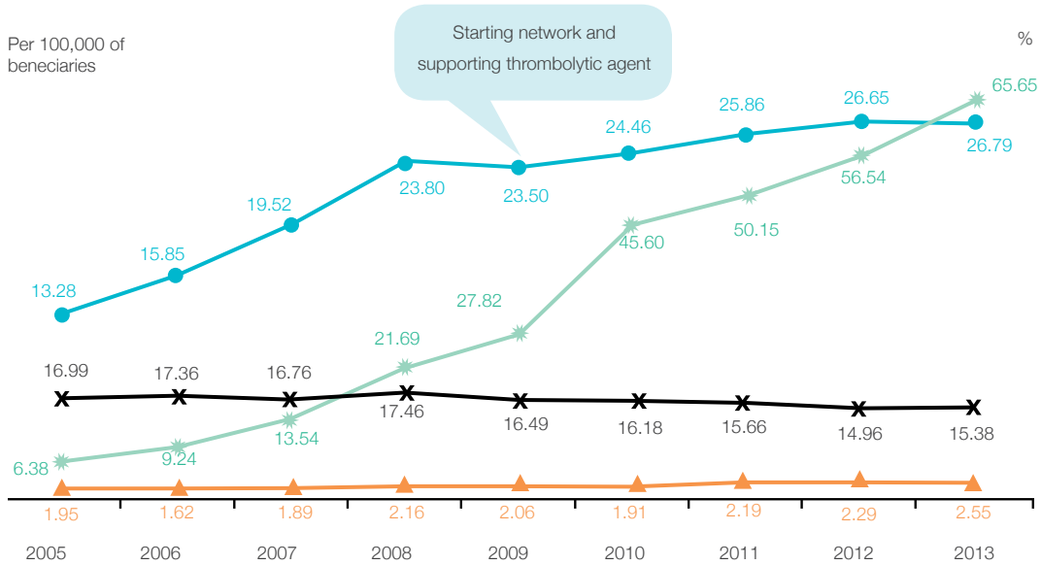
Since FY2005, accessibility of patients with cerebrovascular has been improved as described below. Admission rate with stroke in

Figure 45 Fatality rate within 30 days after last admission of heart disease patients with open heart surgery and PCI procedure, FY2005-2013



Source: In-patient data, NHSO, date of data on December 2013

Figure 46 Related indicators of acute myocardial infarction type ST-elevation (STEMI), aged 15 years and older, UCS scheme, FY2005-2013



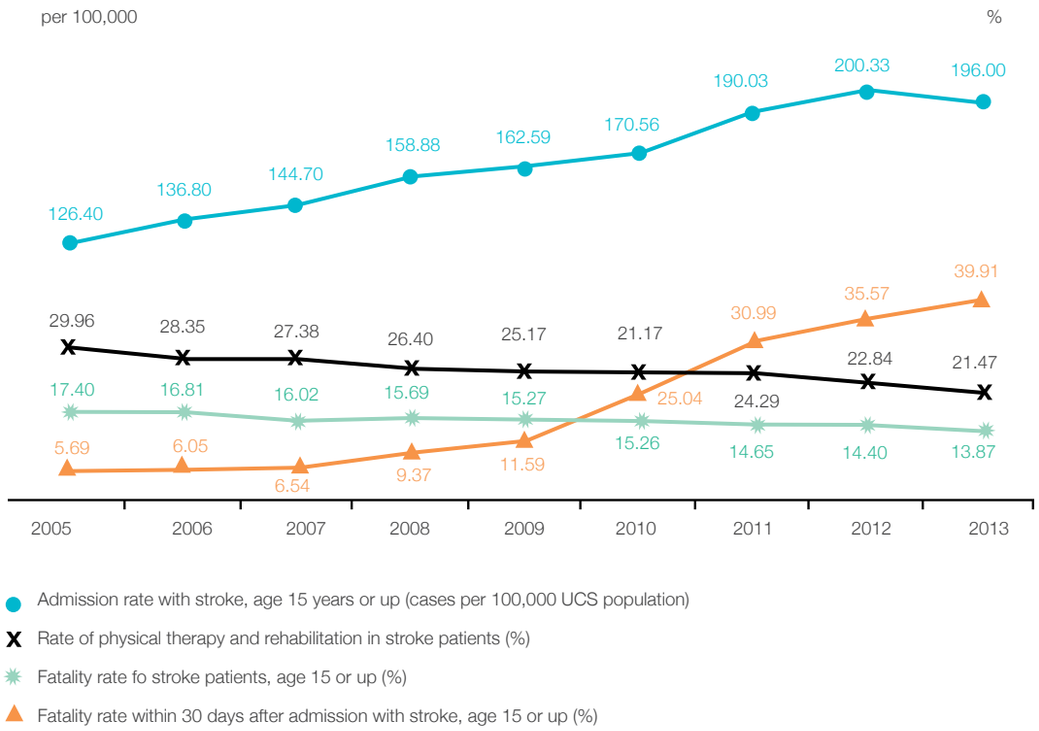
principle hospitals (or mother nodes) of the networks	19	19	20	23	24
child nodes can perform thrombolytic treatment	172	191	219	265	302
child nodes *cannot* provide thrombolytic treatment	408	595	633	650	612

- Admission rate with STEMI in age 15 or up per 100,000 population
- Treatment rate with Thormbolytic and/or Primary PCI in STEMI age 15 or up (%)
- Fatality rate with STEMI age 15 or up (%)
- Re-admission rate within 28 days after last discharge date with STEMI age 15 or up (%)

Source: In-patient data, NHSO, date of data on December 2013

patients aged 15 years and older under the UCS scheme is increased from 126.40 cases per 100,000 of UCS population in FY2005 to 196.0 cases per 100,000 of UCS population in FY2013. The rate of physical therapy and rehabilitation in the same period of time is also increase from 5.69% to 39.91%. As a result, fatality rates and fatality rate within 30 after admission with stroke have continued to reduce during the time, as details shown in figure 47.

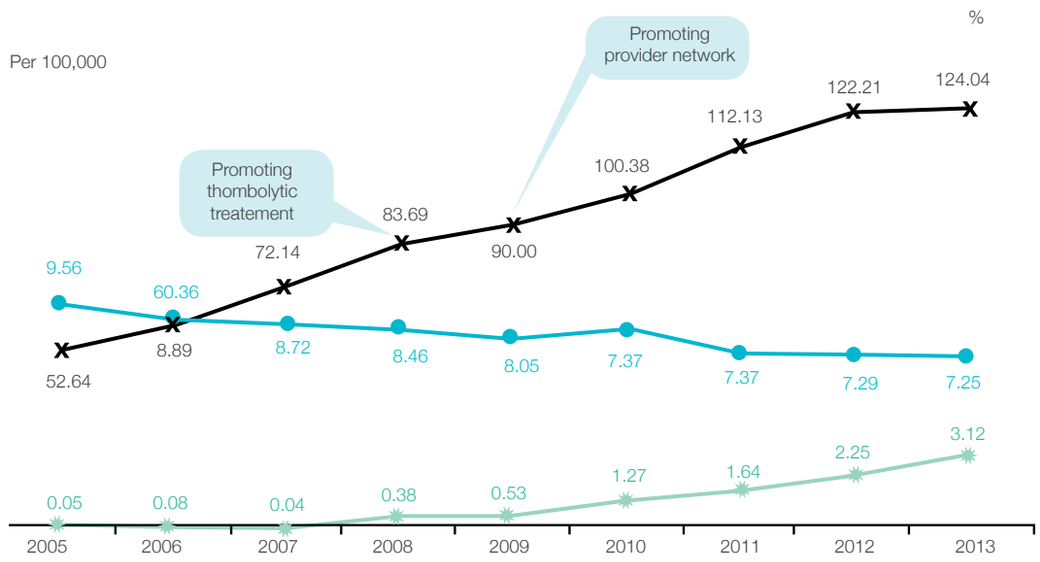
Figure 47 Related indicators in Stroke patient, aged 15 years and older, UCS scheme, FY2005-2013



Source: In-patient data, NHSO, date of data on December 2013

In cerebral infarction patients aged 15 years and older under the UCS scheme, its admission rate is increased from 52.64 cases per 100,000 of UCS population in FY2005 to 124.04 cases per 100,000 of UCS population in FY2013. The rate of thrombolytic treatment in the same period of time is also increase 0.05% to 3.12%. As a result, fatality rates with cerebral infarction has continued to reduce from 9.56% to 7.26% in the same period of time, as details shown in figure 48.

Figure 48 Related indicators in cerebral infraction patients aged 15 years and older, UCS scheme, FY2005-2013



principle hospitals (or mother nodes) of the networks	16	26	34	36	38
child nodes can perform thrombolytic treatment	45	75	102	138	98
child nodes *cannot* provide thrombolytic treatment	152	367	633	669	737

● Admission rate with cerebral infarction, age 15 years or up (cases per 100,000 UCS population)
X Rate of thrombolytic treatment in cerebral infarction patients (%)
✷ Fatality rate of cerebral infarction patients, age 15 years or up (%)

Source: In-patient data, NHSO, date of data on December 2013

5.3.2 HIV/AIDS

AIDS has been one of the top cause of death of Thailand. Therefore, the NHSO has continued to promote interventions to prolong the patients' life and to reduce economic losses of the country. Examples of these interventions are voluntary counseling and testing (VCT) for counseling and blood testing service in risk groups, registration for necessary health treatments and antiviral drugs in HIV/AIDS.

Concept to draw the interventions is built according to epidemiology of the disease covered not only in term of production side (service coverage) but also service outcome, as shown in figure 49.

The NHSO has also supported service system development for HIV/AIDS: 1) counseling service development; 2) service strengthening in order to stop spreading of the virus by promoting patients' health, to reduce opportunistic infections, to reduce disease transmission, to promote overall quality of life;

3) capacity building to health personnel; and 4) monitoring and evaluation as well as promoting Laboratory accreditation (LA).

In FY2013, there is a total 240,697 of HIV/AIDS patients that received ARV treatment. Most of these are patients under the UCS scheme (173,056 patients, or 72%), under the Social Security Scheme (43,283 patients, or 19%), under other private groups or researches (17,322 patient, or 7%), and under the CSMBS (7,036 patients, 3%), respectively as shown in figure 50.

According to The National AIDS Program (NAP Plus), the registration application of the NHSO, there is a total of 291,656 patients registered to the program; 254,640 patients (87.31%) are qualified to get ARV treatment; 221,314 patients (75.88%) are on ARV treatment. Within the group of patients that are on treatment, the number of 175,559 patients (79.33%) are still on treatment on September 30, 2013; 83.29% (146,229 patients) of this group are accessed to the viral load (VL) tests. The results from the viral load test found that 128,255 patients (87.71%) had a number of

Figure 49 Concept for related services and indicators for HIV/AIDS

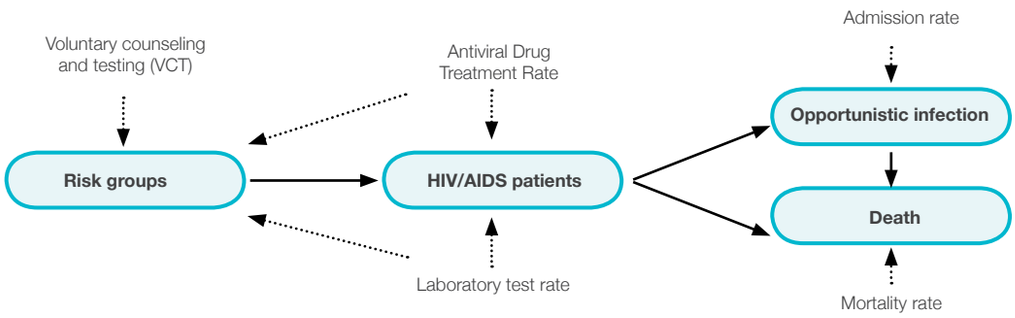
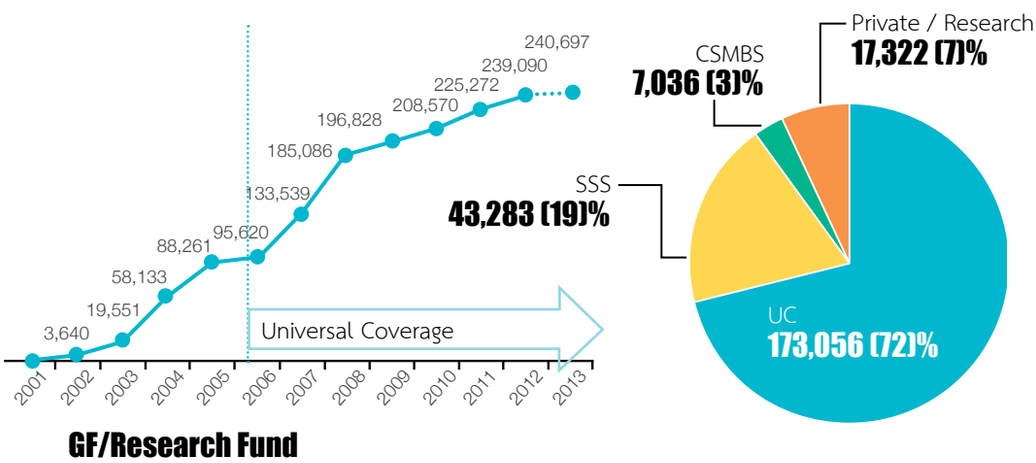


Figure 50 A number of HIV/AIDS patients received ARV treatment, FY2001-2013

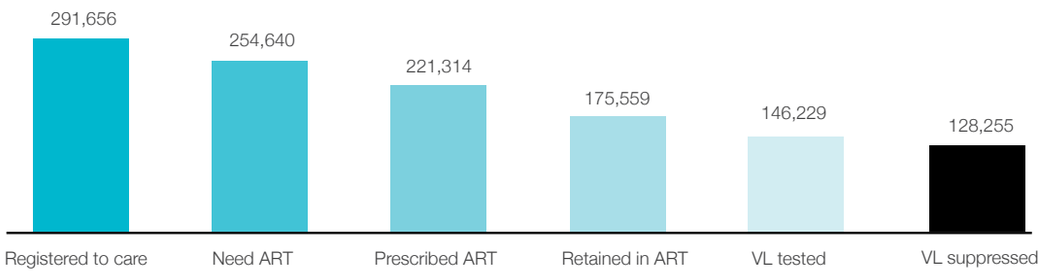


Source: The Natinal AIDS Program (NAP Plus), NHSO, date of data on November 2013

viral load < 50 copies/ml. The overall results found that target groups have accessed to services, i.e., VCT, ARV treatment, and viral load laboratory test, higher than the FY2013 goal.

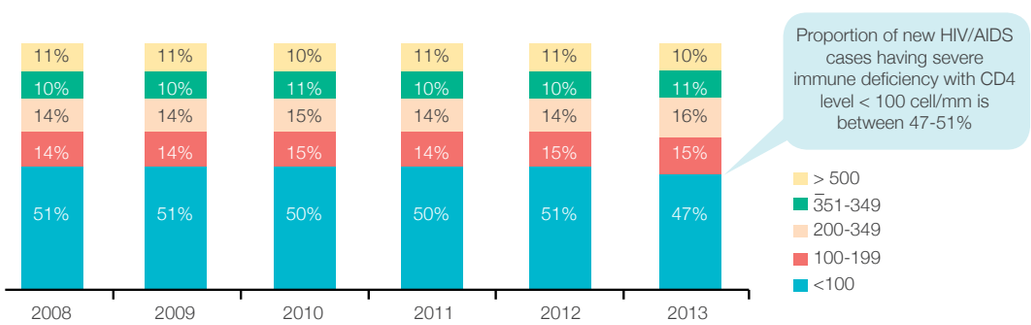
According to service followup from providers, evidences shown that delays in accessing to health service is a main cause of death in the patients. In FY2013, 47% of new HIV/AIDS cases having severe immune-deficiency (CD4 < 100 cell/mm3), as details shown in figure 52.

Figure 51 The number HIV/AIDS accessed to health services under the UCS scheme, FY2013



Note : "Registered to care" represents HIV/AIDS patients registered in the NAP program
"Need ART" represents HIV/AIDS patients qualified to get ARV treatment
"Prescribed ART" represents HIV/AIDS patients are on ARV treatment
"Retained in ART" represents HIV/AIDS patients that are still on treatment on September 30, 2013
"VL tested" represents HIV/AIDS patients that are accessed to viral load test.
"VL suppressed" represents HIV/AIDS patients that have a number of viral load < 50 copies/ml.
Source: The Natinal AIDS Program (NAP Plus), NHSO, date of data on November 2013

Figure 52 CD4 level classification in new HIV/AIDS cases, FY2008-2013

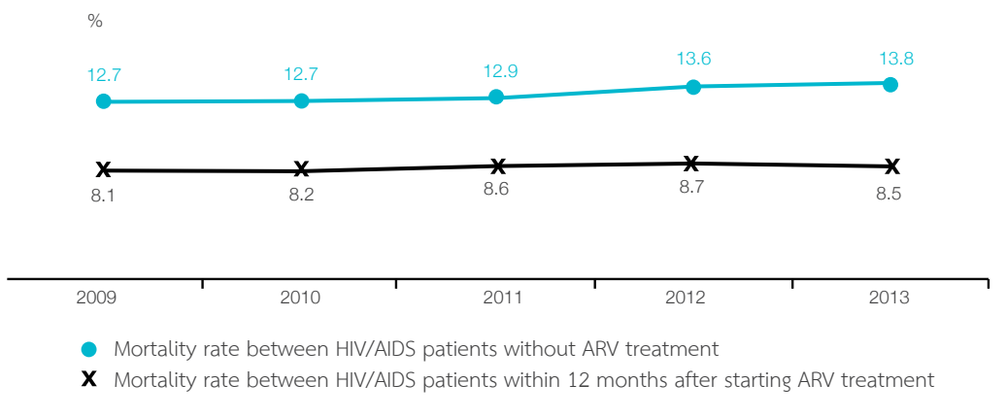


new cases	5,732	7,756	8,264	8,258	8,162	9,403

Source: The Natinal AIDS Program (NAP Plus), NHSO, date of data on November 2013

In order to measure overall effectiveness of service system, one of indicators used for this purpose is a retention rate of HIV/AIDS patients after 12 month of starting ARV treatment. In FY2013, the retention rate is 92.54%. Another indicator that can be used to measure overall effectiveness of the system is a mortality rate of the patients. Figure 53 shows a comparison of the mortality rate between HIV/AIDS patients within 12 months after starting ARV treatment and the ones without ARV treatments. The result shows that the patients without ARV treatment tend to have higher mortality rate than the one with ARV treatment; for example, 13.8% for the first and 8.5% for the later, in FY2013.

Figure 53 Mortality rate of HIV/AIDS patients under the UCS scheme, FY2008-2013



Source: The Natinal AIDS Program (NAP Plus), NHSO, date of data on November 2013

5.3.3 Tuberculosis

According to the World Health Organization (WHO) in 2011, Thailand is one of among 22 countries that tuberculosis is still its serious health problem. Keys interventions are to promote curative result (success rate) and to reduce the disease epidemic include DOTs treatment and drug treatment.

Concept to draw the interventions is built according to epidemiology of the disease covered not only in term of production side (service coverage) but also service outcome, as shown in figure 54.

The NHSO in collaborated with the ministry of public health (MOPH), the health department of Bangkok metropolitan administration, and the Government Pharmaceutical Organization (GPO) to promote tuberculosis disease management since FY2007 in order to reduce its infection rate, to promote quality of care and effectiveness of treatment, and to control epidemic of the disease.

In FY2013, target registration to the disease management program is 45,000 cases; the result at the end of the year is 57,778 cases. Within this registration number, 47,766 cases

(82.87%) is under the UCS scheme, and 48,592 cases (85%) is pulmonary tuberculosis, as shown in figure 55. When classifying the patients into stage of infection and treatment type, most of the patients is a new case that have positive sputum culture called CAT1 group (51,988 cases, or 140.89% of the target). The rest groups are a resistance to drug called CAT4 group(1,967 cases, or 87.42% of the target), and a new case that have negative sputum culture called CAT3 group (704 cases, or 15.62% of the target), respectively as shown in table 6.

Figure 54 Concept for related services and indicators for Tuberculosis

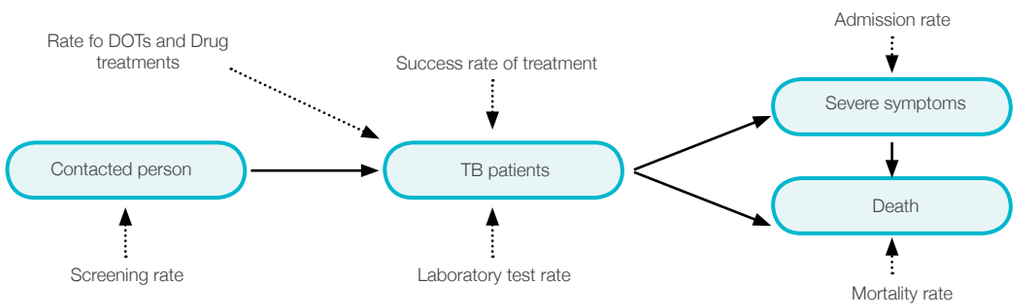
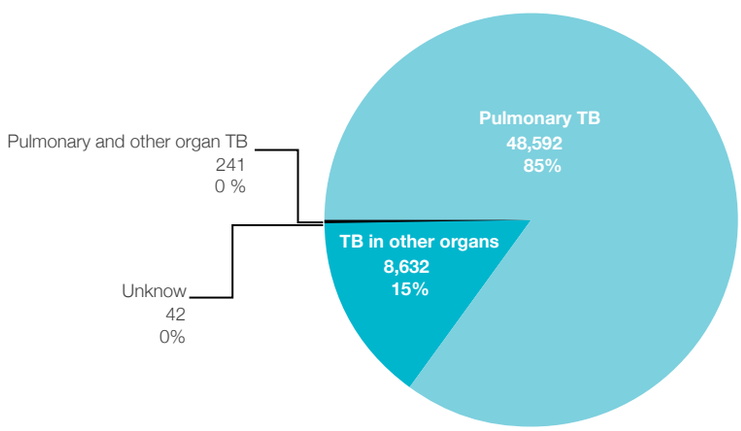


Figure 55 The number of TB patients classified by site of infection, FY2013.



Source: Tuberculosis data, NHSO, date of data on November 2013

Table 6 The number of patients classified by stages of infection, FY2013

Stages of infection and treatment types	Target (cases)	Output (cases)	% of target
1. new cases with positive sputum culture (CAT1)	36,900	51,988	140.89
2. new case with negative sputum culture (CAT3)	4,500	703	15.62
3. old cases with positive sputum culture (CAT2)	1,350	123	9.11
4. resistance to drug (CAT4)	2,250	1,967	87.42

Source: Tuberculosis data, NHSO, date of data on November 2013

Note : Description of CAT1–CAT4 groups

- *Category 1 (CAT1) : 2HRZE / 4HR = prescribes with oral Isoniazid (H) Rifampicin (R) Pyrazinamide (Z) and Ethambutol (E) every day in the first 2 months, then prescribes with Isoniazid and Rifampicin in the last 4 months.*
- *Category 2 (CAT2) : 2HRZES / 1HRZE / 5HRE = prescribes with oral Isoniazid, Rifampicin, Pyrazinamide, Ethambutol, with Streptomycin injection in the first 2 months; then continues with 4 doses of H, R, Z, E for the next 5 months, finally, prescribes with 3 doses of H, R, Z. If the sputum culture in the end of 2nd month is still positive, a month extended from initial phase is required for 2HRZES / 2HRZE*
- *Category 3 (CAT3) : 2HRZ / 2HR = prescribes with 3 doses of H, R, Z for the first 2 months, then prescribes with 2 doses of H, R for the next 2 months.*
- *Category 4 (CAT4) : drugs that are used inf Failure case of MDR–TB and Chronic case, The principle is to use at least 4 Second line drugs that never be used before (one of these 4 drugs has to be injected). The injection period should be 6 months; and continuing treatment for at least 18 months. There are two groups of Empiric CAT4:*
  - *Empiric CAT4(1) for 6k5 O.P.E.Z / 12–18 O.P.E.Z*
  - *Empiric CAT4(2) for K5** O.(P*).Et.Cs(Z) / 12–18 O.(P*).Et.Cs(Z)*
- *CAT1 Treatment is for new cases that never be treated before, or be treated less than one month that have positive result on direct smear, or severe casess. CAT4 treatment is provided for chronic cases that failed from CAT1 or CAT2 treatment, or discontinued prior treatment, or immigrants, so the patients will be prescribed with second line drugs*

There are indicators to assess service outcome. The outcome in FY2013 is described follow. The overall success rate of new cases with positive sputum culture is 87.2%. Default rate in all treatment types is 1.9%. Conversion rate of sputum culture from positive to negative result in concentration phase is 89.9%. Success rate of all TB cases is 78.9%. Mortality rate of TB patients is 6%. Default rate in patients with second line drugs is 2.1%. Finally, Mortality rate of TB patients with second line drugs is 13.2%.

5.3.4 Cancers

Cancers have continued to be one of important health problems in Thailand. The reasons for its important are its fatality rate and mortality rate have increasing trends, and high losses from Premature death. Cancers that are most critical include, but not limited to, liver cancer and cholangiocarcinoma, lung cancer, breast cancer, cervix cancer, colon cancer, and leukemia. There have been interventions in the UCS scheme in order to reduce impact from cancers, e.g., screening for cervix cancer, promoting treatments (surgery, radiotherapy, and chemotherapy) in order to expand patients' life.

Concept to draw service outcome in cancer care is built according to epidemiology of the disease covered not only in term of production side (service coverage) but also service outcome, as shown in figure 56.

The NHSO has continued to support service networks on cancers especially in tertiary care level such as cancer institutes or centers, cancer units in medical schools and big regional hospitals in order to promote holistic care from screening, basic diagnosis, referral system, rehabilitation, as well as palliative care linked with hospitals closed to patients' home since FY2009. Starting in FY2010, service network on chemotherapy has been promoted to cover all services from screening to palliative care in end stage patients nationwide. There are a total of 690 hospitals in the networks; 25 of these are principle hospitals (or mother nodes) of the networks nationwide.

Access to healthcare service in early stage of disease is important to expand the patients' life since some cancers can be treated. The methods of treatment include surgery, radiotherapy, radioisotope, and chemotherapy. The reasons that accessing to these services is concerned. First, there is limited number of hospitals that can provide services on radiotherapy, radioisotope, and chemotherapy. Second, the number of patients accessed to health services with cancers has been increased from 74,626 cases in FY2005 to 117,332 cases in FY2013 as shown in figure 57.

Figure 56 Concept for related services and indicators for cancer

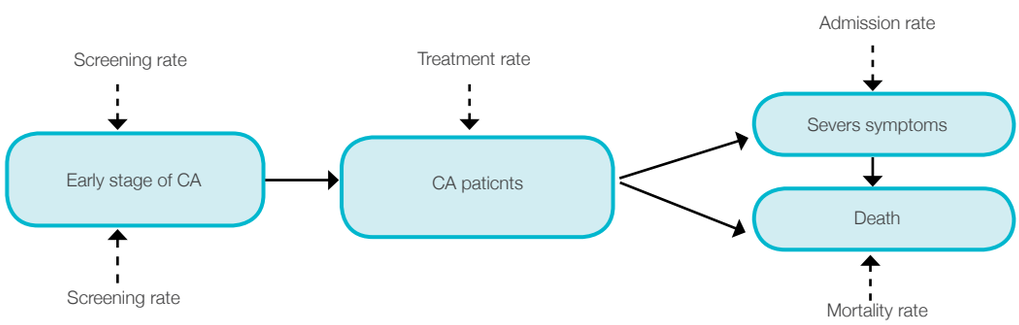
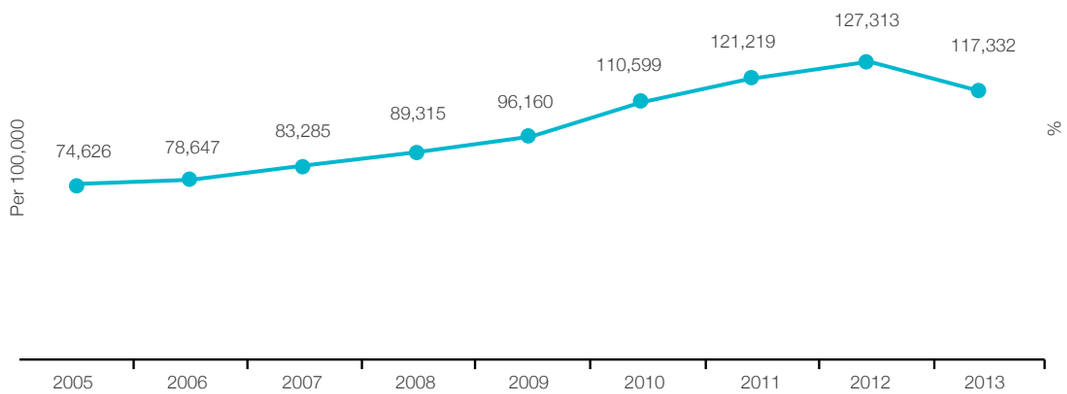


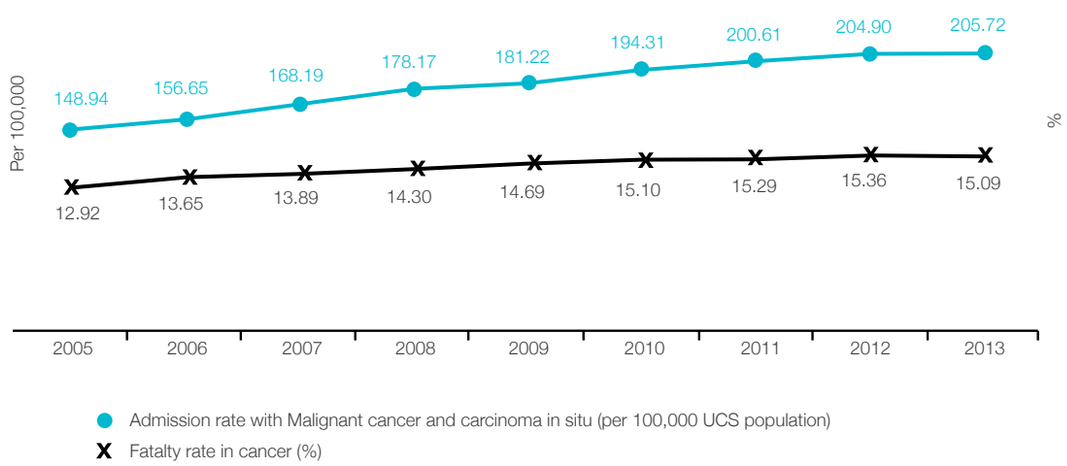
Figure 58 shows admission rate of patients with malignant carcinoma and carcinoma in situ per 100,000 of UCS population and fatality rate with cancer from FY2005 to FY2013. The results show that both of the rates tends to increase during the period of time, i.e., the admission rate is increased from 148.94 cases per 100,000 of UCS population in FY2005 to 205.72 cases per 100,000 of UCS population in FY2013 and the fatality rate is increased from 12.92% in FY2005 to 15.09% in FY2013.

Figure 57 The number of patients accessed to health services with cancers, FY2005-2013



Source: Out-patient and in-patient data, NHSO

Figure 58 Related indicators in cancer patients under UCS scheme, FY2005-2013



Source: In-patient data, NHSO

5.3.5 Chronic Kidney Diseases

Chronic kidney diseases (CKD) have continued to be one of important health problems in Thailand. The reasons for its important are its fatality rate and mortality rate have increasing trends, and high losses from cost of care and disability. Furthermore, financial barriers from high cost of care and limitation of service facilities have affected accessing to necessary cares of the patients. The NHSO, therefore, has continued to promote the services not only including them in the benefit package but also promoting the related health services. The UCS benefit package has been included kidney replacement therapies, i.e., kidney transplantation (KT), peritoneal dialysis (PD), and hemodialysis (HD, only in case that PD is not function), since FY2008.

Concept to draw service outcome in chronic kidney diseases is built according to epidemiology and phasing of the disease covered not only in term of production side (service coverage) but also service outcome, as shown in figure 59.

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 package under the "PD first" policy since FY2008. Other methods, i.e., hemodyalsis (HD) and kidney transplantation (KT), have been included later for the cases that Continuous Ambulatory Peritoneal Dialysis (CAPD) is not function.

1. Accessibility to care

The number of registration of chronic kidney disease management program under the UCS scheme has continued to increase since FY2008. An accumulative number of the registration in FY2013 (at September 30,2013) is 42,090 cases (or 88.22 per 100,000 of UCS population); 14,626 cases (34.75% of all registrations) were dead; 27,464 cases (65.25% of all registrations) still survive. Details of accessibility classified by method of treatments are described below.

1.1 Continuous Ambulatory Peritoneal Dialysis (CAPD)

An accumulative number of registration for CAPD at the end of FY2013 since Oct. 2007 is 26,633 cases; 14,229 cases (53.43% of all registrations) were dead; 9,589 cases (36.00% of all registrations) remain in the system; the rest 2,815 cases changed method to treatment, as shown in figure 61.

Figure 59 Concept for related services and indicators for chronic kidney diseases

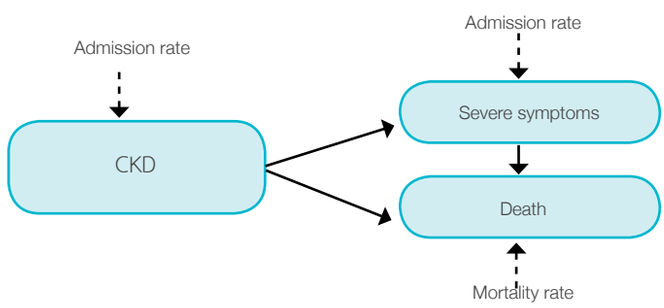
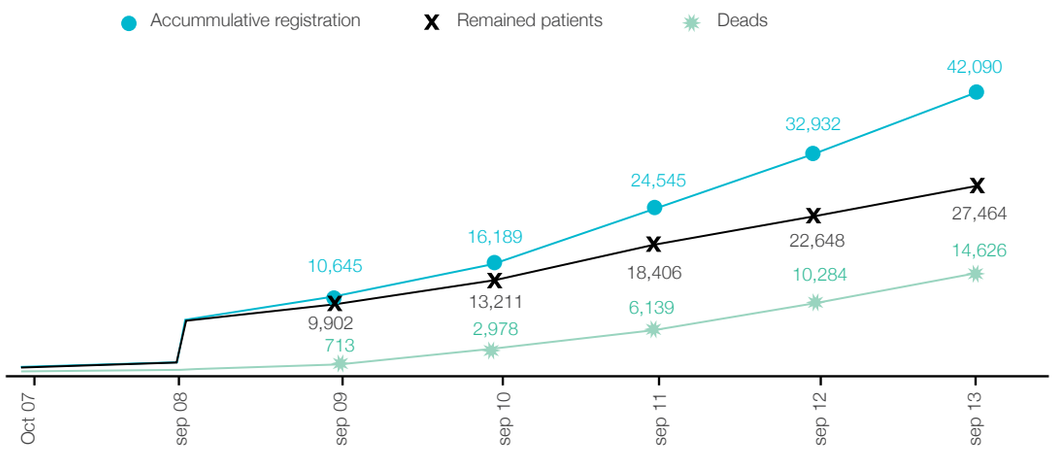


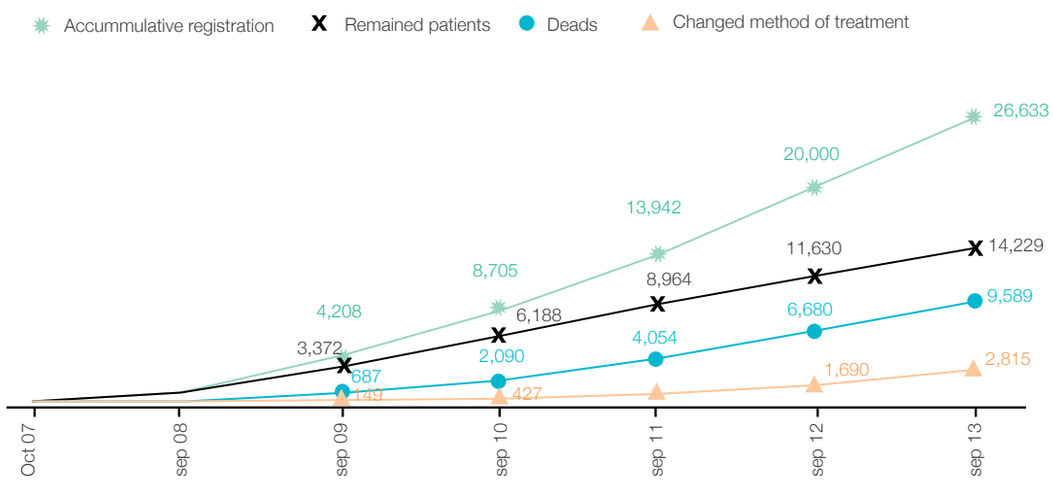
Figure 60 All registration of chronic kidney disease management under UCS scheme, Oct.2007-Sep. 2013



Note: CAPD and HD have been included in benefit package since FY 2008 and FY 2009, respectively

Source: chronic kidney disease management data, NHSO, September 2013

Figure 61 Registration to CAPD of chronic kidney disease management under UCS scheme, Oct.2007-Sep. 2013



Source: chronic kidney disease management data, NHSO, September 2013

1.2 Hemodialysis (HD)

Although the "PD first" policy is promote, hemodialysis may be required in some cases according to medical guideline. An accumulative number of registration for HD at the end of FY2013 since Oct. 2008 is 17,923 cases; 4,976 cases (27.76% of all registrations) were dead; 11,507 cases (64.20% of all registrations) remain in the system; the rest 1,440 cases changed method to treatment, as shown in figure 62.

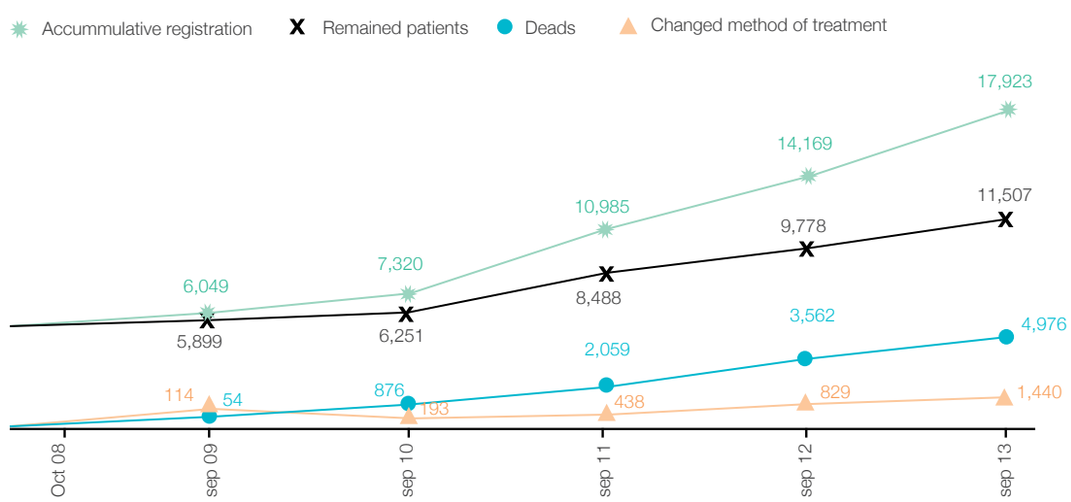
1.3) Kidney Transplantation (KT)

Kidney transplantation is a final method to treat end-stage kidney diseases that is more effective if the surgery is succeed, especially when other methods of replacement therapy are fails. The surgery is required not only specialist and high technology but also high collaboration between providers from preparation period to surgery and after surgery. Furthermore, its high cost of services. It is, therefore, important to include the service into the UCS benefit package. An accumulative number of registration for KT at the end of FY2013 since Jan. 2008 is 3,043 cases; 124 cases (4.07% of all registrations) were dead; 1,389 cases (45.65% of all registrations) were done with the surgery; the rest 1,530 cases (50.28% of all registration) are in the waiting list, as shown in figure 63.

1.4) Immunosupressive drug after Kidney Transplantation (KT)

It is important to suppress body immunization in patients after kidney transplantation; otherwise, the new kidney may be rejected from the body. The patients register for immunosuppressive drug after KT may be operated before they are qualified to register to the UCS scheme. An accumulative number of registration for immunosuppressive drug after

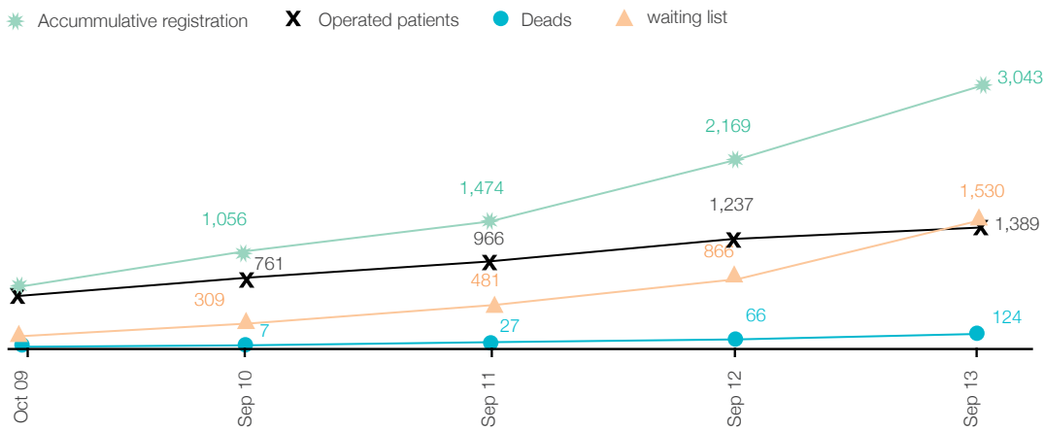
Figure 62 Registration to HD of chronic kidney disease management under UCS scheme, Oct.2008-Sep. 2013



Source: chronic kidney disease management data, NHSO, September 2013

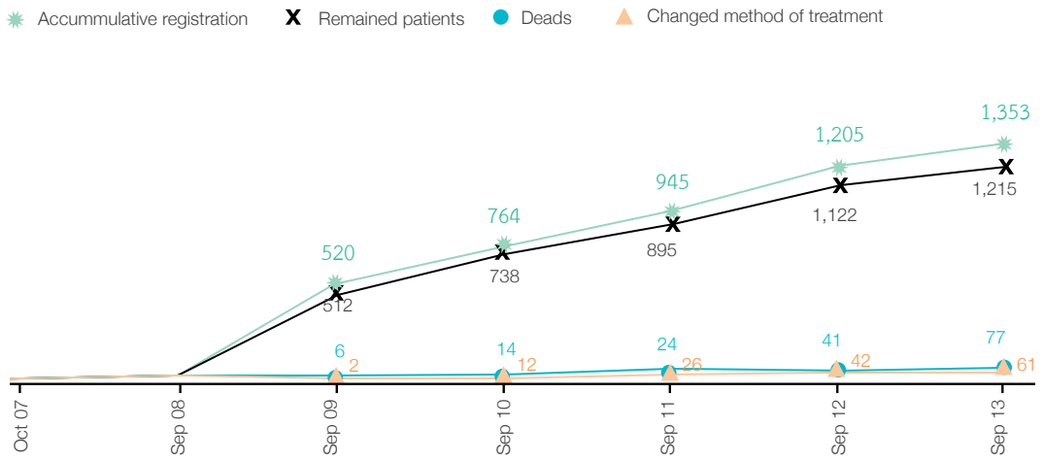
KT at the end of FY2013 since Jan. 2008 is 1,353 cases; 77 cases (5.69% of all registrations) were dead; 1,215 cases (89.80% of all registrations) are continued to receive the drug; the rest 61 cases (4.51% of all registration) changed method to treatment, as shown in figure 64.

Figure 63 Registration to KT of chronic kidney disease management under UCS scheme, FY2008-2013



Source: chronic kidney disease management data, NHSO, September 2013

Figure 64 Registration to immunosuppressive drug after KT of chronic kidney disease management under UCS scheme, FY2008-2013



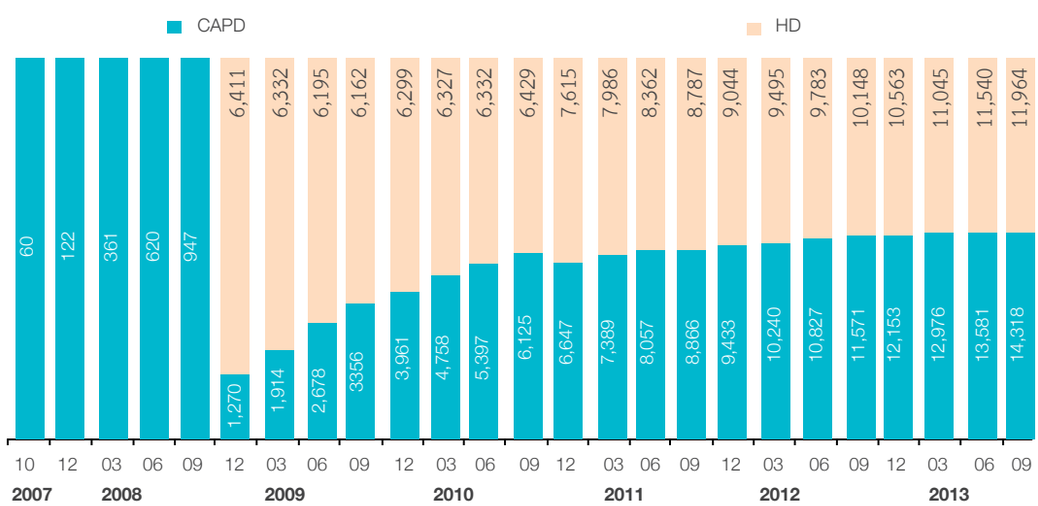
Source: chronic kidney disease management data, NHSO, September 2013

2. Workloads in health services for chronic kidney diseases

As described above, most of patients registered to chronic kidney disease management program in order to access to replacement therapy under the UCS scheme are CAPD and HD, respectively. Figure 65 shows a proportion between the number of patients with CAPD and HD in chronic kidney disease management under UCS scheme from FY2008 to FY2013. The number of patients with both method of therapies has continued to increase since implementing the program in FY2008. However, the proportion of patients with CAPD and with HD has continued to increase from less than 0.2 times in FY2008 to close to one time in FY2013. The number of patients with HD has been increased from 6,411 cases on December 2008 (or 83.47% of all patients at the end of period) to 11,964 cases on September 2013 (45.52% of all patients at the end of period). This shows that the "PD first" policy seems to be succeeded in promoting CAPD method.

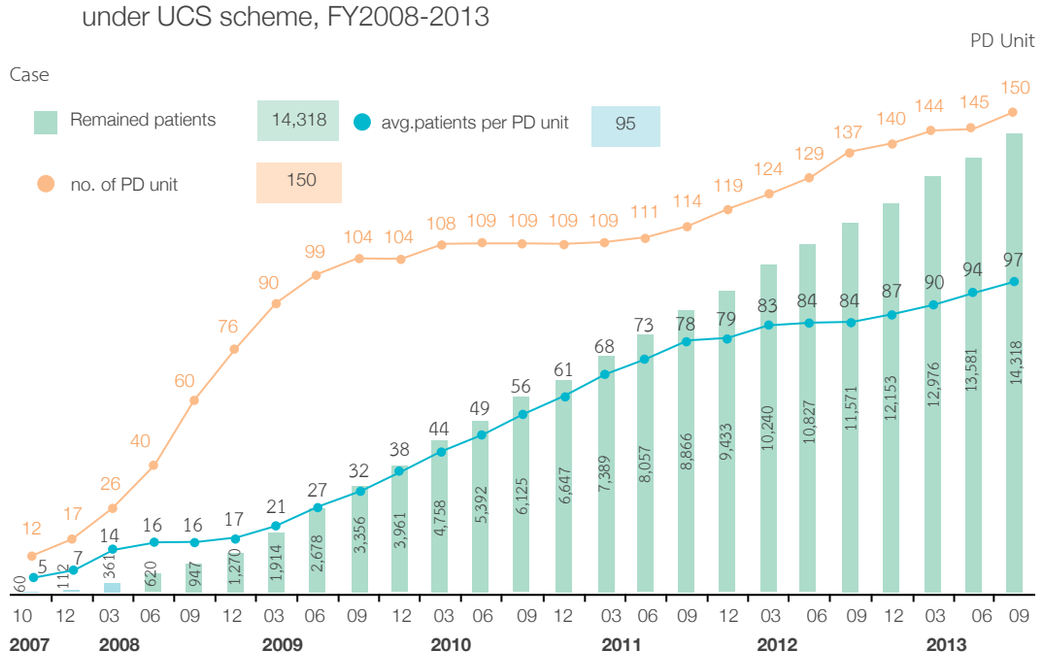
Figure 66 compares the number of patients with CAPD, units of PD fluids, and an average number of patients with CAPD per PD unit in chronic kidney disease management under UCS scheme from FY2008 to FY2013. An accumulative number of patients with CAPD remained in the system, units of PD fluid, and an average number of patients with CAPD per PD units has dramatically increased from FY2008 to FY2013. This may be implied that accessing to the renal replacement therapies of end-stage kidney disease patients under the UCS scheme has been improved.

Figure 65 Comparison the number of patients with CAPD and HD in chronic kidney disease management under UCS scheme, FY2008-2013



Source: chronic kidney disease management data, NHSO, September 2013

Figure 66 Comparison the number of patients with CAPD, units of PD fluids, and an average number of patients with CAPD per PD unit in chronic kidney disease management under UCS scheme, FY2008-2013



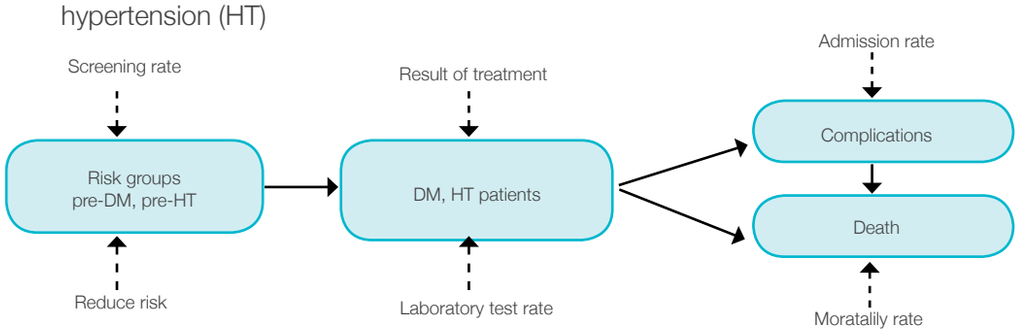
Source: chronic kidney disease management data, NHSO, September 2013

5.3.6. Diabetes Mellitus and Hypertension

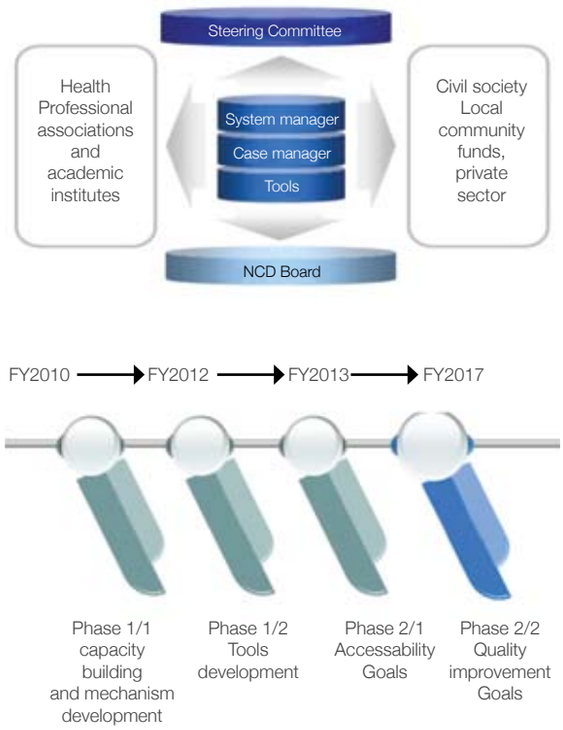
Diabetes mellitus (DM) and hypertension (HT) are chronic metabolic diseases caused by inappropriate behaviours. They are also important public health problems since their fatality rate, burden of diseases, and losses from death and disability are high. Therefore, it is important to be managed as disease management program under the UCS scheme from health promotion, disease screening, treatment, and prevention losses from complications. These services required continuous followup according to standard clinical guideline.

Concept to draw service outcome in Diabetes mellitus (DM) and hypertension (HT) is built according to epidemiology and phasing of the disease covered not only in term of production side (service coverage) but also service outcome, as shown in figure 67.

Figure 67 Concept for related services and indicators for Diabetes mellitus (DM) and hypertension (HT)



Key objectives for the NHSO to promote DM and HT to disease management program are 1) to reduce or to delay complications in DM and HT, 2) to reduce fatality rate from DM and HT or their complications, and 3) to reduce or to delay progression of disease in pre-DM and pre-HT groups. In order to achieve these objectives, the following interventions are promoted: increasing access to secondary prevention , improving quality of care quality, and strengthening stakeholder participation. The stakeholders involved in DM and HT service include consumers, civil society, local administrative organizations, providers of all level of care (e.g., health center/PCUs, district hospitals, general / regional hospitals, and other type of hospitals and health facilities). The following diagrams show participatory mechanism and roadmap in DM and HT disease management program.

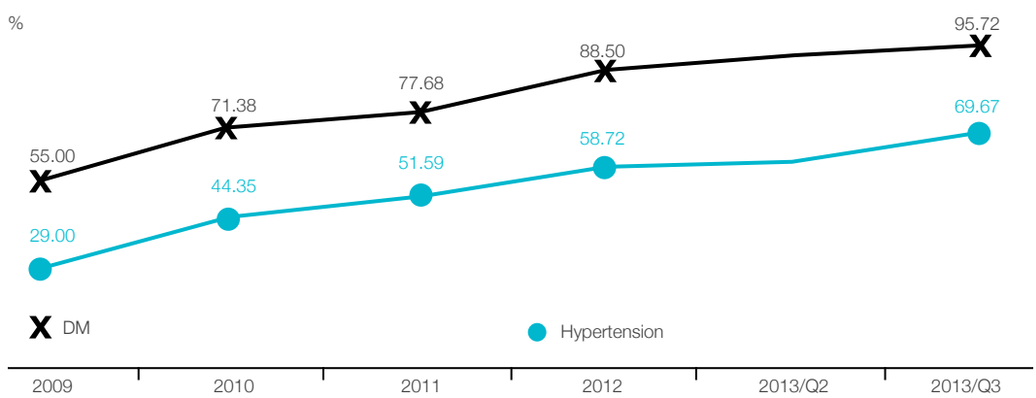


Roadmap in DM&HT disease mangement program starting from FY2010

1. Accessibility to care

Since it is difficult to identify the total number of patients with metabolic chronic diseases, accessibility to care by comparing to disease prevalence rate is used to measure accessibility. Accessibility rate, when comparing to prevalence of the disease, of both DM and HT has continued to increase, i.e., from 55.0% and 29.0 in FY2009 to 95.72% and 69.67% in FY2013 for DM and HT, respectively as shown in figure 68.

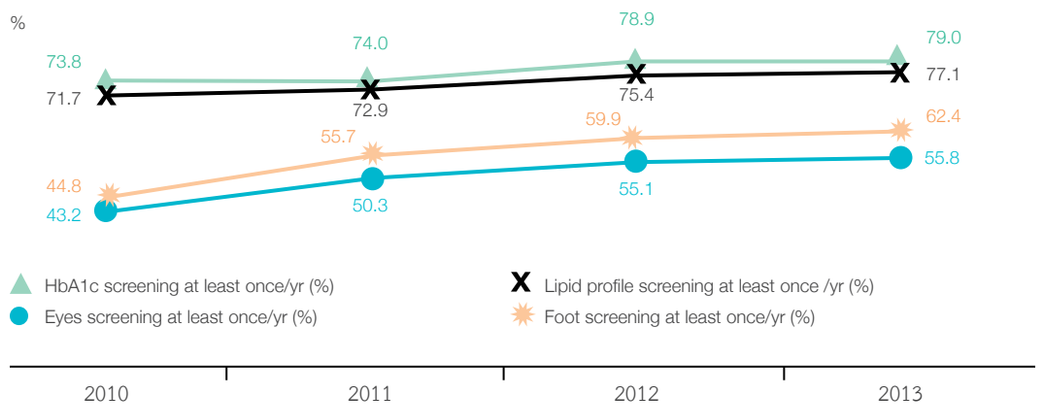
Figure 68 Accessibility rate comparing to prevalence of DM and HT, FY2009-2013



Note: prevalence rate used in this analysis is 6.9% and 21.4% for DM and HT, respectively.
Source: Out-patient and In-patient data, NHSO, date of data on June 2013

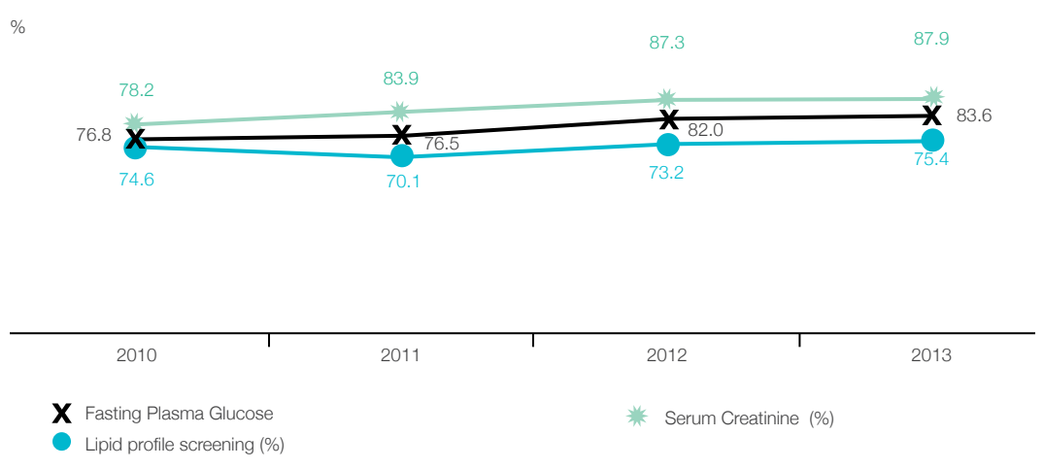
According to an evaluation report on health service outcome of type II DM and HT in hospitals under the ministry of public health and the Bangkok metropolitan administration office during FY2010-2013 by Medical Research Network (MedResNet) of the Consortium of Thai Medical Schools, screening rate for early complication detection in type II DM and HT tends to increase during FY2010-2013, as shown in figure 69 and 70, respectively.

Figure 69 Screening rate –HbA1c, Lipid profile, Albumin or protien, eyes and feet screening– in type II DM, FY2010-2013



Source: Evaluation Report on health service outcome of type II DM and HT in hospitals under the ministry of public health and the Bangkok metropolitan administration office during FY2010-2013, by Medical Research Network (MedResNet) of the Consortium of Thai Medical Schools.

Figure 70 Screening rate for routine laboratory tests in Hypertension, FY2010-2013



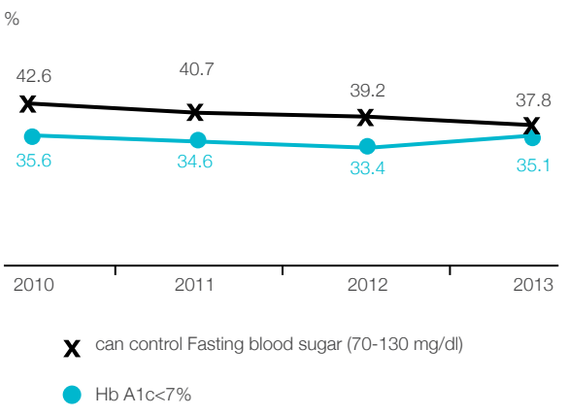
Source: Evaluation Report on health service outcome of type II DM and HT in hospitals under the ministry of public health and the Bangkok metropolitan administration office during FY2010-2013, by Medical Research Network (MedResNet) of the Consortium of Thai Medical Schools.

2. Effectiveness of care

It is important to control symptoms in metabolic chronic diseases such as DM and HT in order to prevent complications and reduce losses from admission or disability. According to an evaluation report on health service outcome of type II DM and HT in hospitals under the ministry of public health and the Bangkok metropolitan administration office during FY2010-2013 by Medical Research Network (MedResNet) of the Consortium of Thai Medical Schools, control rate of risk symptoms in DM and HT are studied, as shown in figure 71 and 72, respectively. Result of the control rate in both diseases is quite steady or a little worst during the period of study except control rate of fasting blood sugar test of DM patients is a little better.

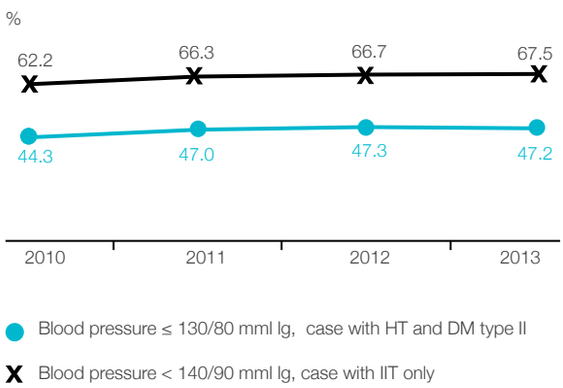
The study also reports complication rate found in DM and HT patients, as shown in figure 73 and 74, respectively. In DM patients, complication rate of most organs has been decreased during the period of study except renal complication that has been increased from 5.4% in FY2011 to 8.2% in FY2013. In HT, while complication rate in cerebro-vascular diseases is quite steady between 04% – 0.5%; its complication rate in cardio-vascular diseases and peripheral nerve system is increased from 0.4% and 3.4% in FY2011 to 1.1% and 5.7% in FY2013, respectively.

Figure 71 Control rate of risk symptoms in DM, FY2010-2013



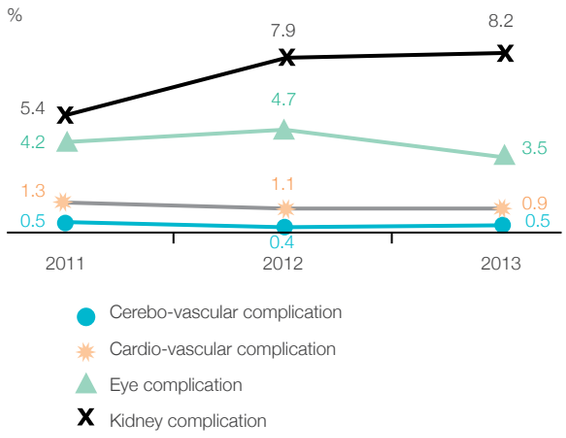
Source: Evaluation Report on health service outcome of type II DM and HT in hospitals under the ministry of public health and the Bangkok metropolitan administration office during FY2010-2013, by Medical Research Network (MedResNet) of the Consortium of Thai Medical Schools.

Figure 72 Control rate of risk symptoms in Hypertension, FY2010-2013



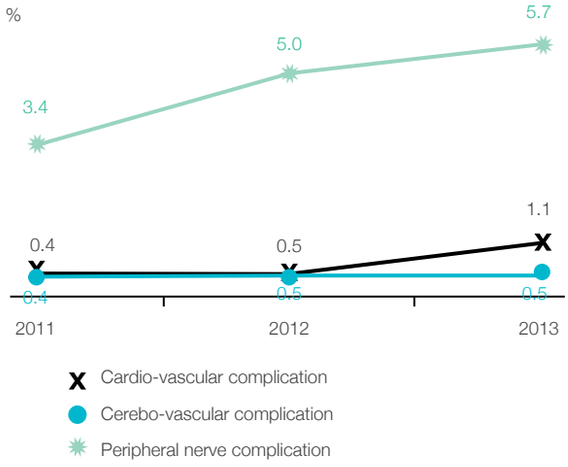
Source: Evaluation Report on health service outcome of type II DM and HT in hospitals under the ministry of public health and the Bangkok metropolitan administration office during FY2010-2013, by Medical Research Network (MedResNet) of the Consortium of Thai Medical Schools.

Figure 73 Complication rate in DM, FY2011-2013



Source: Evaluation Report on health service outcome of type II DM and HT in hospitals under the ministry of public health and the Bangkok metropolitan administration office during FY2010-2013, by Medical Research Network (MedResNet) of the Consortium of Thai Medical Schools.

Figure 74 Complication rate in Hypertension, FY2011-2013

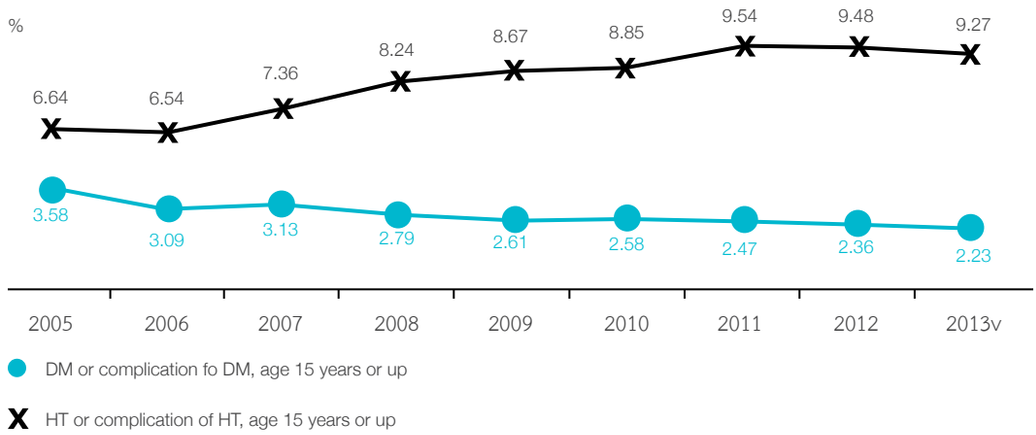


Source: Evaluation Report on health service outcome of type II DM and HT in hospitals under the ministry of public health and the Bangkok metropolitan administration office during FY2010-2013, by Medical Research Network (MedResNet) of the Consortium of Thai Medical Schools.

3. Health service outcome

One of indicators to measure health service outcome is fatality rate within 30 days of last discharge date. The fatality rate with DM or complication of DM in patients under the UCS scheme aged 15 years and older has been decreased from 3.58% in FY2005 to 2.23% in FY2013, while the one with HT or complication of HT in patients under the UCS scheme aged 15 years and older has been increased from 6.64% in FY2005 to 9.27% in FY2013, as shown in figure 75.

Figure 75 Fatality rate within 30 days of last discharged date of DM and HT or its complication in patients under the UCS scheme aged 15 years and older, FY2005-2013



Source: In-patient data, NHSO, date of data on December 2013

5.3.7. Other disease management or vertical programs

Other disease management or vertical programs under the UCS scheme described in this section include health service for newborn, head injuries, asthma and chronic obstructive pulmonary disease (COPD), and cataract surgery.

Health service for newborn

Low birth weight (LBW) has been defined by the WHO as weight at birth less than 2,500 grams. According to the WHO, LBW is generally recognized as a disadvantage for the infant. LBW infants are at higher risk of early growth retardation, infectious diseases, developmental delay and death during infancy and childhood. Countries can substantially reduce their infant mortality rates by improving the care of LBW infants.

Health system development for LBW requires appropriate special care as well as appropriate claim and payment system that should be more reflected to unit cost since referral system is usually involved. It is, therefore, important to be included in disease management program of the UCS scheme. The related health system development include increasing service capacity in hospitals, supporting medical instruments to hospitals, promoting capacity building to health staffs, and improving overall system management, in order to promote participation within and between service networks in collaborated with the Thai Neonatal Society and the national sub-committee in tertiary care system development. There are a total of 868 hospitals in the network; it is 29 principle hospitals (or mother nodes) of the networks nationwide.

Figure 76 Low birth weight rate of all deliveries in hospital under the UCS scheme, FY2005-2013

Source: in-patient data, NHSO, date of data on September 2013.

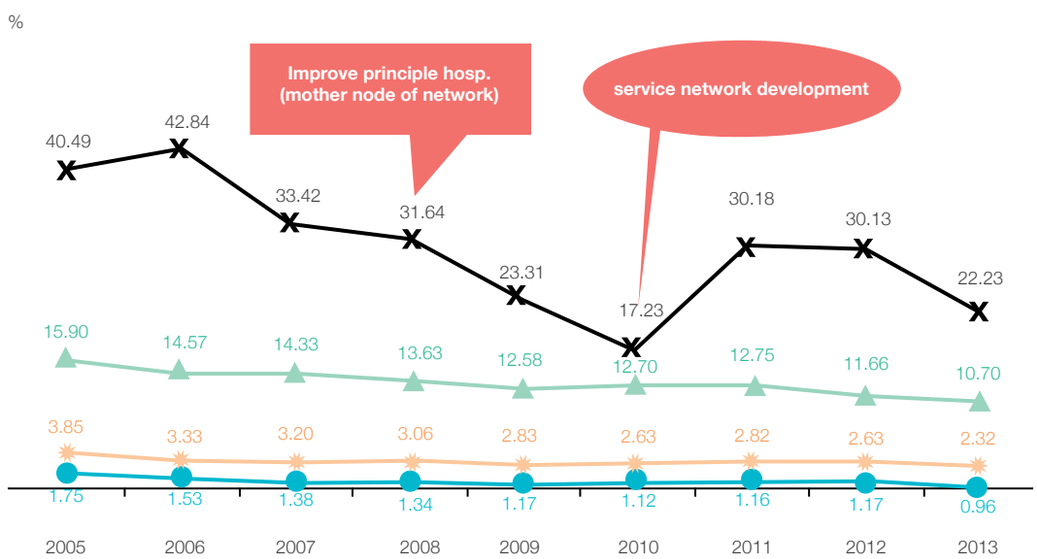
LBW rate of all deliveries in hospitals under the UCS scheme has continued to reduce from 11.13% in FY2005 to 10.26% in FY2013, as shown in figure 76. Figure 77 shows fatality rate of LBW classified into three sub-categories: less than 1,000 grams, 1,000 to 1,499 grams, and 1,500-2,499 grams. The rate in most of sub-categories is slightly reduced from FY2005 to FY2013.

Health service for Head injuries

It is important to manage health service for head injuries as disease management program because of lacking health personnels especially neuro-surgery specialist. Interventions to increase accessibility to the services include health service system development to increase service capacity of hospitals, and referral system development both within and cross regions, are important.

The NHSO has continued to support service networks on head injuries. There are a total of 27 principle hospitals (or mother nodes) of the networks, and 437 smaller hospitals (or child nodes) in the networks nationwide. Although the number of hospitals in the networks has continued to increase, there is needs to improve service coverage.

Figure 77 Fatality rate of LBW, UCS scheme, FY2005-2013



Principle hospitals (mother nodes of the networks)	21	25	27	29
Smaller hospital (child nodes of the networks)	512	637	828	839

▲ Birth weight < 2,500 g.
X Birth weight between 1,500-2,499 g.
● Birth weight between 1,000-1,499 g.
✸ Birth weight < 1,000 g.

Source: in-patient data, NHSO, date of data on September 2013.

Admission rate of intracranial head injuries of patients under the UCS scheme has been increased dramatically from 70.77% in FY2005 to 94.04% in FY2013, while surgery rate and fatality rate of the patients is slightly decreased, as shown in figure 78.

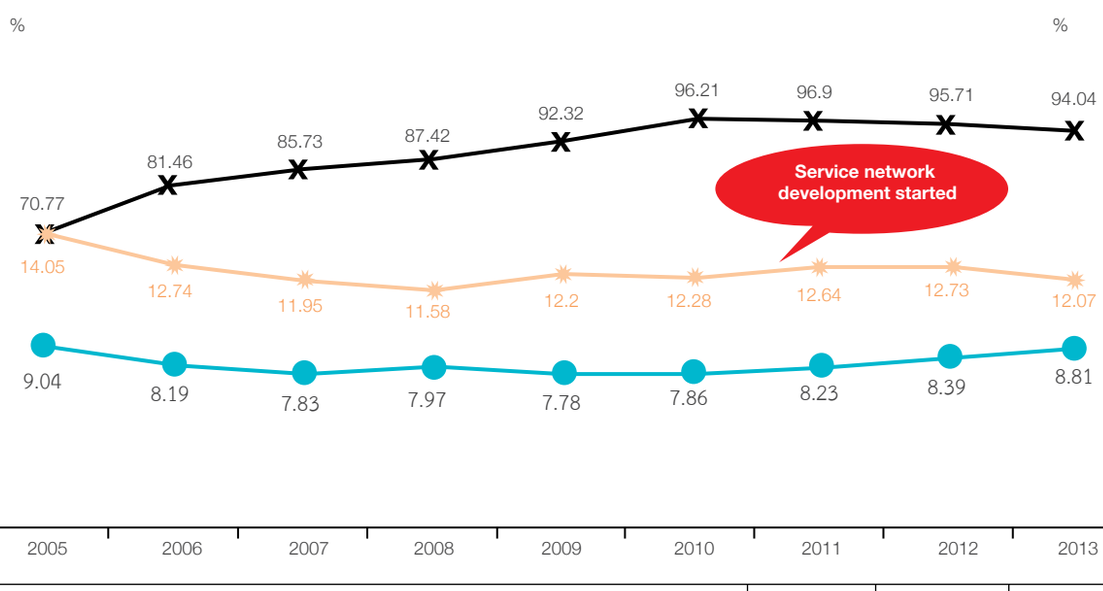
Health services for asthma and chronic obstructive pulmonary disease (COPD)

Asthma

Asthma is a common chronic inflammatory disease of bronchi that have increasing incident worldwide. Although national clinical guideline has been implemented, survey data indicates that asthma control in Thailand is lower than standard. More than a half of asthma patients have lower quality of life than normal people because of lacking of appropriate treatment according to the national guideline, i.e., only 6.7% of patients using inhaled steroids.

The NHSO, therefore, has continued to promote health system development for asthma in order to improve quality of life of the patients so they can live as normal and avoid admission from acute severe symptoms. There are a total of 762 hospitals (64.25% of all 1,186 hospitals nationwide) registered to provide treatment according to the national guideline that include severity assessment, peak expiratory flow (PEF) test, steroid inhalation

Figure 78 Related indicators in head injury patients, UCS scheme, FY2005-2013



Principle hospitals (mother nodes of the networks)	25	27	27
Smaller hospital (child nodes of the networks)	103	154	437

X Admission rate of intracranial head injury, UCS sheme

Surgery rate in intracranial head injury, UCS sheme

Fatality rate in intracranial head injury, UCS sheme

Source: in-patient data, NHSO, date of data on December 2013.

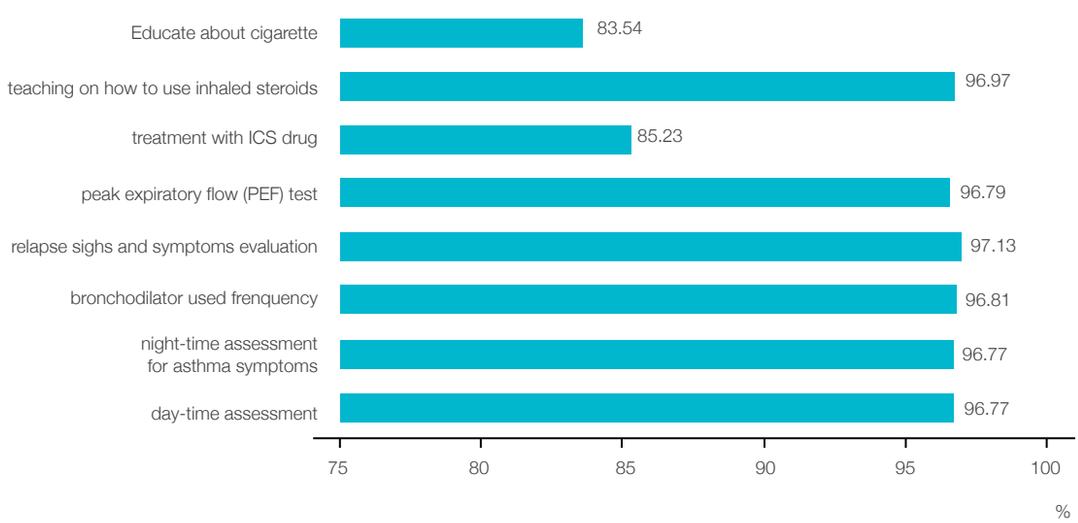
treatment, teach and evaluate using inhaled steroid of the patients.

There are 93,971 cases of asthma patients whom are treated according to the national guideline at asthma clinics from all 337,430 cases of all asthma cases from out-patient services (Jul. 2012 – Jun. 2013; or, a coverage of asthma patients whom are treated according to the national guideline at asthma clinics is 27.85%).

The most related treatment activities according to the national guideline of asthma that the patients have accessed during Jul.2012-Jun.2013 to assess how well their asthma is controlled include relapse signs and symptoms evaluation (97.13%), teaching on how to use inhaled steroids (96.97%), bronchodilator used frequency (96.81%), peak expiratory flow (PEF) test (96.79%), day-time assessment for asthma symptoms (96.77) and night-time assessment for asthma symptoms (96.77), respectively as shown in figure 79.

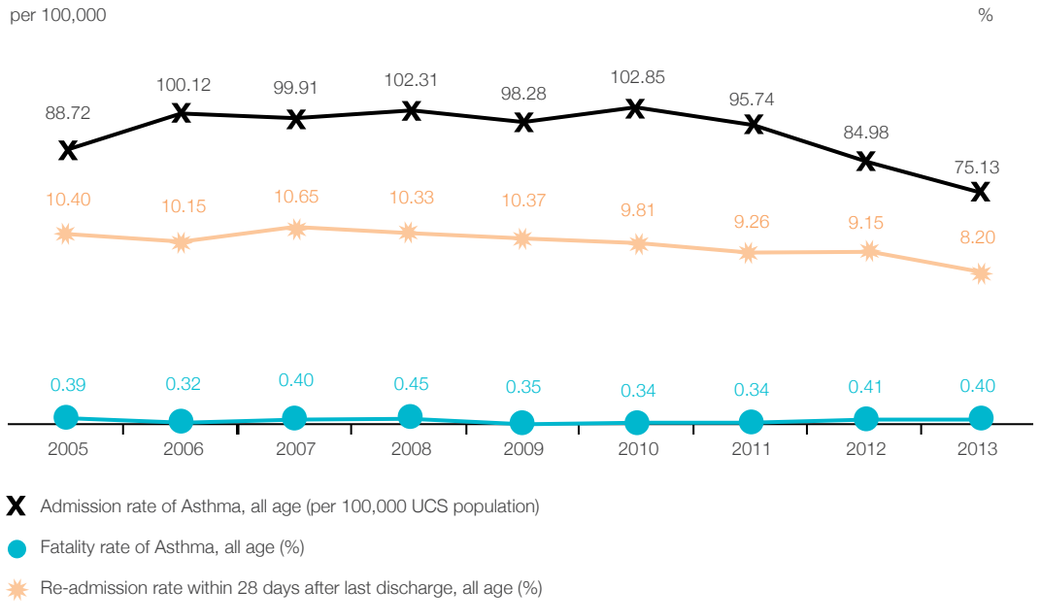
Admission rate and re-admission rate within 28 days after last discharged date of asthma patients under the UCS scheme has been decreased since FY2005. The admission rate is reduced from 88.72 in FY2005 to 75.13% in FY2013, and re-admission rate within 28 days after last discharged date of the patients is reduced from 10.40% in FY2005 to 8.2% in FY2013, as shown in figure 80. Fatality rate of the patients is quite low and steady between 0.32% to 0.45%, as shown in figure 80.

Figure 79 Treatment activities according to the national guideline of asthma, FY2013



Source: Asthma data submitted from registered hospitals, July 2012-June 2013, data date on August 2013

Figure 80 Related indicators in asthma patients, UCS scheme, FY2005-2013



Source: In-patient data, NHSO, date of data on December 2012

Chronic obstructive pulmonary disease (COPD)

COPD is one of important health problems in Thailand both in term of economics and social issues. Early diagnosis for early treatment is important for better curing. In severe cases, less air flows in and out of airways so the patients cannot do normal activities. Most of patients tend to visit hospitals with severe symptoms that required more complicated treatments. This will reduce not only the treatment outcome but also the patients' quality of life. Therefore, health promotion and screening in risk groups, i.e., elders, smokers, in order to change behavior and reduce lost from COPD.

The NHSO, therefore, has continued to promote health system development for respiratory diseases that have symptoms and use same drug group as asthma in order to have standard of care and to improve quality of life of the patients so they can live as normal and avoid admission from acute severe symptoms. In FY2013, there are a total of 708 hospitals (59.70% of all 1,186 hospitals nationwide) registered to provide treatment according to the national guideline for COPD.

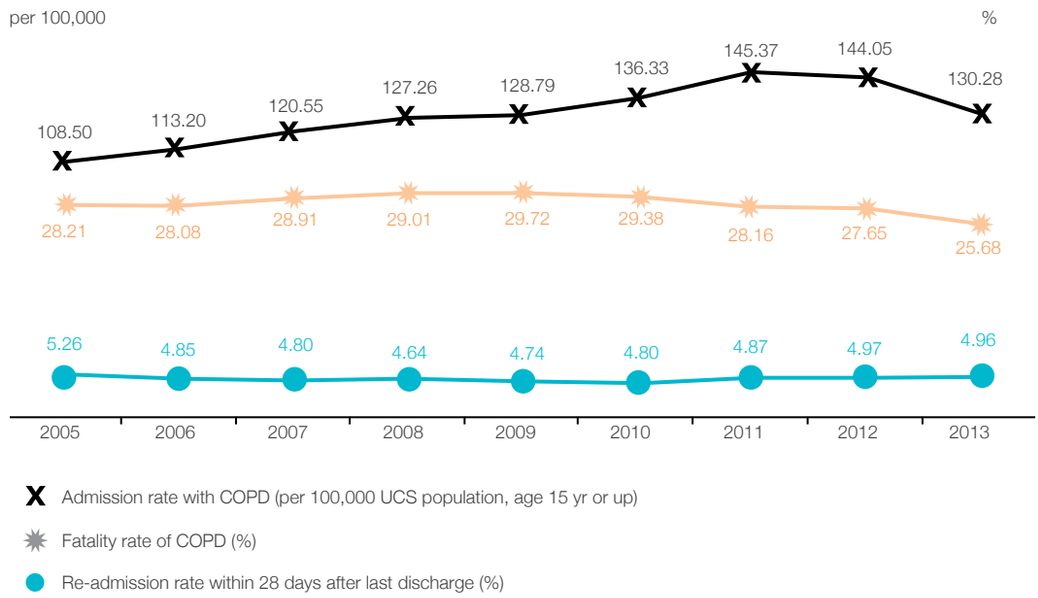
Admission rate of COPD patients aged 15 years and older under the UCS scheme has been increased since FY2005, except in FY2013 that the rate is reduced from FY2012; while fatality rate and re-admission rate within 28 days after last discharged date of the patients has been decreased since FY2005. The admission rate is increased from 108.50 cases per 100,000 of UCS population in FY2005 to 130.28 cases per 100,000 of UCS population in FY2013. Re-admission rate within 28 days after last discharged date of the patients is reduced from 28.21% in FY2005

25.68% in FY2013; and fatality rate of the patients is reduced from 5.26% in FY2005 to 4.96% in FY2013, as shown in figure 81.

Health services for cataract surgery

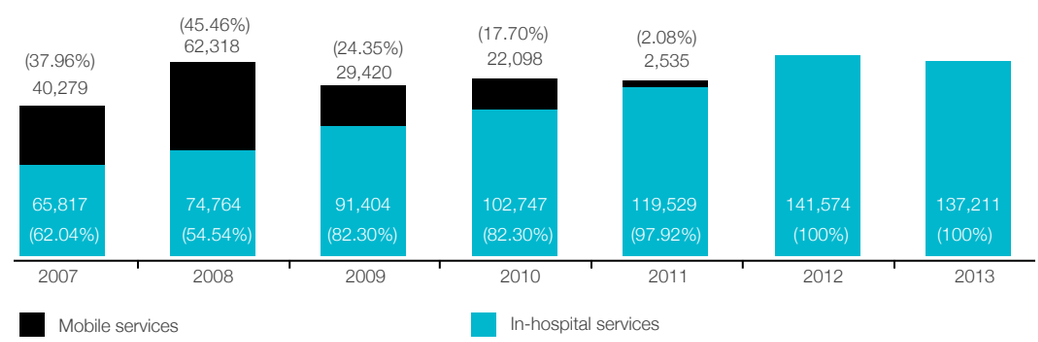
Cataract is a common disease found in elders which leads to a decrease in vision impacted to quality of life of the elders. Therefore, the UCS scheme has included cataract surgery in a vertical program to promote cataract surgery in elders since FY2007. The number of cataract surgeries has increases from 106,096 cases in FY2007 to 137,211 cases in FY2013, as shown in figure 82. The surgery is classified into mobile surgery and in-hospital surgery. As shown in figure 82, the number of mobile surgery has been reduced from 37.96% FY2007 to none in FY2012 and FY2013. This may be interpreted that surgery service for cataract in hospital has been improved and can cover needs for the surgery.

Figure 81 Related indicators in COPD patients aged 15 years and older, UCS scheme, FY2005-2013



Source: In-patient data, NHSO, date of data on December 2012

Figure 82 The number of cataract surgeries, FY2007-2013



Source: In-patient data, NHSO, date of data on September 2012

5.4 Health Promotion and Disease Prevention

Health promotion and disease prevention policy is an important strategy for promoting universal health coverage in order to reduce sickness from preventable diseases and to prolong quality of life by avoiding risk behaviors. Because of this important and it covers both healthy and sick population, the National Health Security board has increased a share of the UCS budget for health promotion and disease prevention from 175.00 Bahts per population in FY2003 to 313.70 Bahts per population in FY2013, or 1.79 times increase within 10 years.

Key indicators to measure outcome of health promotion and disease prevention of the UHC have applied the same indicators according to health system development strategy of the ministry of public health under the theme: “All Thais are healthier ...”. Target and outcome of these indicators are shown in table 7.

Table 7 Performance on health promotion and disease prevention, FY2013

ID	Indicator list	Target	Outcome
1	**Maternal care**		
	Rate of pregnancies attended the first visit of ANC within the first 12 GA.	60% or more	54.69%
	Rate of pregnancies attended at least 5 times for antenatal care during pregnancy	60% or more	62.36%
	Rate of pregnancies received supplementary iodine.	100%	94.97%
	Rate of post partal women received at least 3 postpartum care visits	65% or more	74.03%
	Rate of full breastfeeding from birth to six months old	50% or more	54.62%
	Maternal mortality rate (cases per 100,000 live births)	18 or less	19.6
	Birth asphyxial rate (cases per 1,000 live births)	25 or less	25.50
	Thalassemia screening rate in pregnancies		92.88
2	**Child health**		
	Immunization coverage rate		
	BCG vaccine in 1 year old child	90% or more	100%
	OPV3 vaccine in 1 year old child	90% or more	99.30%
	DTP4 vaccine in 2 years old child	90% or more	96.00%
	M/MMR vaccine in 1 year old child	95% or more	98.90%
	OPV4 vaccine in 2 years old child	90% or more	96.00%
	JE2 vaccine in 2 years old child	90% or more	96.40%
	JE3 vaccine in 3 years old child	90% or more	92.20%
	DTP5 vaccine in 5 years old child	90% or more	89.60%
	OPV5 vaccine in 5 years old child	90% or more	89.60%
	Child growth with good height and appropriate body shape, aged 0-2 years old	70% or more	76.08%

ID	Indicator list	Target	Outcome
	Child growth with good height and appropriate body shape, aged 3-5 years old	70% or more	61.51%
	Rate of Children received routine growth monitoring according to guideline, aged 0-2 years old	80% or more	91.56%
	Rate of Children received routine growth monitoring according to guideline, aged 3-5 years old	80% or more	90.14%
	Rate of children with appropriate growth according to guideline	85% or more	97.08%
	Rate of children having dental caries in primary tooth*	57% or less	57.20%
	Rate of children received oral health examination, under 3 years old*	70% or more	70.15%
	Rate of children received brushing teeth training, under 3 years old	70% or more	69.87%
	Rate of children received fluorine vanish, under 3 years old	50% or more	46.97%
	Number of Qualified Child care center	70%	68.50%
	Infant mortality rate (cases per 1,000 live births), estimated mid-year population surveyed by Mahidol University	15 or less	11.20
	Thalassemia screening rate in pregnancies		92.88%
	Thyroid stimulating hormone (TSH) screening rate for TSH defficiency in children		97.72%
	Confirmed rate for TSH defficiency in abnormal result		89.73%
	Rate of children received oral health examination, grade 1 students	767,158 cases	715,216
	Rate of children received comprehensive oral health examination, grade 1 students	715,216 cases	310,474
3	**Workforces and elderly care**		
	CA cervix screening rate at least once within 5 years, women aged 30-60 years old **	60% or more	68.04%
	Depression screening rate***		
	• Aged 30-60 years old	60% or more	29.72%
	• Aged 60 years or older	60% or more	45.40
	DM screening rate, aged 35-60 years old***	90% or more	72.37%
	Hypertension screening rate, aged 35 years or older***	90% or more	63.84%
	Seasonal influenza vaccines in risk groups****	3,000,000 cases	2,848,989
	• Chronic diseases patients		1,557,160
	• Elders aged 65 years and older		743,949
	• Pregnancies with 4+ GA, and children aged 6 months – 2 years old		9,609
	• Other groups		538,271
	Denture service in elderly group aged 60 years and older *****	45,000	40,886

Source: Inspection and supervision report, MOPH, Apr.-Aug. 2013

*Note: * performance of 9 months report, Bureau of Dental Health, Health Department, MOPH, Nov. 2013*

*** analyzed from National Cancer Institute, and the NHSO region 13 Bangkok*

**** analyzed from 21-file standard data set of health promotion and out-patient data*

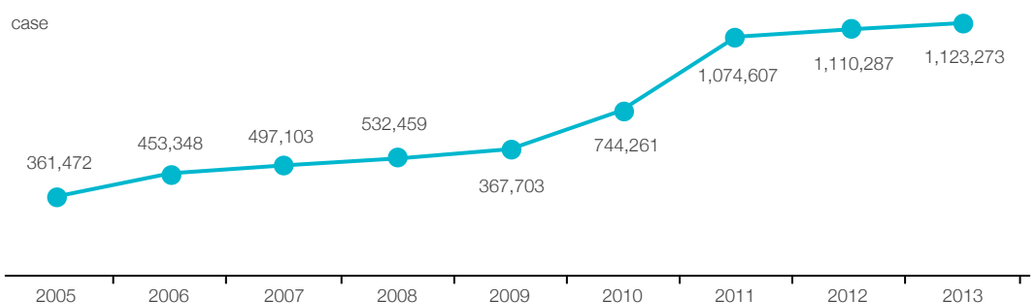
***** service data of Influenza vaccine, December 2013*

****** data from DENTURE ITEM database, Jan. 2014*

5.5 Medical Rehabilitation Services

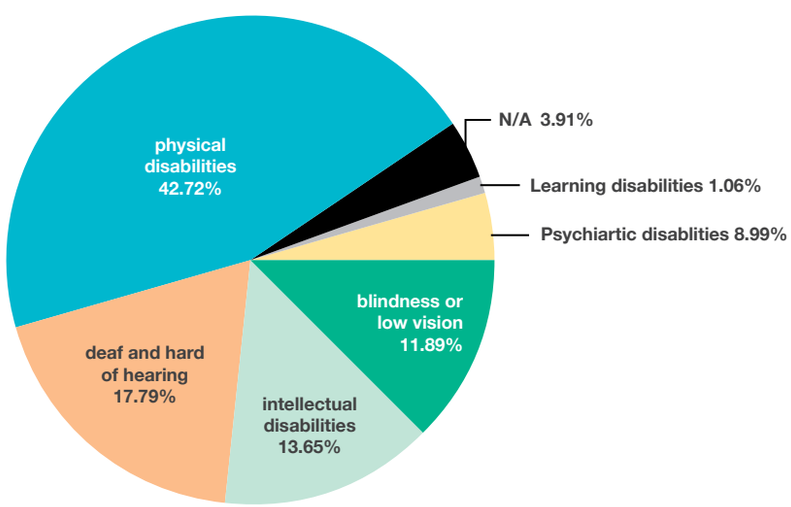
The accumulative number of disabled people registered to the UCS scheme has been increased from 361,472 cases in FY2005 to 1,123,273 cases in FY2013 as shown in figure 83. Figure 84 shows the number of disabled people classified by types of disability; most of the disables are physical disabilities (42.72%), deaf and hard of hearing (17.79%), intellectual disabilities (13.65%), blindness or low vision (11.89%), psychiatric disablities (8.99%), learning disabilities (1.06%), respectively.

Figure 83 The accumulative number of disabled people registered to the UCS scheme, FY2005-2013



Source: Claim data for rehability services and instruments, NHSO, September 2013

Figure 84 Disabled people classified by types of disability, FY2013

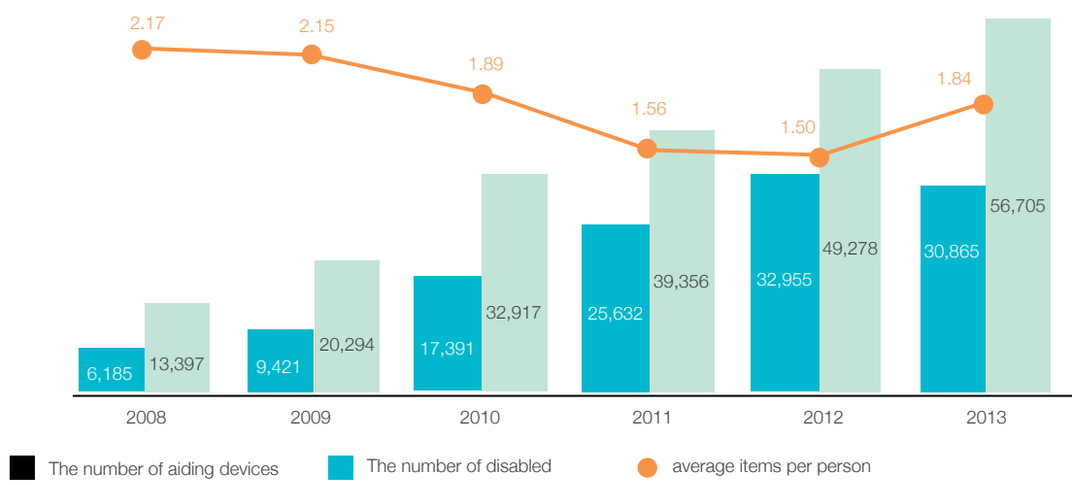


Note: A disabled person can have more than one type of disability.
Source: Claim data for rehability services and instruments, NHSO, September 2013

The number of aiding devices claimed for disables has been increased from 13,397 items for 6,185 disables in FY2008 to 56,705 items for 30,865 disables in FY2013; however, average items per person has been decreased from 2.17 items per person in 2008 to 1.84 items per person in FY2013, as shown in figure 85.

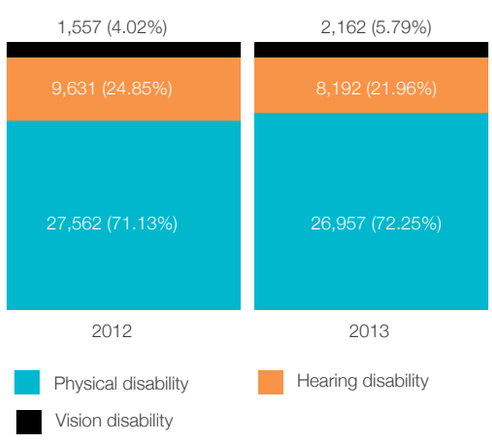
When classifying the disables who received aiding devices in FY2012-2013 by their disability types, most of the disables are physical disability (71.13% in FY2012, and 72.25% in FY2013), and hearing disability (24.85% in FY2012, and 21.96% in FY2013), respectively as shown in figure 86. However, percentage of change from FY2012 in disables with vision disability is higher than other group, i.e., 38.86% increased, while the other groups are decreased at the rate 2.2% and 14.94% in physical disability and hearing disability, respectively.

Figure 85 The number of aiding devices claimed for disabled people, FY2008-2013



Source: Claim data for rehability services and instruments, NHSO, September 2013

Figure 86 The number of disableds who recieved aiding devices in FY2012-2013.



5.6 Thai Traditional Medicines

Accessibility to Thai tradition medicines has been promoted by the UCS scheme. The services are classified into three groups as follow: 1) massage, hot compress, herbal stream, 2) post-partum care, and 3) herbal medicines. Most of the services are provided in health centers or primary care units (PCUs), i.e., 91.35% of the third group, 86.85% of the first group, and 50.41% of the second group, respectively as shown in table 8.

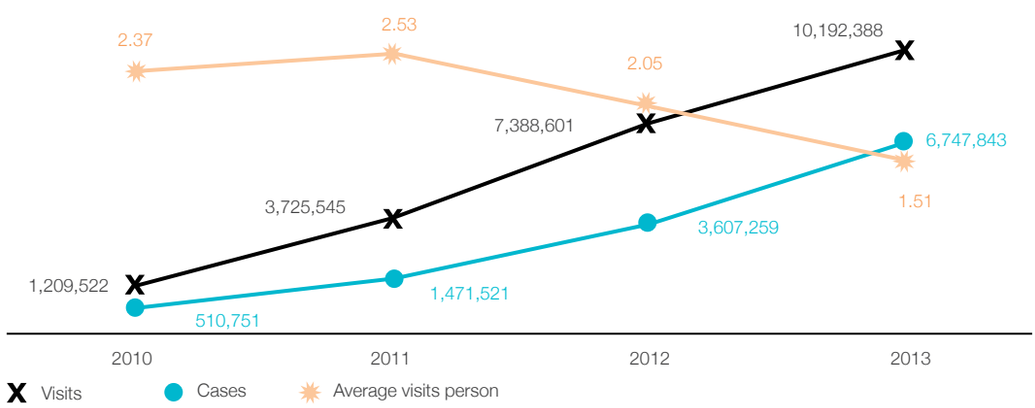
The number of Accessibility to Thai traditional medicines is increases from only 510,751 cases or 1,209,522 visits (average 2.4 visits per person) in FY2010 to 6,747,843 cases or 10,192,388 visits (average 1.5 visits per person) in FY2013, as shown in figure 87.

Table 8 The number of hospitals providing services of Thai traditional medicine, FY2013

Types of hospital	Massage, hot compress, herbal stream		Post-partum care		Herbal medicines	
	# Hospitals	%	# Hospitals	%	# Hospitals	%
Health centers/PCUs	5,250	86.85	366	50.41	9,213	91.35
District hospitals	677	11.20	315	43.39	718	7.12
Regional/general hospitals	80	1.32	31	4.27	85	0.84
Other government hospital not under the MOPH.	17	0.28	3	0.41	28	0.28
Private hospitals	21	0.35	11	1.52	41	0.41
Total	6,045	100	726	100	10,085	100

Source: out-patient data, NHSO, December 2013

Figure 87 The number of Accessibility to Thai traditional medicines, FY2010-2013



Note: 1. Thai traditional medicines includes 1) massage, hot compress, herbal stream, 2) post-partum care, and 3) herbal medicines.

2. Service of the third group was started in FY2011.

Source: out-patient data, NHSO, December 2013

5.7 Drug and Medical Instruments

The NHSO in collaboration with the Food and Drug Administration (FDA), ministry of public health, have continued to promote system development for claims and administration for the J2 sub-list of the national drug list in order to improve accessibility to the necessary high cost drugs. The number of patients access to the drugs in the list is increased from total 3,407 cases in FY2010 to 13,326 cases in FY2013. Details of patients classified by diseases relevant to the J2 sub-list are shown in table 9.

Table 9 The number of patients accessed to the J2 sub-list of the national drug list, FY2010–2013

ID	Diseases	FY2010	FY2011	FY2012	FY2013		
					Oldcases	Newcases	Total
1	cervical dystonia	38	92	197	156	99	255
2	hemi facial spasm	275	612	1,199	1,012	578	1,590
3	Matastasis Breast cancer	1,631	3,036	4,174	2,792	2,013	4,805
4	Matastasis non-small cell lung cancer	396	539	688	261	678	939
5	Matastasis Prostate cancer	166	98	161	99	138	237
6	Acute phase of Kawasaki	288	374	499	17	681	698
7	Guillain Barre syndrome with severe symptoms	105	136	233	2	224	226
8	Myasthenia gravis crisis	48	77	69	9	69	78
9	Autoimmune hemolytic anemia (AIHA)	27	35	58	-	39	39
10	Hemophagocytic lymphohistiocytosis (HLH)	32	44	42	-	41	41
11	Severe Idiopathic thrombocytopenic purpura (ITP)	111	161	215	16	214	230
12	Primary immunodeficiency disease (PID)	66	74	126	112	47	159
13	Severe Pemphigus vulgaris	2	-	-	-	3	3
14	Central precocious puberty	145	281	483	361	204	565
15	Invasive fungal infection	68	131	151	-	349	349
16	Age-related Macular Degeneration; AMD	9	30	27	-	2,694	2,694
17	Hepatitis C genotype 2 , 3	-	-	-	-	332	332
18	Thyroid remnant ablation	-	-	-	-	21	21
19	A plastic anemia	-	-	-	-	56	56
20	Gaucher syndrome type I	-	-	-	-	5	5
21	Methicilin Resistant Staphylococcus Aureus (MRSA) Infections	-	-	-	-	4	4
	Total	**3,407**	**5,720**	**8,322**	**4,837**	**8,489**	**13,326**

Note: list number 17-21 have included in the benefit package since FY2013, according to the announcement of the National drug list.
Source: Claim data on J2 drug list, NHSO

- 6 -
Consumers' Right Protection and Stakeholder Participation

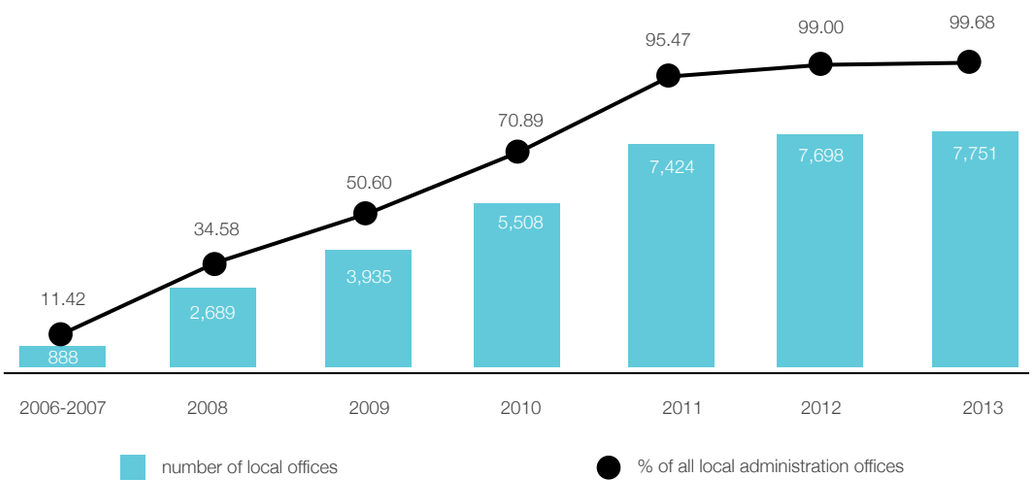
6.1 Promoting local community participation

Promoting local community participation is one of key mechanisms according to Article 47 of the Act to respond to needs of local consumers by engaging community society in decision making and co-funding. The number of local administration offices co-funding in community health security funds has been increased from only 888 sub-districts (11.42%) in FY2006 to 7,751 sub-districts or 99.68% of all local administration offices in FY2013, as shown in figure 88. The community health security funds have been set up in order to promote health related activities that are appropriated and responded to health needs of each community. Consumers and related organizations in each of the community are not only to pay contribution to the community health security funds but also to engage in related decision making processes.

The total amount of community health security funds in FY2013 is THB3,315 millions (including interests) sharing from three sources: the NHSO, local administration offices, and others (such as interests, consumers and community). Proportion of funding from local administration offices has been increase from THB616 million (22.03%) in FY2006 to THB956 million (28.84%) in FY2013 as shown in figure 89.

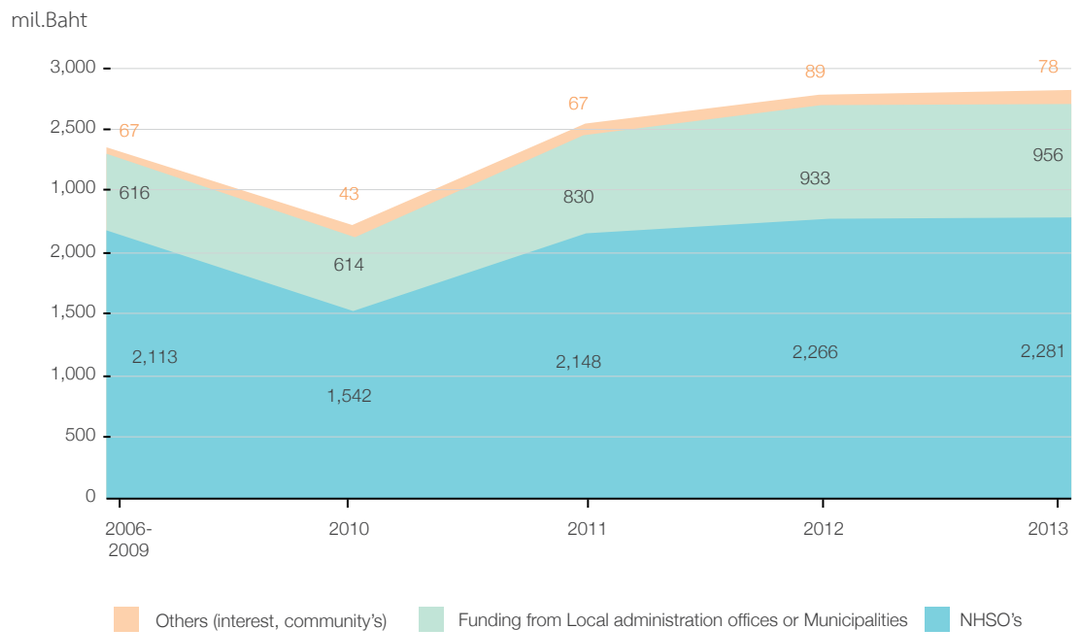
Most of health related activities supported by community health security funds classified by types of related disease in FY2013 are chronic diseases (DM and Hypertension) (46.99%), rehabilitation (23.80%), cancers (21.48%), HIV/AIDS (4.41%), respectively as shown in figure 90.

Figure 88 The number of local administration offices co-funding in community health funds, FY2006-2013



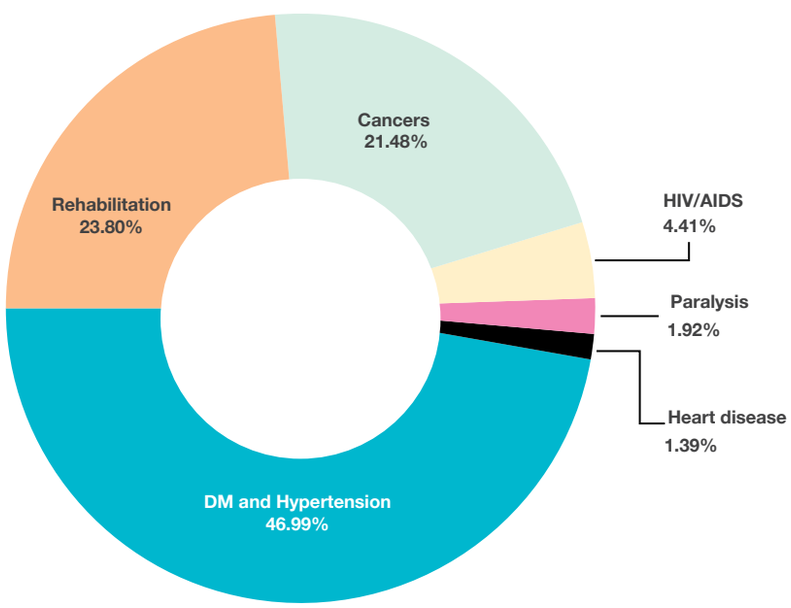
Source: Local administration management data, NHSO

Figure 89 Community health security funds classified by source of funds, FY2006-2013



Source: Local administration management data, NHSO

Figure 90 Health related activities supported by community health security funds classified by types of related disease, FY2013



Source: Local administration management data, NHSO

6.2 Consumer Right's Protection

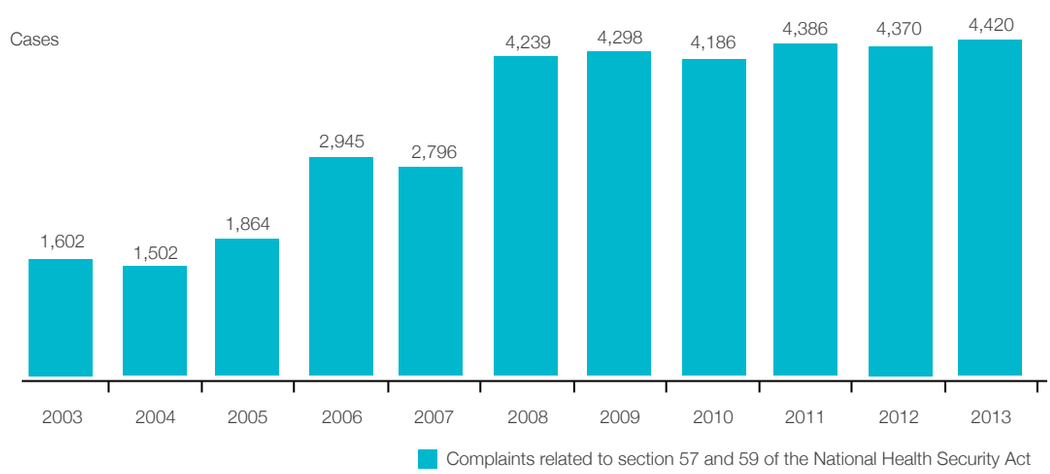
Complaint service center is one of consumer right's protection mechanisms to be a channel that consumers can report complaint about health service. Although some complaints may occur from misunderstanding between patients and providers instead of providers' mistake, complaint service center could be a good channel to ease the conflict between consumers and providers. The number of complaints related to quality of care according to section 57 and 59 of the Act has been increased from 1,602 cases in FY2003 to 4,420 cases in FY2013. However, the number of complaints is quite steady since FY2008 as shown in figure 91. When comparing the number of complaints to the number of out-patient service, the ratio has been reduced from 3.29 complaints to 100,000 cases of out-patient visits in FY2008 to 2.87 complaints to 100,000 cases of out-patient visits in FY2013.

Most of the complaints related to quality of care in FY2013 are "do not receive service according to their benefit package" (1,575 cases), "inconvenience in health service" (1,039 cases), "requested for cost of care" (1,010 cases), and "do not follow standard of care" (796 cases). Details of these complaint classification from FY2003-2013 are shown in figure 92. The number of complaints that are solved within 30 working days is increased from 96.72% in FY2011 to 97.10% in FY2013, as shown in figure 93.

Inquiry service providing for both consumers and providers to understand their right and responsibilities is another channel to promote consumer right's protection by reduce conflict in health service and promoting understanding between consumers and providers.

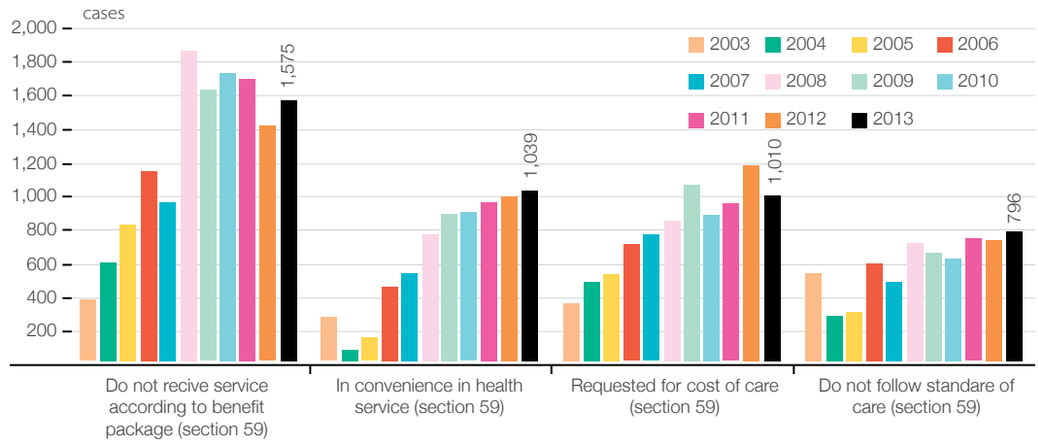
The total number of inquiries has been increased from 512,969 calls in FY2004 to 612,510 calls in FY2013, as shown in figure 94. Within these inquiries, percentage of

Figure 91 The number of complaints related to quality of care according to section 57 and 59 of the Act, FY2003-2013



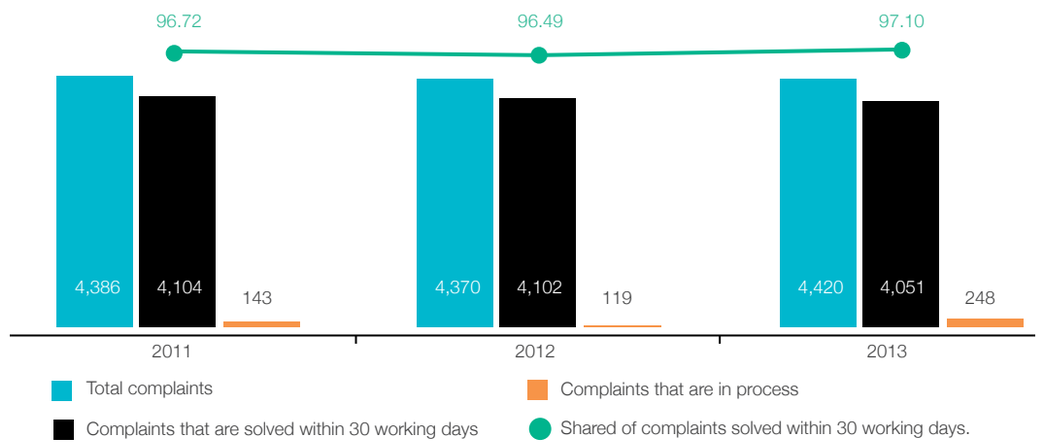
Source: Consumer right's protection data, NHSO

Figure 92 The number of complaints classified by quality issues, FY2003-2013



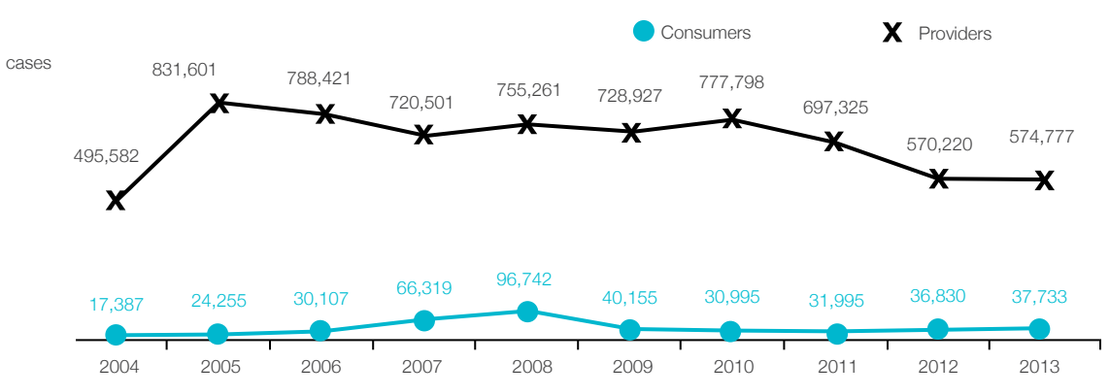
Source: Consumer right's protection data, NHSO

Figure 93 The number of complaints that are solved within 30 working days, FY2003-2013



Source: Consumer right's protection data, NHSO

Figure 94 The number of inquiries from consumers and providers, FY2004-20



Source: Consumer right's protection data, NHSO

inquiries from providers is increased from 3.4% of all inquiries in FY2004 to 6.2% of all inquiries in FY2013. In another view, a proportion between the number of inquiries from consumers to the number of inquiries from providers is decreased from 28.50 times in FY2004 to 15.23 times in FY2013.

Most of the inquiries from consumers is related to the UCS scheme, i.e., 97.11% in FY2013. In FY2013, most of the inquiries about the UCS scheme are "about confirming their health insurance status" (244,245 cases or 43.80% of all UCS scheme inquires), "registration and choosing service provider" (136,596 cases or 24.49% of all UCS scheme inquires), "health service and benefit package" (107,041 cases or 19.19% of all UCS scheme inquires), respectively as shown in table 10. Details of the inquiries from consumers classified by topics of inquiry from FY2008-2013 are shown in table 10.

Table 10 The number of inquiries from consumers classified by topics, FY2008-2013

Inquiry topics	2008	2009	2010	2011	2012	2013
1. UCS scheme	750,755	724,026	772,527	690,350	559,946	557,690
1.1 registration and choosing service provider	247,367	221,877	241,394	208,775	141,399	136,596
1.2 health service and benefit package	39,535	45,739	87,170	81,084	83,894	107,041
1.3 accessing to health service according to benefit package	53,819	56,010	16,436	12,545	9,532	10,948
1.4 basic payment for lost or injuries from health service according to section 41 of the Act.	182	185	264	262	196	259
1.5 Health insurance status confirmation	355,652	345,038	355,539	323,876	264,993	244,245
1.6 Hospital information	18,579	22,829	34,578	29,008	19,156	19,106
1.7 Organization information	1,889	1,811	1,913	2,027	2,180	3,076
1.8 Others (news, other organization, followup cases, etc.)	33,732	30,537	35,233	32,773	35,017	29,060
1.9 Emergency Medical Claim for all*	-	-	-	-	3,579	7,359
2. CSMBS scheme	874	653	635	681	2,497	5,290
3. SSS scheme	3,632	4,248	4,636	6,294	7,777	11,285
4. Local administrative office scheme**	-	-	-	-	-	512
Total	**755,261**	**728,927**	**777,798**	**697,325**	**570,220**	**574,777**

Note : * *The NHSO has developed the emergency medical claim for all since FY2012 when the government annouced the emergency policy for every government schemes*

** *The NHSO has developed registration system for local administration offices since FY2013 according to the government policy.*

Source: Consumer right's protection data, NHSO

Most of the inquiries from providers is related to the UCS scheme, i.e., 96.33% in FY2013. In FY2013, most of the inquiries about the UCS scheme are "health insurance status confirming" (18,988 cases or 52.15% of all UCS scheme inquires), "Others (capitation allocation, news, followup case, etc.)" (9,025 cases or 24.79% of all UCS scheme inquires), "health service and benefit package" (4,354 cases or 11.96% of all UCS scheme inquires), respectively as shown in table 11. Details of the inquiries from consumers classified by topics of inquiry from FY2008-2013 are shown in table 11.

Table 11 The number of inquiries from providers classified by topics, FY2008-2013

Inquiry topics	2008	2009	2010	2011	2012	2013
1. UCS scheme	95,663	39,625	30,523	31,376	35,649	36,407
1.1 registration and choosing service provider	6,862	2,781	2,264	2,584	2,276	2,333
1.2 health service and benefit package	6,104	3,541	4,326	4,065	4,846	4,354
1.3 mothod for claims and reimbursement	2,503	1,328	1,211	1,092	1,074	491
1.4 basic payment for losts or injuries from health service according to section 41 of the Act.	24	12	20	18	28	27
1.5 basic payment for losts or injuries from health service according to section 18(4) of the Act.	98	48	28	22	21	22
1.6 Health insurance status confirmation	49,265	19,051	12,121	12,415	17,064	18,988
1.7 Hospital information	771	338	522	489	447	415
1.8 Organization information	867	583	455	400	436	444
1.9 Others (capitation allocation, news, followup case, etc)	29,169	11,943	9,576	10,291	8,361	9,025
1.10 Emergency Medical Claim for all*	-	-	-	-	1,096	308
2. CSMBS scheme	436	203	161	223	534	555
3. SSS scheme	643	327	311	396	647	678
4. Local administrative office scheme**	-	-	-	-	-	93
Total	**96,742**	**40,155**	**30,995**	**31,995**	**36,830**	**37,773**

Note : * *The NHSO has developed the emergency medical claim for all since FY2012 when the government annouced the emergency policy for every government schemes*

** *The NHSO has developed registration system for local administration offices since FY2013 according to the government policy.*

Source: Consumer right's protection data, NHSO

The number of complaints regarding to general management of the UCS scheme has been reduced from 19,392 cases in FY2008 to 6,016 cases in FY2013; this can show that the overall general management of the scheme has been improve. In FY2013, most of the complaints about the UCS scheme are "wrong health insurance status" (3,373 cases or 56.07% of all UCS scheme complaints), "request for helps" (991 cases or 16.47% of all UCS scheme complaints), "registration and health card" (779 cases or 12.95% of all UCS scheme complaints), respectively as shown in table 12. Details of the complaints regarding to general management classified by topics of compliants from FY2008-2013 are shown in table 12.

Basic compensations to consumers for losses from health service according to section 41 of the Act has been increased from only THB4.86 million in FY2004 to THB191.58 millions in FY2013, or almost 40 times increases, as shown in figure 95. The number of consumers filed for compensations from their losses is increased from 951 cases in FY2012 to 1,182 cases in FY2013. The number of approved cases for the losses is increased from 834 cases in FY2012 to 995 cases in FY2013; however, the rate of approved applicants is also decreased from 87.70% of all cases in FY2012 to 84.18% in FY2013.

Table 12 The number of complaints related to general management classified by topics, FY2008-2013

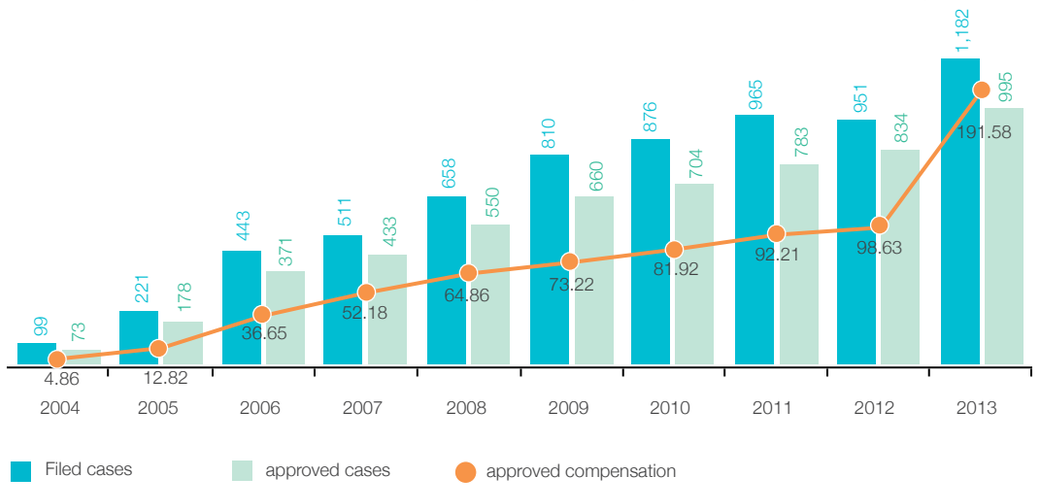
Complaint topics	2008	2009	2010	2011	2012	2013
1. UCS scheme	19,392	10,083	6,169	5,742	5,773	6,016
1.1 registration and health card	1,518	1,077	175	786	737	779
1.2 wrong health insurance status	16,151	7,496	3,789	3,330	3,065	3,373
1.3 ask for help	998	900	1,084	1,134	1,252	991
1.4 consultation	313	204	108	112	80	88
1.5 suggestions	285	300	352	372	346	416
1.6 Reject to service for emergency cases according to section 7 of the Act	17	10	8	8	5	3
1.7 Reject to service for "Emergency Medical Claim for all" policy*	-	-	-	-	288	336
1.8 Others	110	96	31	-	-	-
2. CSMBS scheme	10	8	8	4	477	511
3. SSS scheme	17	16	7	10	74	106
Total	**19,419**	**10,107**	**6,184**	**5,756**	**6,324**	**6,633**

Note : * *The NHSO has developed the emergency medical claim for all since FY2012 when the government annouced the emergency policy for every government schemes*

Source: Consumer right's protection data, NHSO

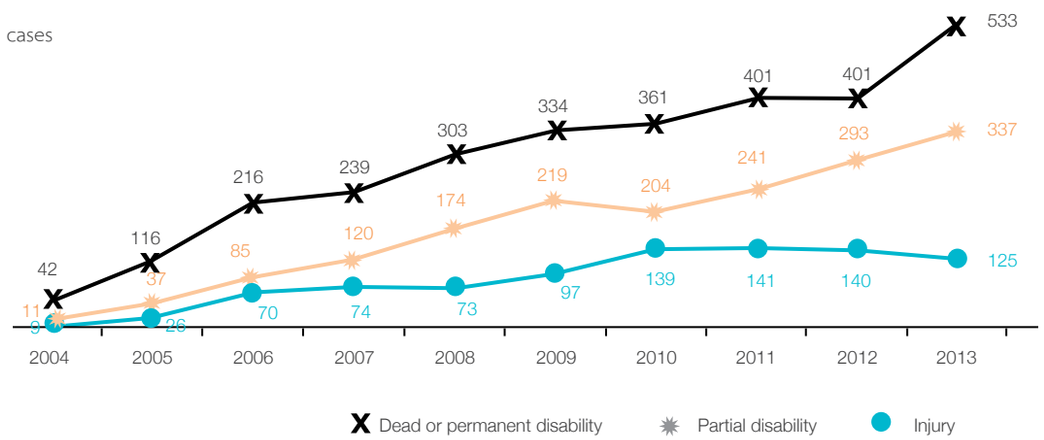
When classifying the number of approved cases for their losses into three main types of lost: 1) death or permanent disability, 2) partial disability, and 3) injuries as shown in figure 96, most of losses in FY2013 are deaths or completed disabiliy (533 cases or 53.57% of all losts), partial disability (337 cases or 33.87% of all losses), and injuries (125 cases or 12.56% of all losses), respectively. The amount of approved compensations to each type of losses in FY2013 is THB149.93 millions, THB17.94 million, and THB20.31 million, respectively as shown in figure 97.

Figure 95 The number of consumers file for compensations from their losses according to section 41 of the Act and the amount of approved compensations for the losses, FY2004-2013



Source: Bureau of Legal Affair, NHSO

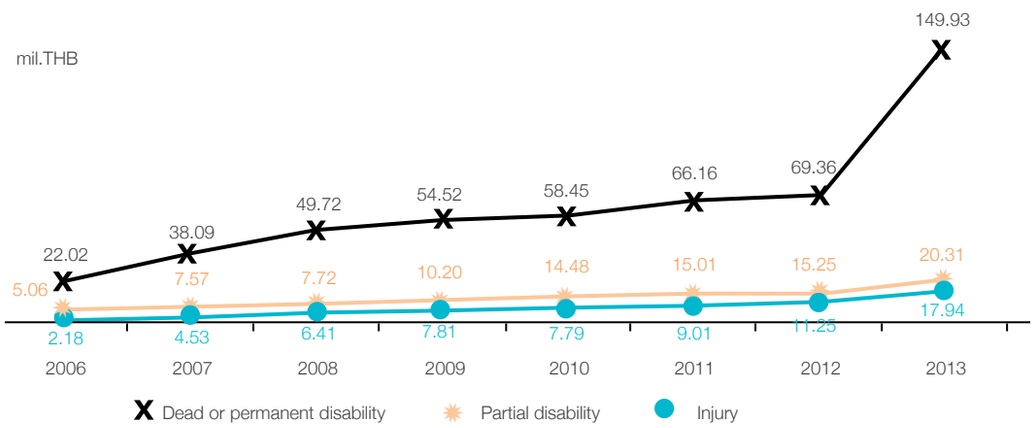
Figure 96 The number approved applicants for their losses classified by types of loss, FY2004-2013



Source: Bureau of Legal Affair, NHSO

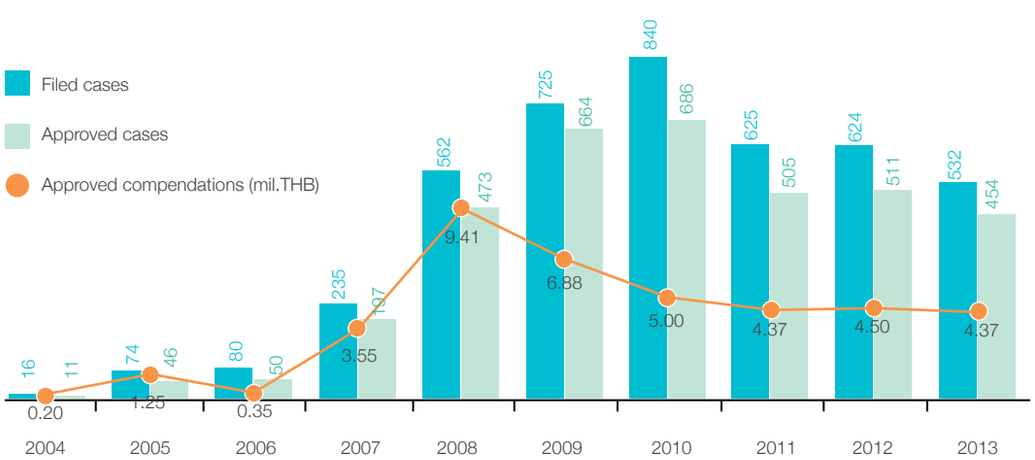
Basic compensations to providers for losses from health service according to section 41 of the Act is increased from THB0.20 million in FY2004 to THB4.37 millions in FY2013, as shown in figure 98. The number of providers filed for compensations from their losses is reduced from 624 cases in FY2012 to 532 cases in FY2013. The number of approved cases for the losses is reduced from 511 cases in FY2012 to 454 cases in FY2013; however, the rate of approved cases is increased from 81.89% of all cases in FY2012 to 85.34% in FY2013. The average compensations per approved case in FY2013 is THB9,626 per case. Most of the approved cases are injuries; only 6 cases are death of completed disability.

Figure 97 The amount of compensations classified by types of loss, FY2006-2013



Note: The national health security board has approved the national guideline for preliminary compensations for losses or injuries according to section 41 of the Act on October 1, 2012.
Source: Bureau of Legal Affair, NHSO

Figure 98 The number of providers file for compensations from their losses according to section 41 of the Act and the amount of approved compensations for the losses, FY2004-2013



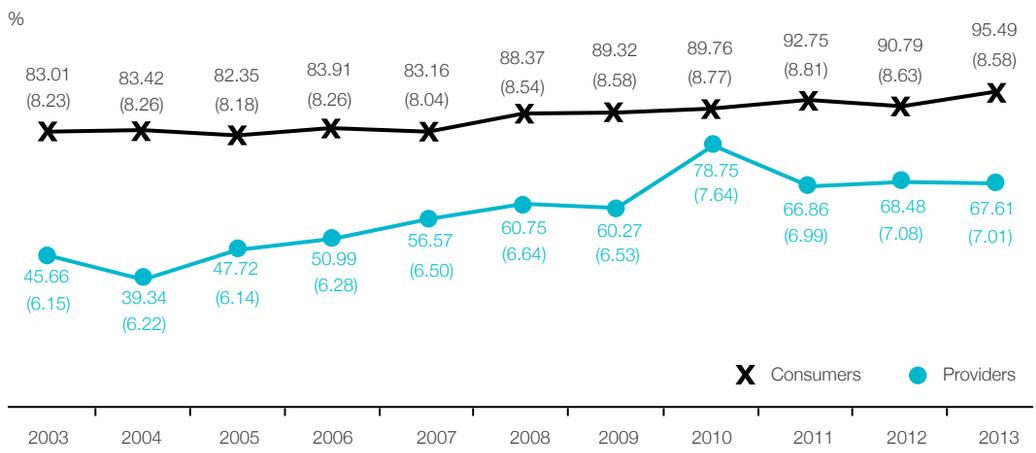
Source: Bureau of Legal Affair, NHSO

6.3 Satisfaction of Consumers and Health care providers

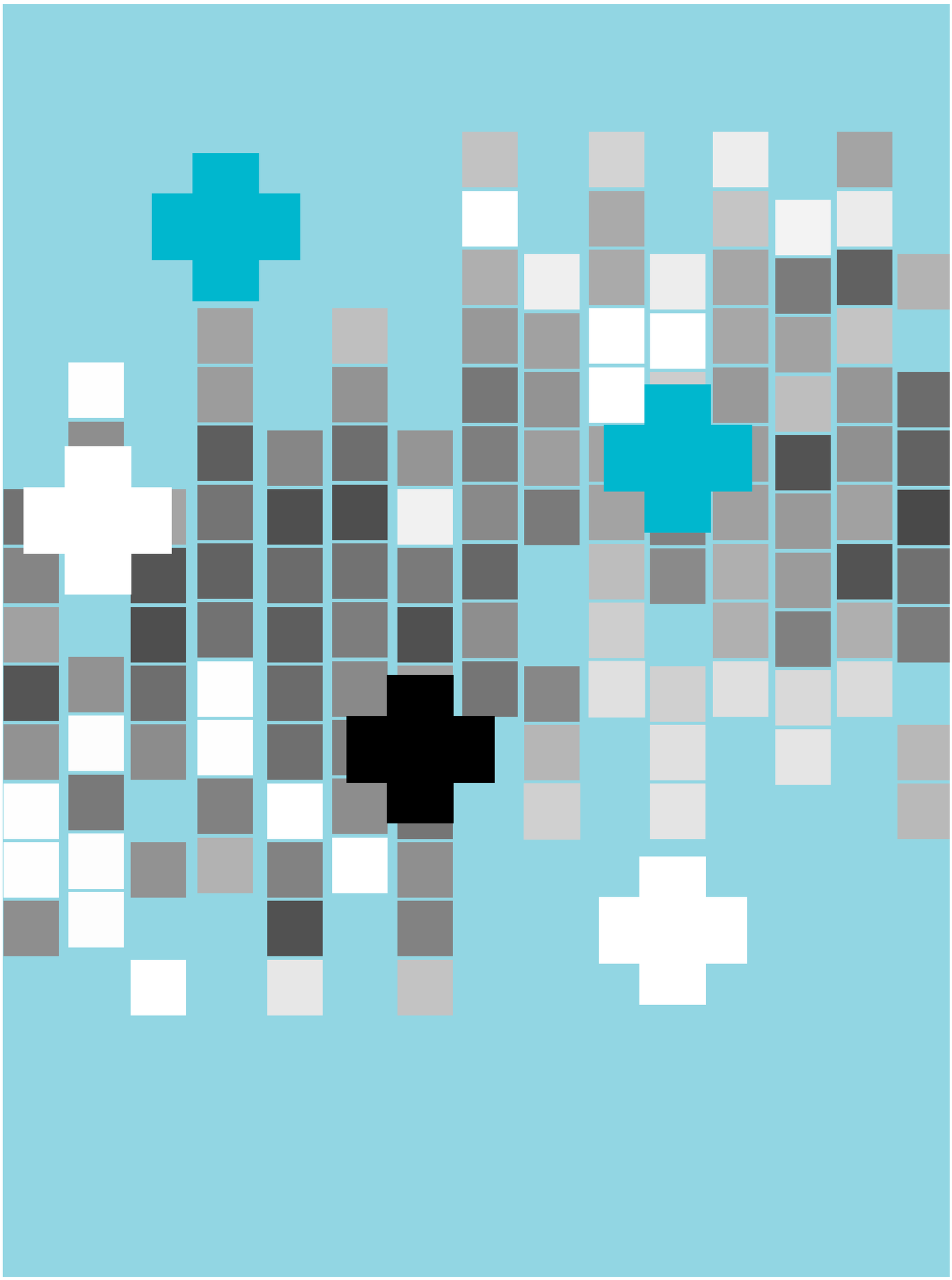
According to the Satisfaction survey report by Academic Network for Community Happiness Observation and Research (ANCHOR), Assumption University of Thailand, average satisfactory scores and percentage of satisfied respondents ("4 = satisfy" and "5 = very satisfy" level) of both consumers and providers have continued to increase from FY2003 to FY2013. This shows that situation of the universal health coverage implementation has been improved. However, both of the average satisfactory score and percentage of satisfied respondents in consumers are higher than the ones in providers, as shown in figure 99.

The percentage of satisfied consumers is increased from 83.01% in FY2003 to 95.49% in FY2013, while the one of the providers is increased from 44.66% to 67.61% in the same period. The average satisfactory score of consumers is also increased from 8.23 in FY2003 to 8.58 in FY2013, while the one of the providers is increased from 6.15 to 7.01 in same period.

Figure 99 The percentage of respondents satisfy at 4 = satisfy" and "5 = very satisfy" level and average satisfactory score, FY2003-2013



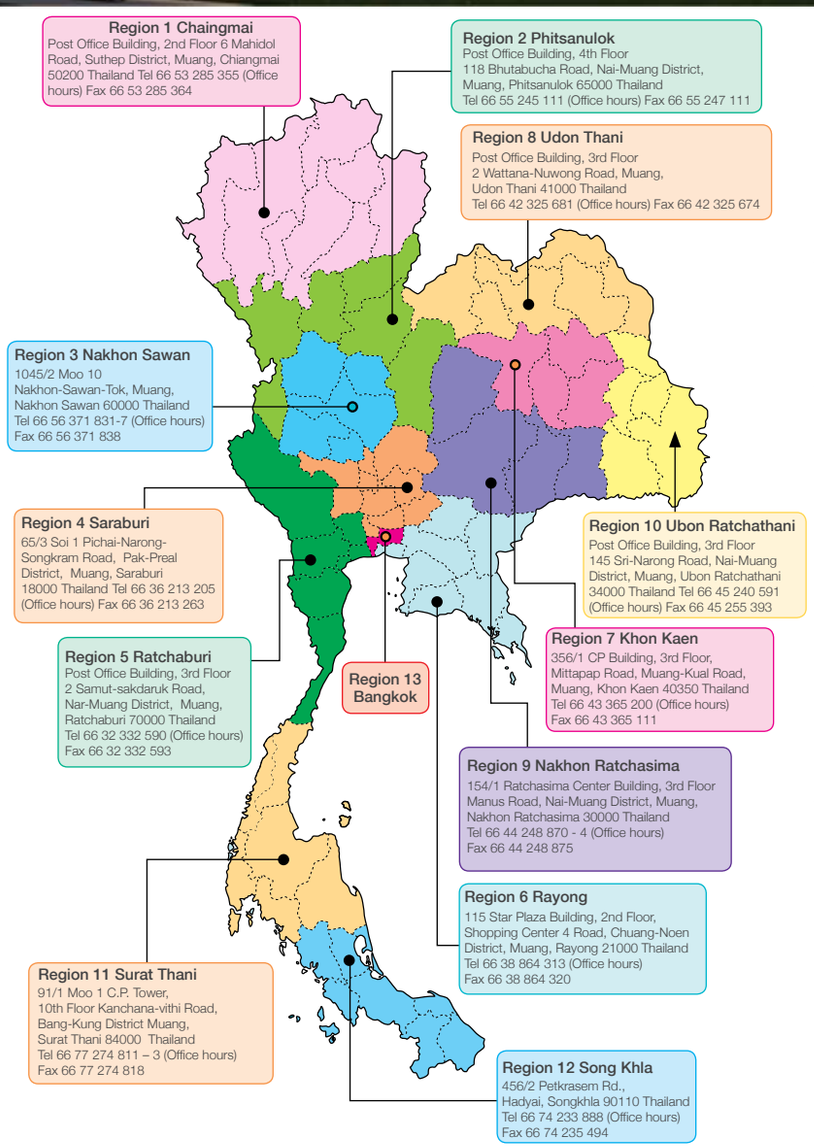
Note: Percentage of satisfaction is a summation of "4 = satisfy" and "5 = very satisfy"
Source: Satisfaction survey report, Academic Network for Community Happiness Observation and Research (ANCHOR), Assumption University of Thailand



PART TWO

The National Health Security Office

1. Vision, Mission, Goals, Strategies and Operations of the NHSO



All Thai citizens have been insured by the universal health coverage since the National Health Security Act B.E. 2545. was passed by the parliament in November 2002. The National Health Security Office (NHSO) was established by the Act to manage universal health coverage for Thai citizens. By Section 24 of the Act, the NHSO is a government legal entity to operate autonomously under policies set by the National Health Security Board chaired by the minister of ministry of public health.

The universal coverage scheme (UCS) announced by the National Health Security Act has covered all Thai citizens who are not insured by other government health insurance schemes, i.e., 1) the civil servants medical benefit scheme (CSMBS) for civil servants and their dependents; 2) the Social Security Scheme (SSS) providing health care for employees of all private firms; 3) other state

enterprise schemes or the local government schemes in comparative to the CSMBS. At anytime, Thai citizens are eligible to at least one of one of the schemes based on their employment, or they may eligible to register to the UCS scheme. They, therefore, can access to quality of health care as need.

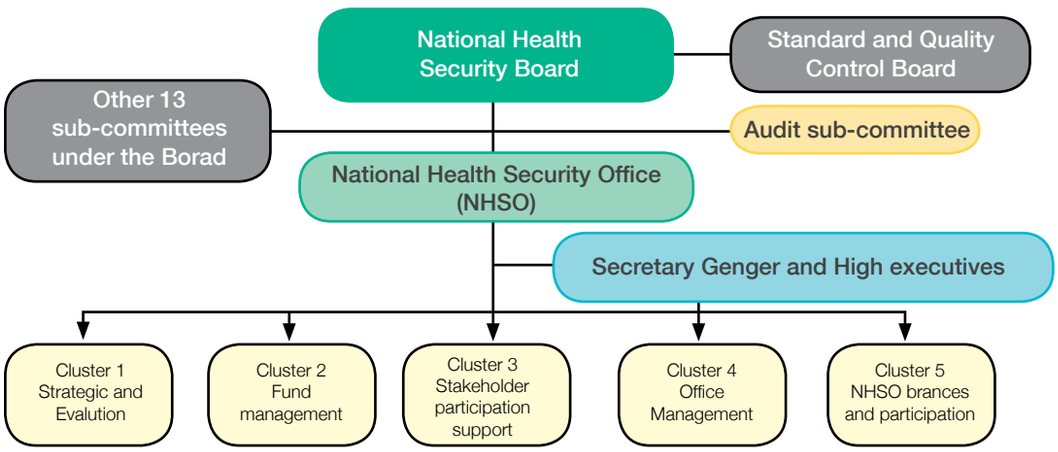
Head office of the NHSO is located at the following address:

" 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 66 2 141 4000 (Office hours)
Fax 66 2 143 9730-1
Office Hours: Mon.-Fri. 08:30 – 16:30
Call Center (24 hrs.): 1330 (Local calls only)

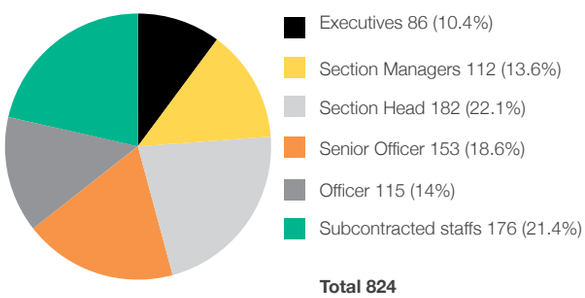
2. Vision, Mission, Goals, Strategies and Operations of the NHSO

The NHSO operates autonomously under policies set by the National Health Security Board chaired by the minister of ministry of public health. Other committee and sub-committees are also established by the National Health Security Act, i.e., the Standard and Quality Control Board, and the Audit sub-committee, and other 13 related sub-committees in order to support the Board policies. A Standard and Quality Control Board was assigned by the law to have powers and duties related to standard and quality in health care. An Audit sub-committee acts as independent auditors to audit the NHSO operations. Structure of the NHSO's Board of Directors is shown in the following diagram.

Board of Directors



The NHSO employees are classified into three groups, i.e., high executives, directors and executives, and operational staffs. The operational staffs are included section managers, section heads, senior officers, officers, and subcontracted staffs. A number of total employees in fiscal year 2013 (September 30, 2013) is 824 employees. Proportions of the employees are shown in the following diagram.



1.1 Vision

"All residents in Thailand are assured under the universal health coverage"

1.2 Goals

All residents in Thailand are assure under the universal health coverage so they can access to necessary health care without financial risk, especially in catastrophic illness. It is equity for everyone to access to quality of care regarding to their gender or social status. The health care should be efficiency, effective, and social accountability.

1.3 Mission

1. Promoting universal health coverage (UHC) to cover all residents living in Thailand.
2. Promoting stakeholder participation to have a shared sense of ownership on the universal coverage scheme (UCS)
3. Promoting health system development under the universal coverage scheme to meet quality standard in order to improve accessibility while keeping satisfaction of both consumers and health providers
4. Promoting consumer and provider relationship with human rights and dignity consideration
5. Continuing to improve efficiency on financial management of the National Health Security Fund
6. Promoting equity between government health insurance schemes on both the benefit packages and service providing.

1.4 Strategies

1. Promoting robust mechanisms and measurements on universal health coverage (UHC) to assure all residents living in Thailand
   - 1.1 Promoting the development of mechanism to the assure residents that are not cover under any of the government health insurance schemes
   - 1.2 Collaborating and promoting the development of mechanism to assure the protection of individuals that are cover under other small government health insurance schemes, e.g., Local Administration Health Insurance Scheme, State Enterprise Health Insurance Scheme, other small autonomous government offices.
   - 1.3 Promoting the development of mechanisms to promote public relations and right protection of consumers and providers so that they can understand and know their rights and responsibilities under the universal health coverage (UHC) concept.
2. Developing positive seamless work processes between stakeholders to have a shared sense of ownership.
   - 2.1 Developing positive seamless work processes between stakeholders.
   - 2.2 Promoting knowledge and under - standing among stakeholders at both individual level and organizational level.
   - 2.3 Promoting regional and local participation on health service management system for other small government health insurance

schemes, e.g., Local Administration Health Insurance Scheme, State Enterprise Health Insurance Scheme, other small autonomous government offices

2.4 Promoting consumer and provider relationship with human rights and dignity consideration

3. Strengthening health service system development especially on primary care to meet local contexts and requirements (Primary care strengthening)

3.1 Promoting hospital quality improvement at all levels to meet the national standard so that consumers can access to quality health service as needed

3.2 Promoting innovative care in health promotion and disease prevention in order to increase accessibility and equity of care.

3.3 Promoting the increasing of dignity and quality of life of the providers at primary care level using local collaboration and capacity.

3.4 Promoting national seamless health system development to increase a convenience access to health service at all level from primary care to tertiary care.

3.5. Promoting primary care unit management by local administration offices and privated sector, especially in urban areas.

4. Promoting harmonization between government health insurance schemes

4.1 Developing benefit package based on the overall benefit and value as well as appropriated service delivery development that can increase accessibility, equity, efficiency, and effectiveness.

4.2 Supporting relevant policy research on resource management for future sustainability system management.

4.3 Developing standard financial mechanisms that are harmonized with other government health insurance schemes.

4.4. Developing integrated health information management to have national standard data set that can be shared and used among stakeholders.

5. Promoting and strengthening good governance management in universal coverage scheme

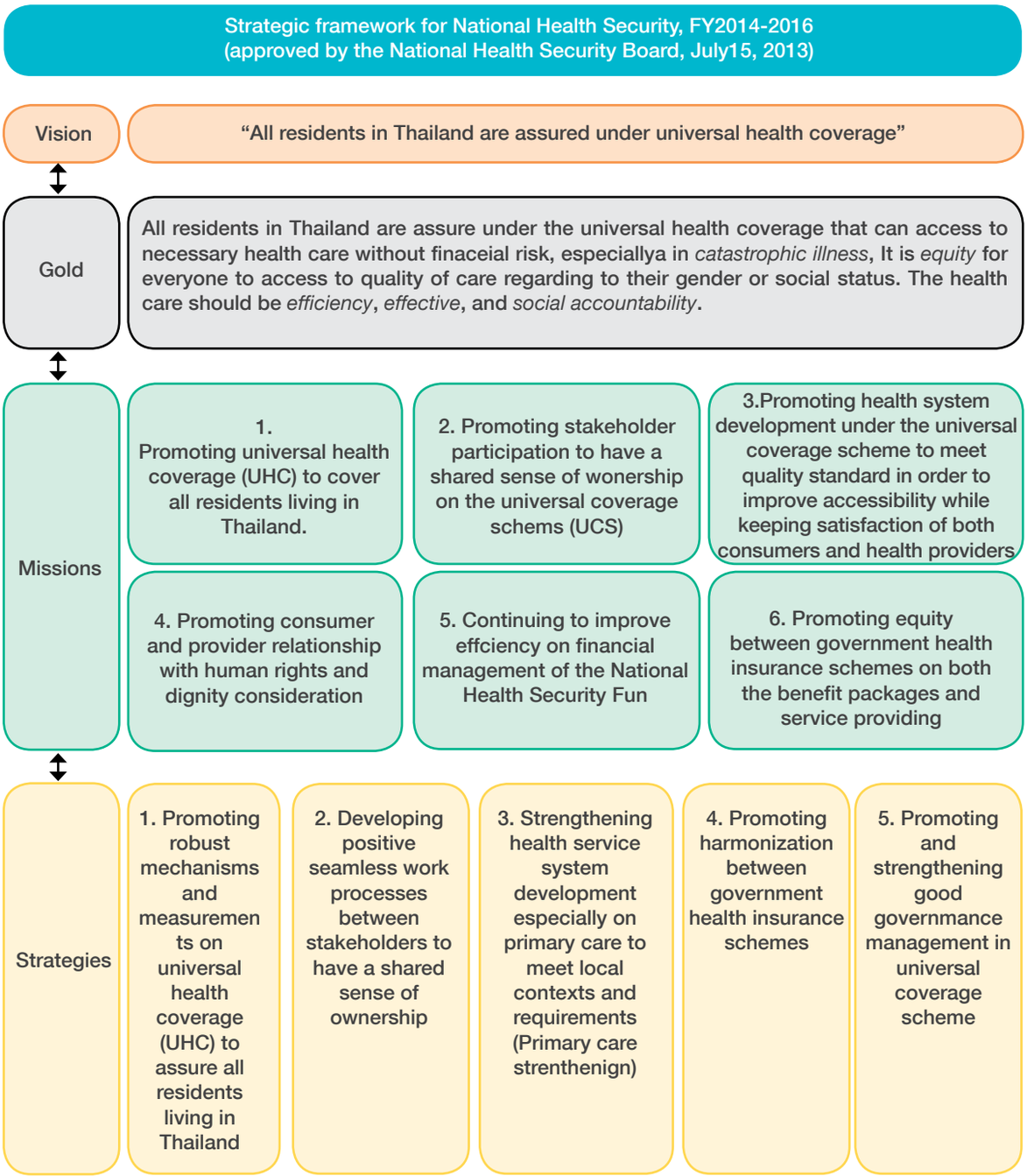
5.1 Developing effective financial management on universal coverage fund management that is acceptable on good governance aspect.

5.2 Promoting decentralized policy as well as the effective continuous audit, monitoring and evaluation especially on health outcome.

5.3 Promoting capacity building for health personnel in the universal health coverage system not only on knowledge but also on moral and ethics in order to be a mechanism to keep good governance at national level.

5.4 Promoting the National Health Security Office to be a learning organization for knowledge sharing and resource center on universal health coverage implementation at national and international level.

Figure 100 Strategic framwork of Universal Health Coverage Development, FY2014-2016



2. Budget Management

The NHSO's budgets are managed under supervision of the National Health Security Board and classified into two group of funds as follow.

1. National Health Security fund (or UCS fund) is provided for health expenditures to registered hospitals and health providers. It is managed in order to support UHC implementation cover health service from health promotion, disease prevention and curative as well as palliative care according to the UCS benefit package.
2. NHSO administrative fund is provided for operation cost of the NHSO classified into two sub-funds, i.e., routine operation budget, and strategic operation budget.

The approved government budgets for the UCS fund and the NHSO administrative fund has been increased from THB82,023 million in FY2006 to THB141,302.75 million in FY2013, and from THB647 million in FY2006 to THB1,209.12 million in FY2013, respectively as shown in table 13.

Table 13 Approved government budgets for the UHC fund and the NHSO administrative fund, FY2006-2013

Approved	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
(1) UCS fund	82,023.00	91,369.05	101,984.10	108,065.09	117,969.00	129,280.89	140,609.40	141,302.75
(2) NHSO administrative fund	647.00	810.96	807.65	936.75	858.46	961.30	1,099.80	1,209.12
% of (2) to (1)	0.79%	0.89%	0.79%	0.87%	0.73%	0.74%	0.78%	0.85%

Note : * *The NHSO has developed the emergency medical claim for all since FY2012 when the government annouced the emergency policy for every government schemes*

Source: Consumer right's protection data, NHSO

3. The NHSO Key Performance Indices in FY2013

Key performance indices (KPIs) of the UCS management are set according to the national health security fund (UCS fund) that are classified into medical service capitation, HIV/AIDS health service package, Chronic Kidney Diseases (CKD) health service package, and vertical program payments related to health promotion, disease prevention, or curation. Details of targets and performance of the related KPIs are described in table 14.

Table 14 The NHSO key performance indices in FY2013

KPIs	Units	Goal (according to budget allocation)	Performance	% of performance
Targeted population				
- Thai citizens	Cases	65,404,188	65,747,528	100.52
- UCS beneficiaries	Cases	48,445,000	48,612,007	100.34
1. medical service capitation				
1.1 out-patient services (OP)				
- utilization rate	visits/person/yr	3.43	3.12	90.96
- total OP visits	Visits	175,288,591	151,864,201	86.64
1.2 in-patient services (IP)				
- utilization rate	Admissions /person/yr.	0.113	0.119	105.31
- total admissions	admissions	5,450,063	5,786,414	106.17
- sum Adj. RW		5,848,925	6,334,206	108.30
1.3 Accident and Emergency (AE), High cost care (HC), disease management or vertical programs				
1.3.1 High cost care (HC)				
1.3.1.1 Accessibility to high cost drug in specific diseases				
1) Hemophilia	Cases	1,201	1,309	108.99
2) acute myocardia infraction type ST-elevation (STEMI)	Cases	4,660	3,380	72.53
3) Stroke (Stroke Fast Track)	Cases	1,223	1,374	112.35
4) Methadone Maintenance Therapy (MMT)	Cases	2,923	5,308	181.59
5) Drugs for opportunistic infection in AIDS (Crpyto/CMV)	Visits	5,677	3,426	60.35
6) J2-list drugs Cases	13,716	13,326	97.16	
7) Compulsory licensing drugs (Clopidogrel)	Cases	164,684	173,745	105.50
8) Orphan drugs of rare diseases	Cases	353	1381	391.22
	Items	10	20	200.00
1.3.1.2 Accessibility to specific diagnosis or procedures				
1) Instrument-OP&IP	items	1,220,435	1,360,196	111.45
2) OP visits for Chemotherapy/ Radiotherapy in cancers	Visits	398,187	388,359	97.53
3) Hemodialysis in acute case	Cases	33,799	15,222	45.04
4) Hyperbaric Oxygen therapy	Cases	105	121	115.24

KPIs	Units	Goal (according to budget allocation)	Performance	% of performance
5) High cost diagnosis and procedure of heart diseases in ambulatory care	Visits	1,248	4,509	361.30
6) Orthodontics services for cleft lip and cleft palate	Cases	384	251	65.36
1.3.2 Accident and Emergency (AE)				
1) AE in hospitals located outside their registered province, and service outside registered hospital in disabled people	Visits	891,325	1,215,266	136.34
2) Co-payed and referred OP	Visits	249,293	1,391,694	558.26
3) referred cases with transportation cost	Visits	220,446	229,381	104.05
4) newborn admissions	Admissions	625,232	636,890	101.86
5) admissions that are claims in non-registration UCS or new employment (the first 3 months) of SSS	admissions	41,240	26,089	63.26
1.3.3 disease management or vertical programs				
1) Asthma	Cases	197,756	172,069	87.01
2) Tuberculosis	Cases	45,000	52,498	116.66
3) new cases of Leukemia & Lymphoma	Cases	1,235	2,777	224.86
4) sugeries in cataract	Visits	100,000	157,498	157.50
5) Corneal Transplantation	Items	360	360	100.00
6) kidney stone cases	52,687	19,880	37.73	
7) Morphine treatment in palliative cases	cases	3,136	7,847	250.22
8) Organ transplantation				
- Liver transplantation in children	cases	55	22	40.00
- Heart transplant	cases	54	9	16.67
- Bone marrow transplantation	cases	30	23	76.67
- seasoning influenza vaccines	Cases doses	3,471,649 3,645,232	2,848,989	82.06
1.4 Rehabilitation				
1) disables	cases	1,300,274	1,123,273	86.39
2) instruments for disables	cases	44,786	37,311	

KPIs	Units	Goal (according to budget allocation)	Performance	% of performance
3) rehabilitation services				
- for disables	cases	302,377	190,765	63.09
- for elders	cases	477,557	142,200	29.78
- for other patients	cases		166,816	
4) Orientation and Mobility (O&M) for disables	cases	7,920	4,779	60.34
1.5 Thai traditional medicines				
- Massage, hot compress, herbal stream	visits	3,914,113	4,017,170	102.63
- registered hospitals having Thai traditional medicine center	hospitals	400	492	123.00
- post-partum care	cases	15,678	26,725	170.46
1.6 preliminary compensations for consumers accorfing to section 41 of the Act.				
- approved cases	cases	1,101	995	90.37
1.7 preliminary compensations for providers accorfing to section 41 of the Act.				
- approved cases	cases	614	454	73.94
2. HIV/AIDS health service package	cases	174,400	176,926	101.45
3. CKD health service package	cases	31,434	29,668	94.38
4. Health promotion and prevention in chronic diseases (DM and hypertension)				
- secondary prevention in DM and HT patients	cases	1,267,600	3,173,107	250.32

4. Challenges in Universal Health Coverage System Implementation

4.1 Inequity between government health insurance schemes

There are three main government health insurance schemes in Thailand, i.e., the Civil Servant Medical Benefit Scheme (CSMBS) for government officers or state enterprise employees and dependents, Social Security Scheme (SSS) for formal private employees, and the Universal Coverage Scheme (UCS) for the rest of Thai citizens. Although there has been effort from the government and stakeholders to harmonize benefit packages and reimbursement rate, differences between schemes still exist.

In FY2013, there are government policies to reduce differences between schemes. The most high impact policy is the national emergency project called " "When emergency threatened to life occurs, go to the nearby hospital, no question on health insurance"

project (Translated from Thai: “เจ็บป่วยฉุกเฉินถึงแก่ชีวิต ไม่ถามสิทธิ ใกล้ที่ไหน ไปที่นั่น”). The project is aimed to protect the citizens in emergency, so they can access to necessary health care at the nearby hospital without question on their health insurance scheme and without pre-payment for the care; and, referral system to higher capacity of health care is available as needed. Other policies include harmonizing regulations and benefit packages, integrating management system between schemes by establishing the National Clearing House for claims and information systems, and promoting standard quality of care by implementing national standard service guidelines for specific diseases, e.g., HIV/AIDS, CKD, cancers.

4.2. Improving efficiency and quality in health insurance system

1) Introducing new payment models development to promote efficiency an quality of care

The NHSO as a health service purchaser for the UCS scheme has implemented financing mechanism to promote efficiency and quality of care. For example, the NHSO may introduces additional on-top payment models to focus more on health quality and outcome especially in health services that have low demand but need more proactive intervention such as health promotion and disease prevention.

2) Promoting local health service purchasing

The ministry of public health has regional health policy to provide health service in responding to local health problems. Local health service purchasing is considered by stakeholders, both consumers and providers, in local communities in order to provide health service system that meet the community needs and monitor by the community. Capacity building or other requirements in order to prepare the health system for the communities are decided and supported by the communities. The relation of the local stakeholders called “strategic partnership”.

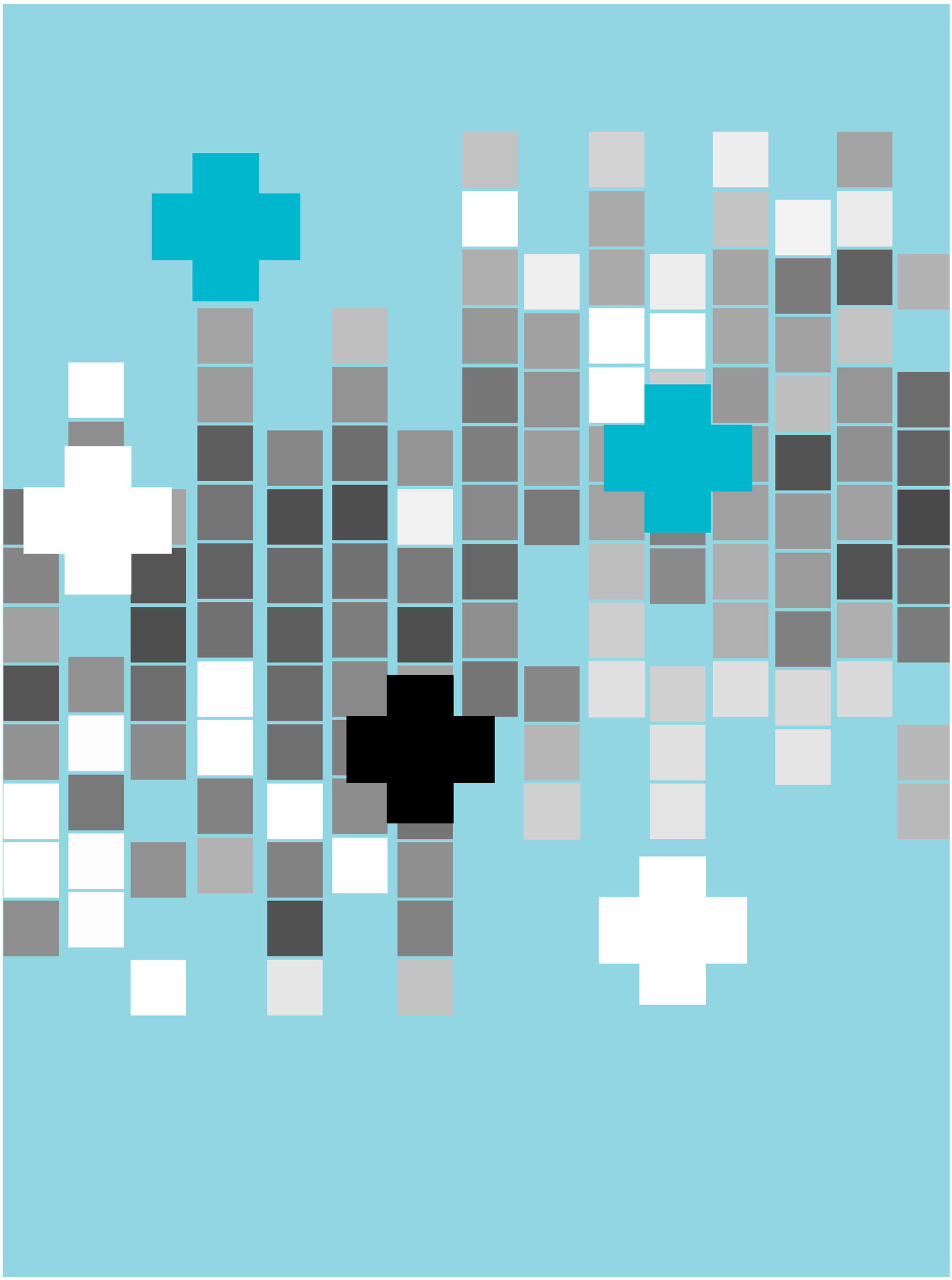
4.3. Impacts from and changing in population structure and emerging diseases

Great impacts from changing in population structure and emerging diseases are important concerns. Becoming aging society and increasing prevalence rate in non communicable diseases (NCDs) have introduced new public health challenges to Thailand. It is important for Thailand to be prepared for these impacts.

Health care reform for these changes would include primary care strengthening, responsive community health system, long-term care for elders, community-based health care, innovation in health system, human resource management, health system development, and civil society involvement.

4.4. Health financing sustainability

The most important concern on universal health coverage implementation in many countries is increasing rate in health expenditure that could be burdened to the system in long-term. Thailand is also faced this challenge with no exception. Therefore, it is important to be prepared. Many new policies, health interventions, payment systems, and / or new innovation in health care would be considered to sustain the overall health system and UHC implementation.



PART THREE

The National Health Security Board and The Health Service Standard and Quality Control Board

1. The National Health Security Board

List of the National Health Security Board

1.	Mr.Pradit Sintavanarong นายประดิษฐ สินธวณรงค์	Minister of ministry of public health รัฐมนตรีว่าการกระทรวงสาธารณสุข	Chair
2.	Mr.Charal Trinvuthipong นายจรัล ตฤณวุฒิพงษ์	Medicine and public health expert in the board ผู้ทรงคุณวุฒิด้านการแพทย์และสาธารณสุข	Member
3.	Mr. Kanit Sangsubhan นายคณิศ แสงสุพรรณ	Fiscal financing expert in the board ผู้ทรงคุณวุฒิด้านการเงินการคลัง	Member
4	Prof. Somsri Phaosawat ศ.เกียรติคุณ สมศรี เผ่าสวัสดิ์	Health insurance expert in the board ผู้ทรงคุณวุฒิด้านประกันสุขภาพ	Member
5.	Mr. Pinit Hirunyachote นายพินิจ หิรัญโชติ	Alternative medicine expert in the board ผู้ทรงคุณวุฒิด้านการแพทย์ทางเลือก	Member
6.	Mr.Narongsak Angkasuwapla นายณรงค์ศักดิ์ อังคะสุวพลา	Thai traditional medicine expert in the board ผู้ทรงคุณวุฒิด้านการแพทย์แผนไทย	Member
7.	Gp. Capt. Ittiporn Khanacharoen นอ.(พิเศษ)อิทธพร คณะเจริญ	Social science expert in the board ผู้ทรงคุณวุฒิด้านสังคมศาสตร์	Member
8.	Mr. Sangiam Boonjuntr นายเสงี่ยม บุญจันทร์	Law expert in the board ผู้ทรงคุณวุฒิด้านกฎหมาย	Member
9.	Mr. Narong Sahametapat นายณรงค์ สหเมธาพัฒน์	Permanent Secretary, Ministry of public health ปลัดกระทรวงสาธารณสุข	Member
10.	Mr. Charin Chakapak นายจรินทร์ จักกะพาก	Assistant Permanent Secretary, Ministry of Interior รองปลัดกระทรวงมหาดไทย	Member
11.	Mr. Artit Isamo นายอาทิตย์ อิสโม Mr. Prakorn Amorncheewin นายปกรณ์ อมรชีวิน Mr. Jirasak Sukonthachat นายจิรศักดิ์ สุคนธชาติ	Assistant Permanent Secretary, Ministry of Labour (to June 2013) Assistant Permanent Secretary, Ministry of Labour (to September 2013) Secretary General of Social Security Office (start on October 2013)	Member
12.	Maj.Gen Kobpanya Wongwisetkij พลตรีกอบปัญญา วงศ์วิเศษกิจ Lt.Gen. Therayuth Sasiprapa พลโทธีรยุทธ ศศิประภา	Representative of Permanent secretary, Ministry of defense (to September 2013) (start on October 2013) แทนปลัดกระทรวงกลาโหม (เริ่ม ต.ค. 56)	Member

13.	Mr. Sombat นายสมบัติ	Suwanpitak สุวรรณพิทักษ์	Assitant Permanent Secretary, Ministry of education (to September 2013)	Member
	Miss Jurairat นส.จุไรรัตน์	Sangboonnum แสงบุญนำ	(start on October 2013) รองปลัดกระทรวงศึกษาธิการ (เริ่ม ต.ค.56)	
14.	Mr.Boonnaris นายบุญนริศร์	Suwanpool สุวรรณพูล	Inspector of ministry of commerce (to Sep.2013) ผู้ตรวจราชการกระทรวงพาณิชย์	Member
	Mrs. Uraiwan นางอุรวี	Ngourungrueng เงารุ่งเรือง	Assistant Permanent Secretary, Ministry of Commerce รองปลัดกระทรวงพาณิชย์	
15.	Mrs. Supha นางสาวสุภา	Piyajitti ปิยะจิตติ	Assistant Permanent Secretary, Ministry of Finance (To May 2013)	Member
	Mrs. Pongpanu นางพงษ์ภาณุ	Savetroon เศวตรุนทร์)	(start on June 2013) รองปลัดกระทรวงการคลัง (เริ่ม มิ.ย.56)	
16.	Mr. Worawit นายวรวิทย์	Champeerat จำปีรัตน์	Director of Budget Bureau ผู้อำนวยการสำนักงบประมาณ	Member
17.	Prof. Umnaj ศ.อำนาจ	Kussanant กุสลานันท์	Representative of Medical council ผู้แทนแพทยสภา	Member
18.	Mr. Sirichai นายศิริชัย	Chuprawat ชูประวัติ	Representative of Dentist council (To Feb.2013) (start on March 2013)	Member
	Mr. Thornint นายธรณินทร์	Charusrungkait จรัสจรุงเกียรติ	ผู้แทนทันตแพทยสภา (เริ่ม มี.ค.56)	
19.	Ass.Prof. Kitti รศ.กิตติ	Pitaknitinum พิทักษ์นิตินันท์	Representative of Pharmacy Council ผู้แทนสภาเภสัชกรรม	Member
20.	Asso.Prof.Suchittra รศ.สุจิตรา	Luangamornlert เหลืองอมรเลิศ	Representative of Nursing Council ผู้แทนสภาการพยาบาล	Member
21.	Mr. Aurchat นายเอื้อชาติ	Kanjanapitak กาญจนพิทักษ์	Representative of Private Hospital Association ผู้แทนสมาคมโรงพยาบาลเอกชน	Member
22.	Mr. Ittipol นายอิทธิพล	Khunplem คุณปลื้ม	Representative of other form of community administration offices ผู้แทนองค์กรปกครองส่วนท้องถิ่นรูปแบบอื่น	Member
23.	Mr. Worawit นายวรวิทย์	Buranasiri บุรณศิริ	Representative of Provincial administration offices ผู้แทนองค์การบริหารส่วนจังหวัด	Member
24.	Mr. Pipat นายพิพัฒน์	Panma พันมา	Representative of Municipality agency ผู้แทนเทศบาล	Member

25. Mr Sanit Klatar นายศานิต กล้าแท้ Mr. Krit Kaewrat นายกฤษณ์ แก้วรัตน์	Representative of Sub-district administration office (ended October 2013) (start on November 2013) ผู้แทนองค์การบริหารส่วนตำบล (เริ่ม พ.ย.56)	Member
26. Mr. Vichai Chokevivat นายวิชัย โชควิวัฒน	Representative of NGO in area of elderly issues ผู้แทนองค์กรเอกชนด้านผู้สูงอายุ	Member
27. Mr. Chusak Janthayanond นายชูศักดิ์ จันทยานนท์	Representative of NGO in area of disability and psychosis ผู้แทนองค์กรเอกชนด้านคนพิการและจิตเวช	Member
28. Miss Boonyuen Siritham นางสาวบุญยืน ศิริธรรม	Representative of NGO in area of argriculture ผู้แทนองค์กรเอกชนด้านเกษตรกร	Member
29. Mrs. Suntaree Sarng-Ging นางสุนทรี เซ่งกิ่ง	Representative of NGO in area of labour force ผู้แทนองค์กรเอกชนด้านผู้ใช้แรงงาน	Member
30. Mr. Nimit Teinudom นายนิมิตร์ เทียนอุดม	Representative of NGO in area of HIV and chronic diseases ผู้แทนองค์กรเอกชนด้านผู้ติดเชื้อเอชไอวีหรือผู้ป่วยเรื้อรังอื่น	Member
31. Mr. Winai Sawasdivorn นายวินัย สวัสดิวร	Secretary General, NHSO เลขาธิการ สปสช.	Secretary

Duties and Authorities of the National Health Security Board

According to section 18 of the National Health Security Act B.E. 2545 (A.D.2002), the national health security board is assigned to perform the following duties and authorities.

1. To set standard of health services of registered health providers and their networks, and to set operational guideline for effective national health security system

2.To provide consultation to the minister about appointment of related officers, and ministerial regulations and declarat-ions enactment related to this act.

3.To define scope and type of necessary health services as well as rate of service cost according to section 5 of this Act

4.To set rules and regulations for the national health security fund operation and management

5.To set rules, methods, and conditions to impeach the NHSO secretary general according to section 31, and to define qualification or non-qualification of the secretary general according to section 32.

6.To issue rules or regulations about receivable fund, payment, maintenance funds, as well as making benefit from the fund according to section 40.

7.To set rules, methods, and conditions for preliminary compensations to the beneficiaries for their lost or injuries from health service that the wrongdoer is nonappearance or the wrongdoer is appearance but the beneficiaries may not receive the compensation within appropriate period of time according to section 41

8.To support and collaborate with local administration offices in local community health security system management and implementation based on community contexts and health needs of community population according to section 47.

9.To support and define rules for community organizations, private organizations and non-profit organizations in local community health security system management and implementation based on community contexts and promote civil society participation in community health security system according to section 47.

10. To set guideline for public hearing from consumers and providers in order to improve quality and standard of healthcare

11. To set guideline for punishment both in financing fines and registration revocations

12. To prepare annual reports about performance and operation challenges, as well as accounting and financial report of the board to be reported to the cabinet, the house of representatives, and the senate within six months after the end date of the fiscal year.

13. To convene annual meeting to hear general comments and suggestions from consumers and providers.

14. To perform other duties as assigned by this Act, or other laws, or the cabinet.

2. The Health Sevice Standard and Quality Control Board

List of the Health Service Standard and Quality Control Board, FY2013

1.	Asso. Prof. Prasobsri Ungthavorn รศ.พญ.ประสบศรี อึ้งถาวร	Representative of Royal Thai College of Pediatricians ผู้แทนราชวิทยาลัยกุมารแพทย์แห่งประเทศ	Chair
2.	Wilawan Jhungprasert, M.D. พญ.วิลาวัณย์ จึงประเสริฐ	Director General, Medical department อธิบดีกรมการแพทย์	Member
3.	Paisarn Dunkum, M.D. นพ.ไพศาล ดั่นคุ้ม	Representative of Food and Drug Administration ผู้แทนสำนักงานคณะกรรมการอาหารและยา	Member
4.	Anuwat Supachutikul, M.D. นพ.อนุวัฒน์ ศุภชุติกุล	Representative of the Healthcare Accreditation Institute ผู้แทนสถาบันรับรองคุณภาพสถานพยาบาล	Member
5.	Tara Chinakarn, M.D. นพ.ธารา ชินะกาญจน์	Director of Bureau of Sanatorium and Art of Healing ผู้อำนวยการสำนักสถานพยาบาลและการประกอบโรคศิลปะ	Member

6.	Prof. Dr. Somsak Lolekha, M.D. ศ.เกียรติคุณ ดร.นพ . สมศักดิ์ โล่ห์เลขา	Representative of Medical council ผู้แทนแพทยสภา	Member
7.	Krisada Swangdee, Ph.D ดร.กฤษดา แสวงดี	Representative of Nurse ผู้แทนสภาการพยาบาล	Member
8.	Ass.Prof. Paisan Kangvonkit, D.D. ผศ.(พิเศษ) ทพ.ไพศาล กังวลกิจ	Representative of Dentist council ผู้แทนทันตแพทยสภา	Member
9.	Amnouy Preukpakpoom ภก.อำนวย พฤกษ์ภาคภูมิ	Representative of Pharmacist council ผู้แทนสภาเภสัชกรรม	Member
10.	Mr. Jesada Anucharee นายเจษฎา อนุจารี	Representative of Lawyers Council ผู้แทนสภาทนายความ	Member
11.	Chalerm Harnpanish, M.D. นพ.เฉลิม หาญพาณิชย์	Representative of private hospitals ผู้แทนโรงพยาบาลเอกชน	Member
12.	Kittisak Kanasawat, M.D. นพ.กิตติศักดิ์ คณาสวัสดิ์	Representative of Municipality ผู้แทนเทศบาล	Member
13.	Mr. Paibul Upattisaring นายไพบูลย์ อุปัติศฤงค์	Representative of Provincial Administration Offices ผู้แทนองค์การบริหารส่วนจังหวัด	Member
14.	Mr. Suthem Chuchaiya นายสุเทพ ชูชัยยะ	Representative of Sub-district Administration Offices ผู้แทนองค์การบริหารส่วนตำบล	Member
15.	Surin Koocharoenprasit, M.D. นพ.สุรินทร์ กู้เจริญประสิทธิ์	Representative of other form of community administration offices ผู้แทนองค์กรปกครองส่วนท้องถิ่นรูปแบบอื่น	Member
16.	Mrs. Kannika Panya-amornwat นางกรรณิกา ปัญญาอมรวัฒน์	Representative of Nursing and Midwifery group ผู้แทนผู้ประกอบวิชาชีพการพยาบาลและการผดุงครรภ์	Member
17	Dr. Kamol Sredchaiyan ทพ.กมล เศรษฐ์ชัยยันต์	Representative of Dentist group ผู้แทนผู้ประกอบวิชาชีพทันตกรรม	Member
18.	Ass. Apichart Pengrungrojchai, Ph.D ผศ.ดร.ภก.อภิชาต เพ่งเรืองโรจนชัย	Representative of Pharmacist ผู้แทนผู้ประกอบวิชาชีพเภสัชกรรม	Member
19.	Prof.Clin.Wiboolphan Thitadilok, M.D. ศ.คลินิก พญ.วิบูลพรรณ ฐิตะดิลก	Representative of The Royal Thai College of Gynaecologists ผู้แทนราชวิทยาลัยสูตินรีแพทย์แห่งประเทศไทย	Member

20. Asso.Prof. Suthiporn Jitmitraparb, M.D. รศ.นพ.สุทธิพร จิตต์มิตรภาพ	Representative of The Royal Thai College of Surgeons ผู้แทนราชวิทยาลัยศัลยแพทย์แห่งประเทศไทย	Member
21. Prog. Tanin Intragamtornchai, M.D. ศ.นพ.ธานินทร์ อินทรกำธรชัย	Representative of The Royal Thai College of Physicians ผู้แทนราชวิทยาลัยอายุรแพทย์แห่งประเทศไทย	Member
22. Ass.Prof. Kanda Chaipinyo, Ph.D ผศ.ดร.กานดา ชัยภิญโญ	Representative of Physical Therapy Professional group ผู้แทนผู้ประกอบโรคศิลปะสาขากายภาพบำบัด	Member
23. Mrs. Chomyoung Budrach นางโฉมยงค์ บุตรราช	Representative of Occupational Therapy Professional group ผู้แทนผู้ประกอบโรคศิลปะ สาขากิจกรรมบำบัด	Member
24. Mrs. Rattana Thinnaithorn นางรัตนา ถิ่นนัยธร	Representative of communication disorder therapy professional group ผู้แทนผู้ประกอบโรคศิลปะสาขาการแก้ไขความผิดปกติของการสื่อความหมาย	Member
25 Mr. Weerapong Kriengsinyod นายวีรพงษ์ เกรียงสินยศ	Representative of NGO in area of agriculture ผู้แทนองค์กรเอกชนงานด้านเกษตรกร	Member
26. Mrs. Supaporn Thinwattanakul นางสุภาพร ถิ่นวัฒนากูล	Representative of NGO in area of children and youth group ผู้แทนองค์กรเอกชนงานด้านเด็กหรือเยาวชน	Member
27. Ass. Yupadee Sirisinsuk, Ph.D ผศ.ภญ.ดร.ยุพดี ศิริสินสุข	Representative of NGO in area of HIV and chronic disease group ผู้แทนองค์กรเอกชนงานด้านผู้ติดเชื้อเอชไอวีหรือผู้ป่วยเรื้อรังอื่น	Member
28. Mr. Jon Ungpakorn นายจอน อึ๊งภากรณ์	Representative of NGO in area of slum communities ผู้แทนองค์กรเอกชนงานด้านชุมชนแออัด	Member
29. Mr. Sumitchai Hattasan นายสุมิตรชัย หัตถสาร	Representative of NGO in area of minority groups ผู้แทนองค์กรเอกชนงานด้านชนกลุ่มน้อย	Member
30. Col. Kidapol Wattankul, M.D. พอ.(พิเศษ)นพ.กิฎาพล วัฒนกูล	Expert in familiy medicines ผู้ทรงคุณวุฒิสาขาเวชศาสตร์ครอบครัว	Member
31. Prof. Ronnachai Kongsakon, M.D ศ.นพ.รณชัย คงสกนธ์	Expert in Psychosis ผู้ทรงคุณวุฒิสาขาจิตเวช	Member

32. Mrs. Rujiranf Akethong นางรุจิรางค์ แอกทอง	Expert in Thai traditional medicines ผู้ทรงคุณวุฒิสาขาการแพทย์แผนไทย	Member
33. Mr. Somjai Tosukolwan นายสมใจ โตศุกลวรรณ์	Expert ผู้ทรงคุณวุฒิ	Member
34. Chatree Bancheun, M.D. นพ.ชาตรี บานชื่น	Expert ผู้ทรงคุณวุฒิ	Member
35. Yuth Potharamig, M.D. นพ.ยุทธ โพธารามิก	Expert ผู้ทรงคุณวุฒิ	Member

Duties and Authorities of the Health Service Standard and Quality Control Board

According to section 50 of the National Health Security Act B.E. 2545 (A.D.2002), the health service standard and quality control board is assigned to perform the following duties and authorities.

1. To control standard and quality of registered health providers and their service networks according to section 45.

2. To monitor standard and quality of care provided by health providers in the cases that the health providers provide service level higher than health service level defined in section 5

3. To define standard measures to control and promote standard and quality of registered health providers and their networks.

4. To guide standard price of all diseases to the board for preparing health service cost guideline for claims and reimbursement to the health providers according to section 46

5. To set rules, methods, and conditions for complaints and complaint reviews, as well as guideline and method for preliminary compensations for the lost or injuries, and to provide complaint centers that are independent from the providers to facilitate complaints.

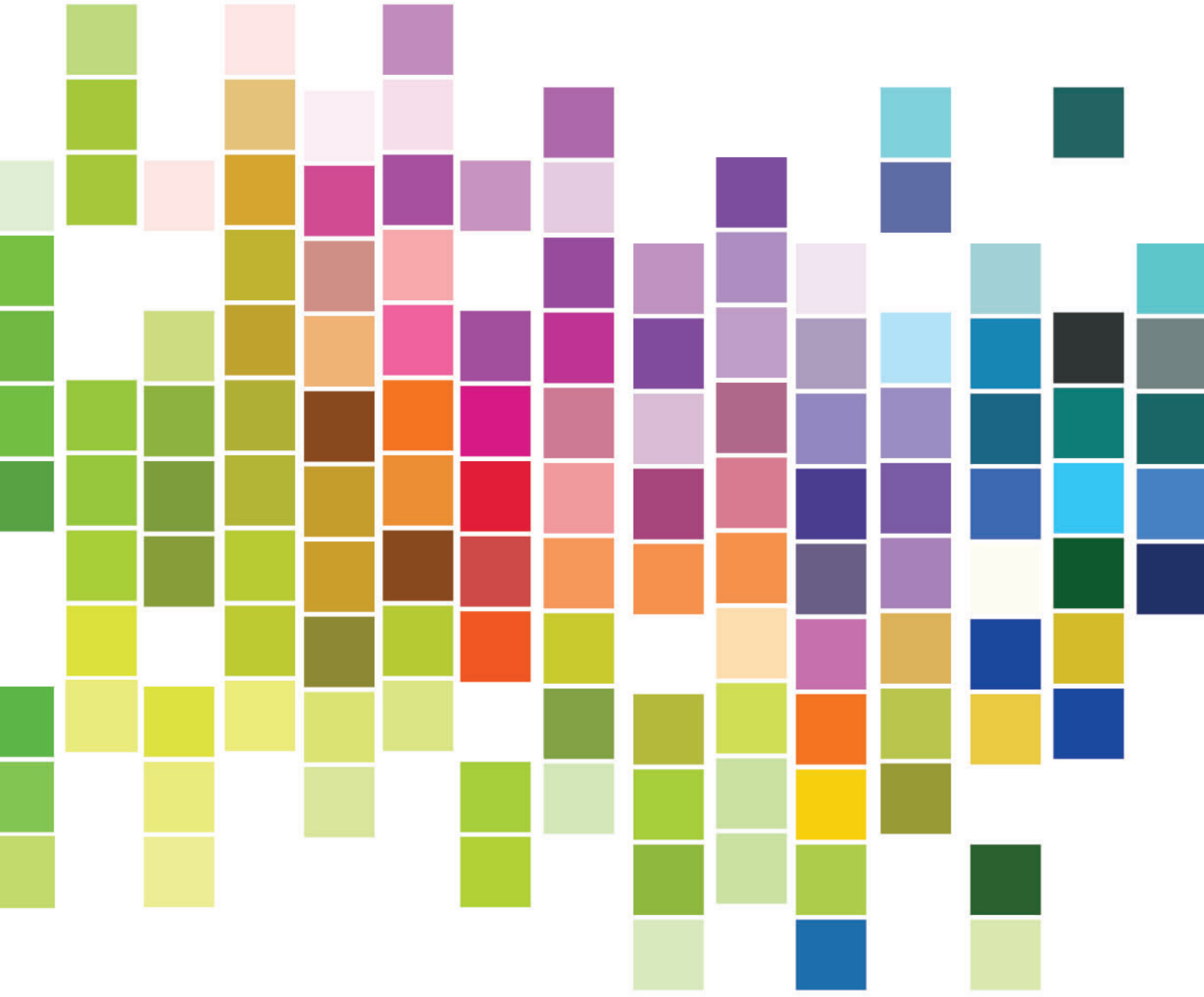
6. To report the results of inspecting and controlling the standard and quality of registered health providers and their networks to the board, and notify such results to the health providers and their authority in order to correct, improve, and evaluate the standard and quality improvement.

7. To promote civil society participation in inspection and controlling the registered health providers and their networks.

8. To provide preliminary compensations in case of losses or injuries from health services that the wrongdoer is nonappearance or the wrongdoer is appearance but the beneficiaries may not receive the compensation within appropriate period of time

9. To promote information sharing channels development for consumers in order to be considered for decision making related to health service

10. To perform other duties as assigned by this Act, or other laws, or the board.



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