Twenty-Year National Strategic Plan for Public Health

(2017-2036)

First Revision 2018

Strategy and Planning Division (SPD)

Office of the Permanent Secretary (OPS)

Ministry of Public Health (MOPH)

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Preface

This 20-Year National Strategic Plan for Public Health 2017-2036 is intended to provide guidance for public health agencies to develop and implement a health system which is in line with the national policy, as well as the national reform and health system reform agenda toward Thailand 4.0.

The Ministry of Public Health (MOPH), under the leadership of the Minister of Public Health Clinical Professor Emeritus Piyasakol Sakolsatayadorn, has recently organized a high-level meeting titled "A Retreat to Ponder the Way Forward for Thailand's Public Health" attended by senior administrators from MOPH-affiliated health agencies, with the aim to outline future policy directions and implementation framework of the Ministry of Public Health (MOPH) so as to achieve the goal of "Healthier People. Happier Health Care Workers. Sustainable Health System."In the process, a review was conducted on the 20-Year National Strategic Plan for Public Health to ensure alignment and linkage with the 20-Year National Strategic Plan 2017-2036, the 12th National Economic and Social Development Plan (2017-2021), Thailand 4.0 Agenda, and the United Nations Sustainable Development Goals (SDGs). The contents of this national strategic plan include the situations and key factors having impacts on health, health status, and the four strategies of excellence of the Ministry of Public Health including 1) Promotion, Prevention and Protection (PP&P) Excellence; 2) Service Excellence; 3) People Excellence; and 4) Governance Excellence. This strategy is comprised of 15 work plans and 45 projects, which are supported by their corresponding goals, key performance indicators (KPIs), and key measures, as well as the implementation guidelines and monitoring and evaluation (M&E) program to ensure concerted efforts are carried out by all relevant agencies under the Ministry of Public Health (MOPH).

On this occasion, the Ministry of Public Health would like to acknowledge the management and public health personnel at the national and regional levels for their contributions to the development of this edition of the national strategic plan for public health. We do hope it will serve as an operational framework for the implementation of public health programs undertaken by the national, regional and local health agencies under the Ministry of Public Health so as to ultimately achieve the goal of "Healthier People. Happier Health Care Workers. Sustainable Health System."

Ministry of Public Health (MOPH)

December 2017

Executive Summary

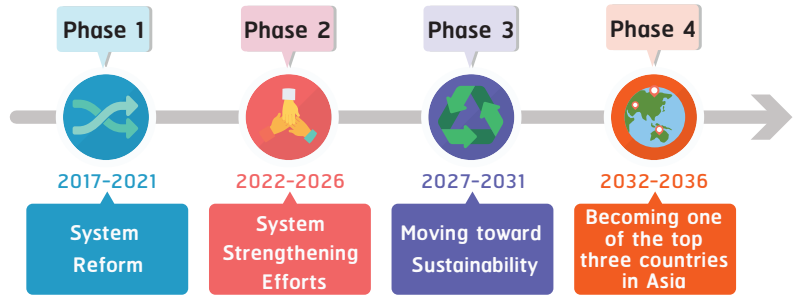
In response to both internal and external changes

e.g. Thailand's significant shift in population structure, change in economic fundamentals toward digital economy, emergence of emerging and re-emerging diseases, deaths caused by preventable non-communicable diseases (NCDs), escalating pollution problems, natural disaster, and terrorism -- that are increasingly having an impact on the country's health system, the Ministry of Public Health (MOPH) has developed a 20-year National Strategic Plan for Public Health 2017-2036.

This national strategic plan is primarily intended to serve as an operational framework for health agencies so that health systems are developed and implemented in line with the context of current environments, the 20-year National Strategic Plan 2017-2036, the 12th National Economic and Social Development Plan (2017-2021), Thailand 4.0 Agenda, the United Nations' Sustainable Development Goals (SDGs), the National Reform Policy toward "Security, Prosperity, Sustainability."

To develop this national strategic plan for public health,

the Ministry of Public Health has recently organized a high-level meeting titled"A Retreat to Ponder the Way Forward for Thailand's Public Health" attended by senior administrators from MOPH-affiliated health agencies, with the aim to outline future policy directions and implementation frameworkof the Ministry of Public Health (MOPH) so as to achieve the goal of "Healthier People. Happier Health Care Workers. Sustainable Health System." In Addition, some other meetings were also held at the national and regional levels to review the draft 20-year National Strategic Plan for Public Health 2017-2036 and set the strategies, implementation procedures, target values, key performance indicators (KPIs) along with the detailed descriptions of the major goals, as well as related work plans/projects. The implementation plan is divided into four five-year phases with each respective focus as follows:



It is primarily made up of four strategies of excellence

including: 1) Promotion, Prevention and Protection (PP&P) Excellence; 2) Service Excellence; 3) People Excellence; and 4) Governance Excellence. These four strategies consist of 15 work plans and 45 projects, with respective goals and key measures to ensure efficiency, effectiveness and cost-effectiveness under limited funding and resources. Additionally, the guidelines were also developed to create understanding and educate operational staff at all levels about the strategies and their respective key performance indicators (KPIs) so that all these strategies are successfully translated into actions. Apart from this, a timely, effective monitoring and evaluation (M&E) program will also be implemented to streamline the operational procedures.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Introduction

Conceptual framework for the 20-Year National Strategic Plan for Public Health (2017-2036)

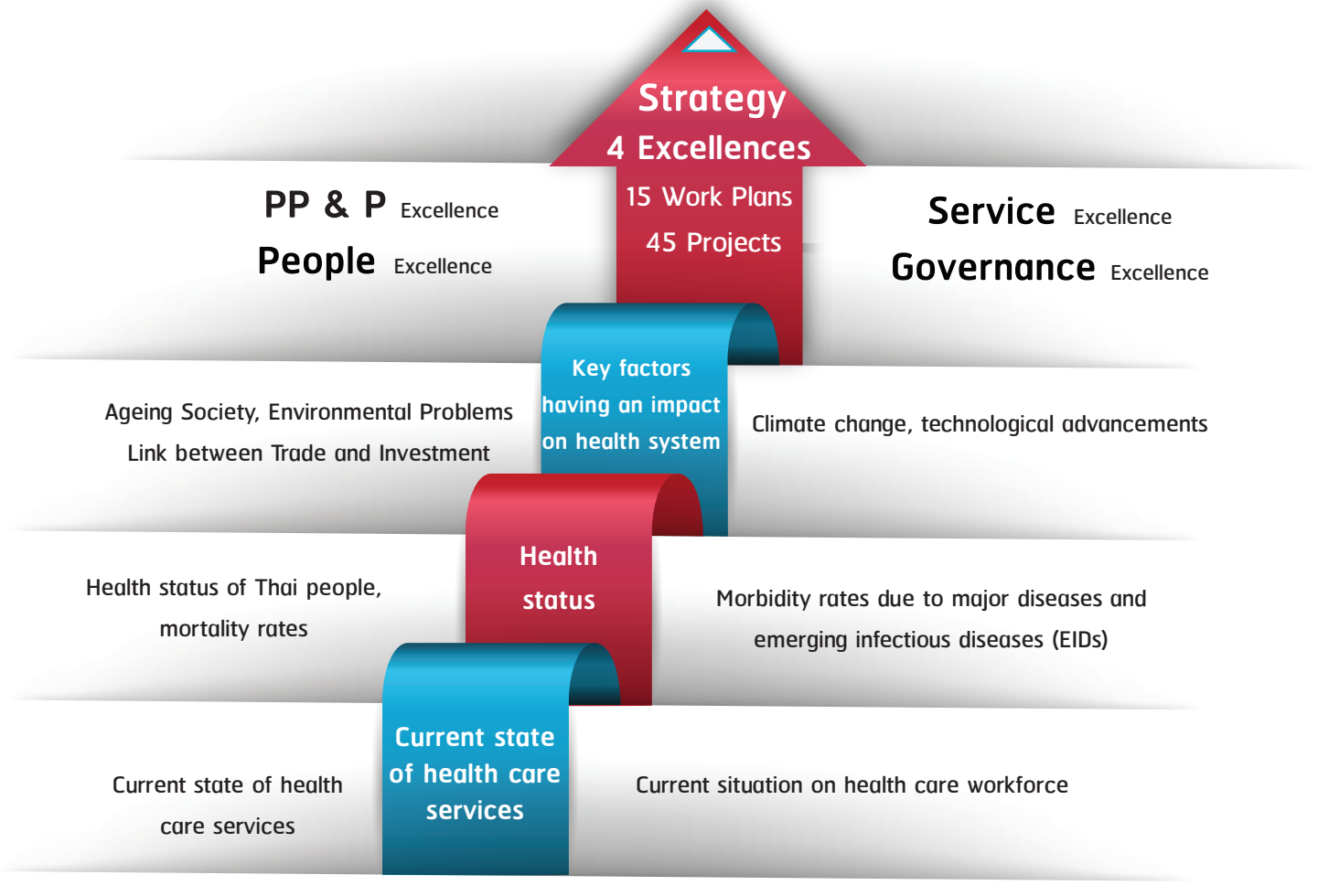
This 20-Year National Strategic Plan for Public Health 2017-2036 (First Revision 2018) has been developed based on the analyses of current conditions and situations under the context of Thai society. It is designed to be consistent with and linked to the United Nations Sustainable Development Goals (SDGs), the intent of the 2017 Constitution of the Kingdom of Thailand, the 20-Year National Strategy, government policies, Thailand 4.0 Agenda, the 12th National Economic and Social Development Plan, as well as civil state policies and other pressing issues, with the aim to implement the government's national reform agenda. This is fundamentally concerned with 10 areas of public health reform including 1) District Health Board (DHB), 2) Development of Primary Care Cluster (PCC), 3) Service plan development, 4) Long Term Care (LTC) for the elderly, 5) Universal Coverage for Emergency Patients (UCEP), 6) Development of Emergency Operations Center (EOC), 7) Development of comprehensive medical industry, 8) Improvement of registry and licensing process, 9) Special health zone strategy, and 10) GREEN & CLEAN Hospitals Project.

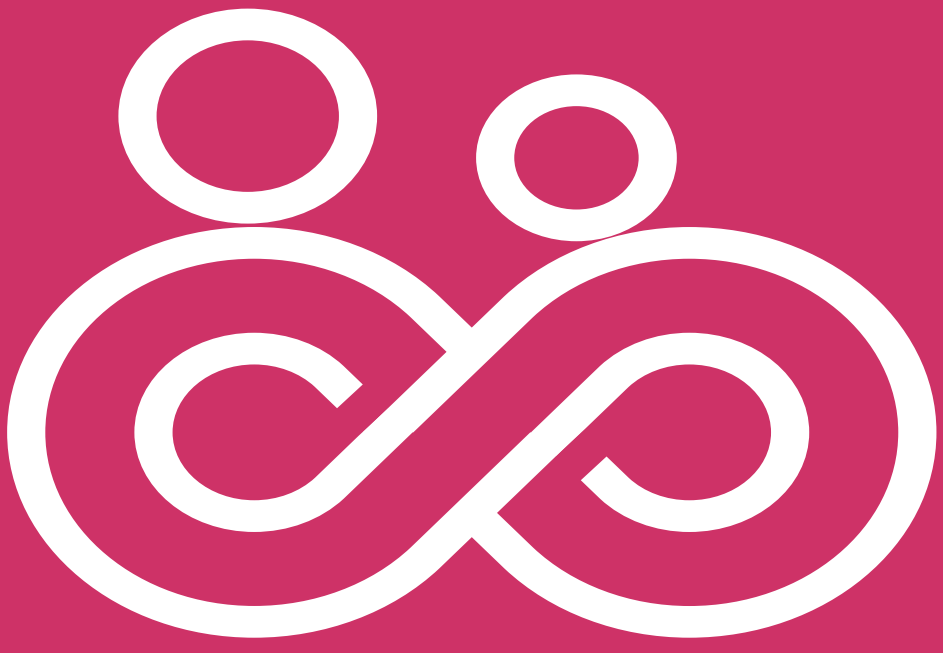
The conceptual framework for developing this national strategy is focused on a long-term development aimed at realizing the vision of **"Thailand achieving security and prosperity and becoming a developed nation based on the philosophy of self-sufficiency economy."** In the process, the Ministry of Public Health will serve as one of the focal points assigned to advance the program implementation by focusing on public and multi-sectoral engagement so as to attain the ultimate goal of health and well-being of all Thais.

Alignment between the 20-Year National Strategic Plan for Public Health and the 12th National Economic and Social Development Plan

Established goals for the 20-Year National Strategic Plan for Public Health

Healthier People. Happier Health Care Workers. Sustainable Health System.





Chapter 2

Key Factors Having an Impact on Health System

Chapter 2

Key factors having impacts on health system

Unprecedented, fast-paced development of science and technology over the past century has resulted in a significant change in society, economy, culture, as well as people's lifestyle and way of life. Although the success in the development of medical technology has enabled more effective prevention and control of infectious diseases, resulted in people living a longer life, and improved access to health care services, the incidence of chronic medical conditions, environmental and social determinants of health are increasingly becoming more diverse, making it more challenging to adequately address. The following are key factors having an impact on the health of Thai populations.

Ageing Society

Currently Thailand is moving from an ageing society toward an aged society. The proportion of ageing population was rapidly increasing to account for 16.5% of the population in 2016 and is expected to reach 32.2% in 2032. In addition, the number of older people living alone and those suffering from chronic medical conditions are also on a steady rise, thus increasing financial burdens for health care among senior citizen. In the meantime, Thailand's total fertility rate in 2016 was at 1.62 children born/woman and is anticipated to further reduce to only 1.3 children born/woman by 2040. This will consequently lead to a further decrease in the number of children and economically productive populations. As a result, the country's future workforce, production capacity and competitiveness will inevitably be affected. And the country will be confronted with great challenges moving forward.

Environmental Problems

At present the environments not conducive to well-being are mostly caused by inappropriate use and mismanagement of the natural resources, resulting in a significant degradation of the natural resources. The environmental problems are further exacerbated by ever-expanding economy and urbanization. One of the major problems is inadequate waste management. In 2016 alone Thailand produced 27.06 million tons of waste – only 9.75 million tons of which were properly disposed of. Additionally, air pollution problems, most notably the dust particles levels in the air that exceed the standard, will also pose a major health threat for Thai populations in the long run – directly and indirectly.

Climate Change

An ongoing climate change resulting from global warming and a resulting loss of ecological balance due principally to rising global temperatures have given rise to a longer period of drought, degrading soil fertility and forests, depleting water resources, reduction in farm outputs, increased threats for biodiversity loss, emergence of disease outbreaks in plant and animal populations, escalating problems of vector-borne diseases in tropical regions such as malaria, and ravaging floods and storms that are associated with unsafe foods and drinking water.

Technological Advancements

Based on the World Economic Forum's Networked Readiness Index (NRI), Thailand in 2014 was ranked 67 out of 148 countries, moving up from the previous 74th place back in 2013. This represents a progress and increased opportunity when it comes to the utilization of information and communication technology (ICT). In 2015 Thai populations were found to have the following technology usage rates: internet 39.3%, computer 34.9%, and mobile phones 79.3%. This means members of the public have been provided with more opportunity of communications and access to information than ever before. Consequently, people's way of life and expectation of the healthcare system may also be changing, in a positive or negative way, along with ongoing technological advances. Given this fact the advancement of technology is therefore incorporated as one of the key factors in the development of this national strategic plan for public health.

Link between Trade and Investment

The inextricable link between trade and investment which knows no borders is an unstoppable, global evolution due to a combination of various factors. This is obvious, for instance, from Thailand recently having joined various regional and international organizations on a number of areas of collaboration - most notably as a member of ASEAN Economic Community (AEC). Geographically located as a hub of Southeast Asia, Thailand stands to benefit from this regional economic integration through the promotion of local investment schemes, exports, and more employments, which in turn will significantly contribute to economic growth and stability, as well as promoting the country's competiveness. Nevertheless, this borderless linkage on many different aspects has also had various detrimental impacts on the health of the general public. In 2014, for instance, it was found that the incidence and prevalence of cases of malaria, tuberculosis (TB), and sexually transmitted infections (STIs) had been higher in 10 provinces located in different special economic zones and with a large number of migrant workers from neighboring countries than the rest of the country. Moreover, Thailand's health system is also being stretched by escalating problems of foreign migrant workers, particularly those undocumented migrant workers who have no health insurance and are unable to pay medical bills. So far the Ministry of Public Health has had to shoulder these ever-increasing medical care expenses for foreign migrant workers – from THB 216.5 million in 2012 to THB 399.5 million in 2014.

Ageing Society

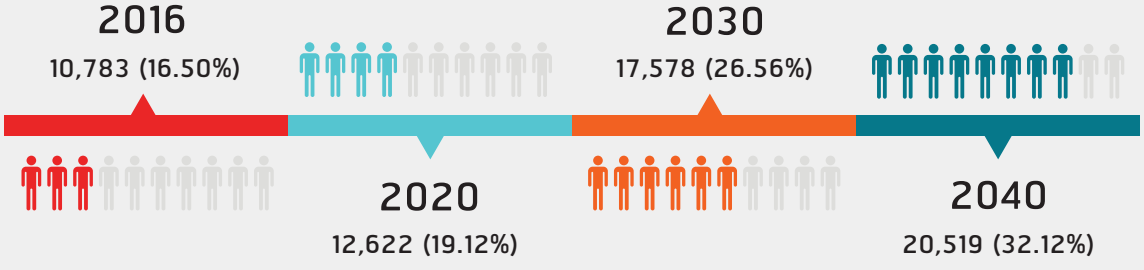
Chapter 2

The Advent of Ageing Society

Thailand is entering an ageing society based on the definition by United Nations, which classifies the ageing society into three different levels as follows:

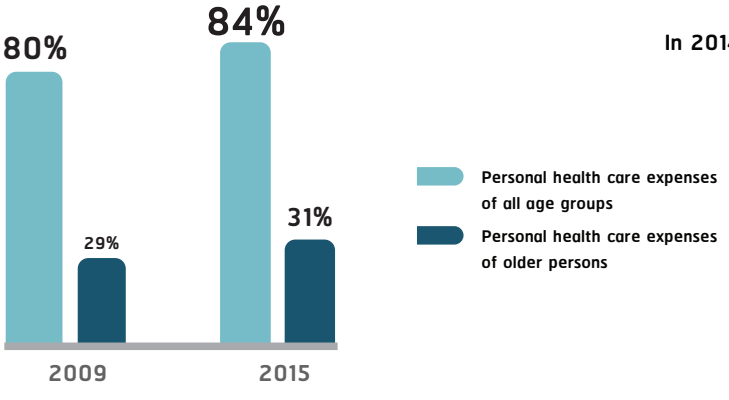
- Ageing society is defined as when people aged 60 or above accounts for 10% of the total population of the country.
- Aged society is defined as when people aged 60 or above accounts for 20% of the total population of the country.
- Super-aged society is defined as when people age 60 or above accounts for > 20% of the total population of the country.

Projected number of Thailand's older population (Unit 1:1,000 persons)



Source: National Economic and Social Development Board (NESDB)

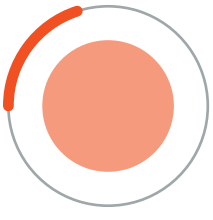
Proportion between personal health care expenses of older population and total health care expenses of all age groups

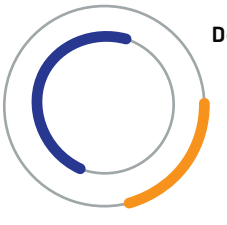


Source: Impacts from change in population structure in Thailand; National Economic and Social Development Board (NESDB) and UNFPA

Social Problems

In 2014, 8.7 percent of older population was found to be living alone.





Depression among older population (those aged 60-80 years)

Male 2.8 percent

Female 6.1 percent

Source: Survey on older population in Thailand, National Statistical Office (NSO)

The First Five Health Threats in 2015

(Inpatient rate per 100,000 population)

No.1	No.2	No.3	No.4	No.5
Hypertension	Heart disease (excluding ischemic heart disease)	Diabetes	Cancer	Ischemic heart disease
9,489.42	6,580.18	5,535.52	3,190.57	1,950.21

Environmental Problems

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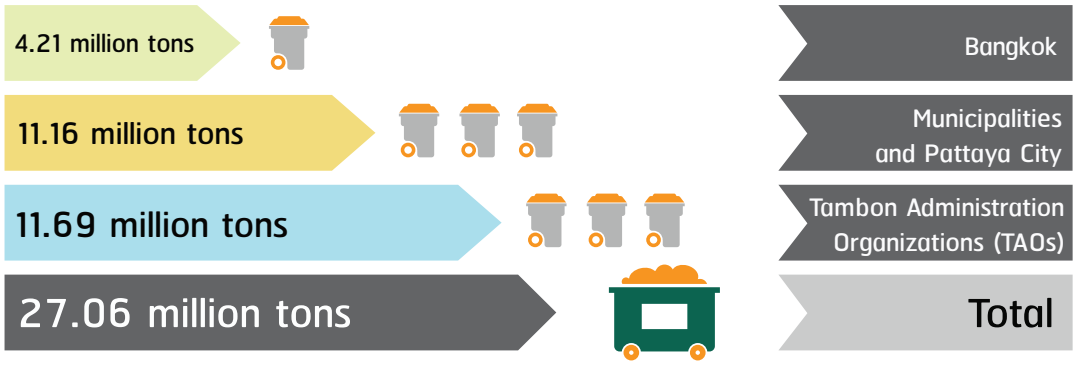
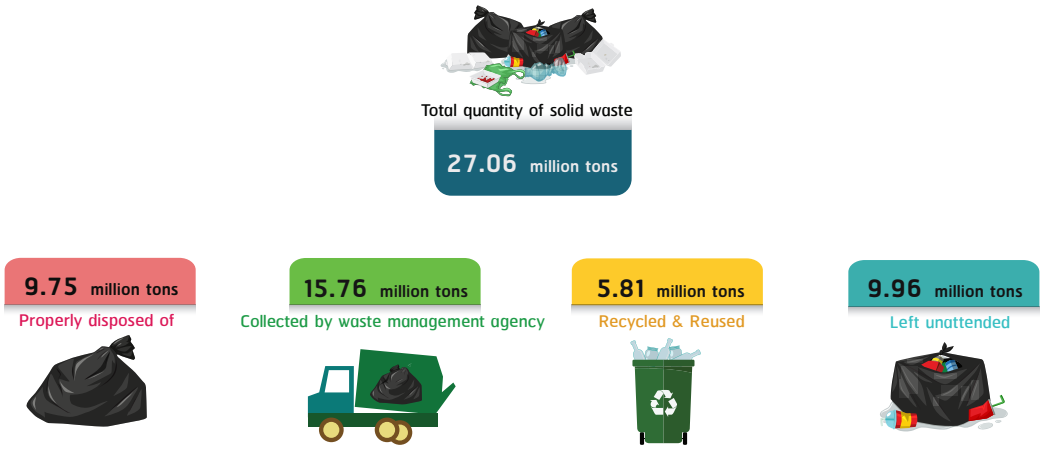
Total quantity of solid waste in 2016



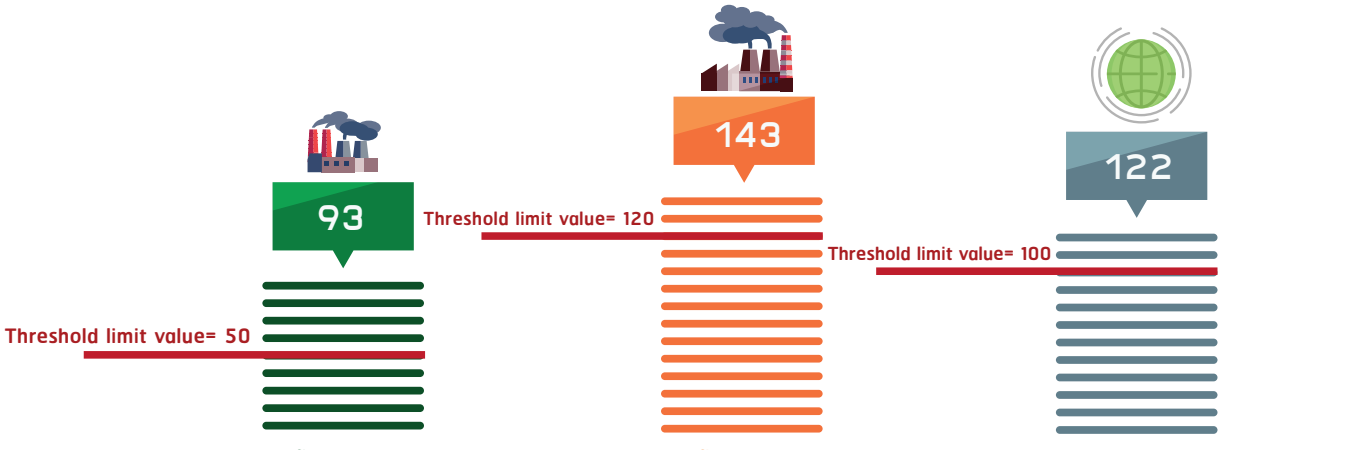
Source: Pollution Control Department

Waste management in 2016



Source: Pollution Control Department

Air pollution problems in 2016



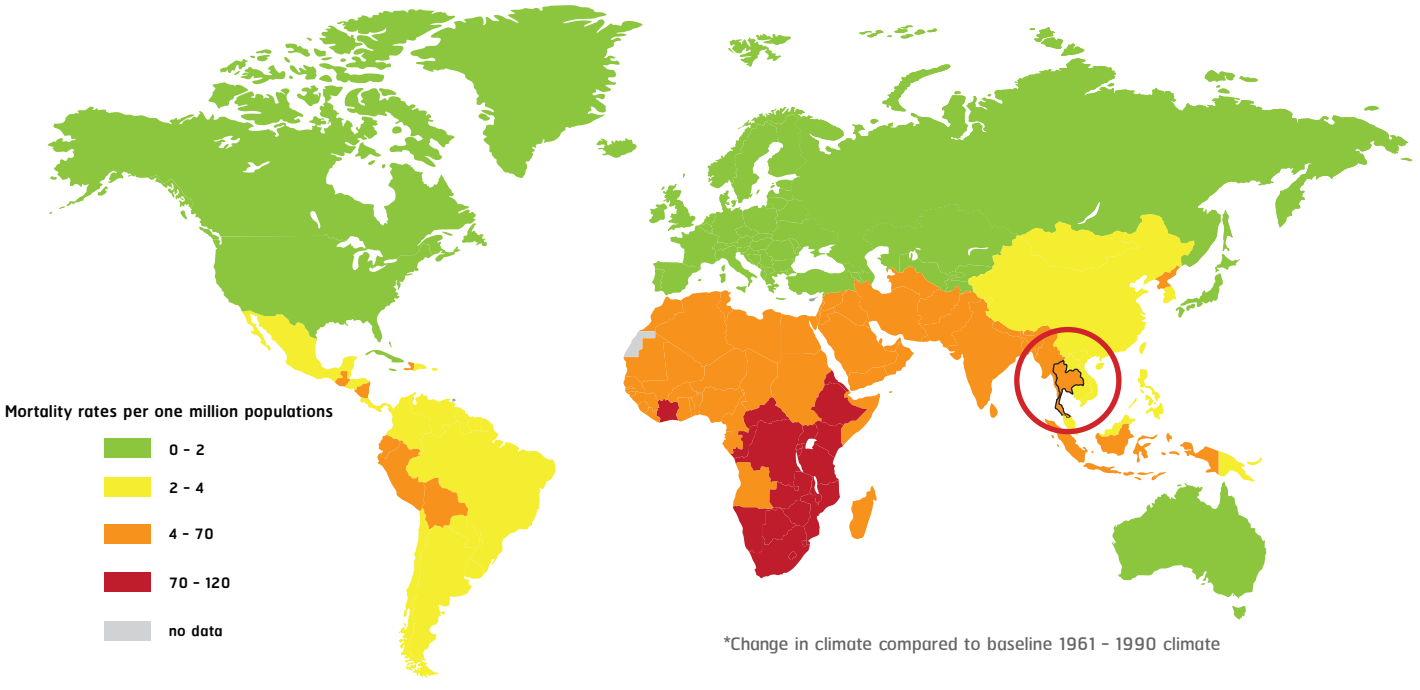
Source: Pollution Control Department

Chapter 2

Climate Change

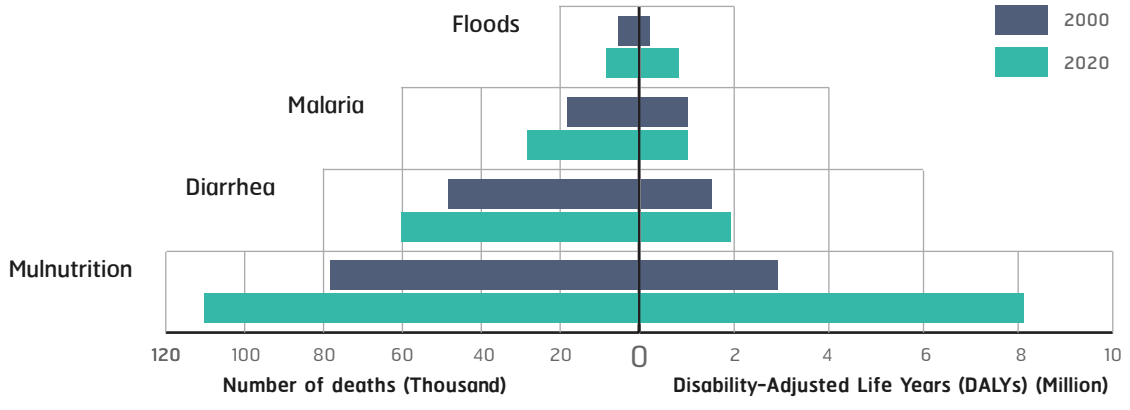
Global Warming

Estimated Deaths Attributed to Climate Change in the Year 2000, by Subregion*



Data Source: McMichael, JJ, Campbell-Lendrum D, Kovats RS, et al. Global Climate Change. In Comparative Quantification of Health Risk: Global and Regional Burden of Disease due to Selected Major Risk Factors. M. Ezzati, Lopez, AD, Rodgers A., Murray CJL. Geneva, WHO, 2004

Projected Disability-Adjusted Life Years (DALYs) Attributed to Climate Change 2000-2020



Source: Campbell-Lendrum et al., 2003

Technological Advancements

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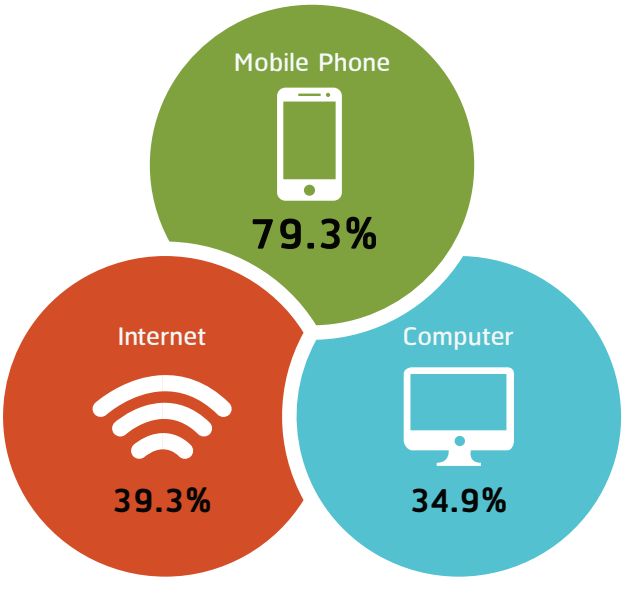
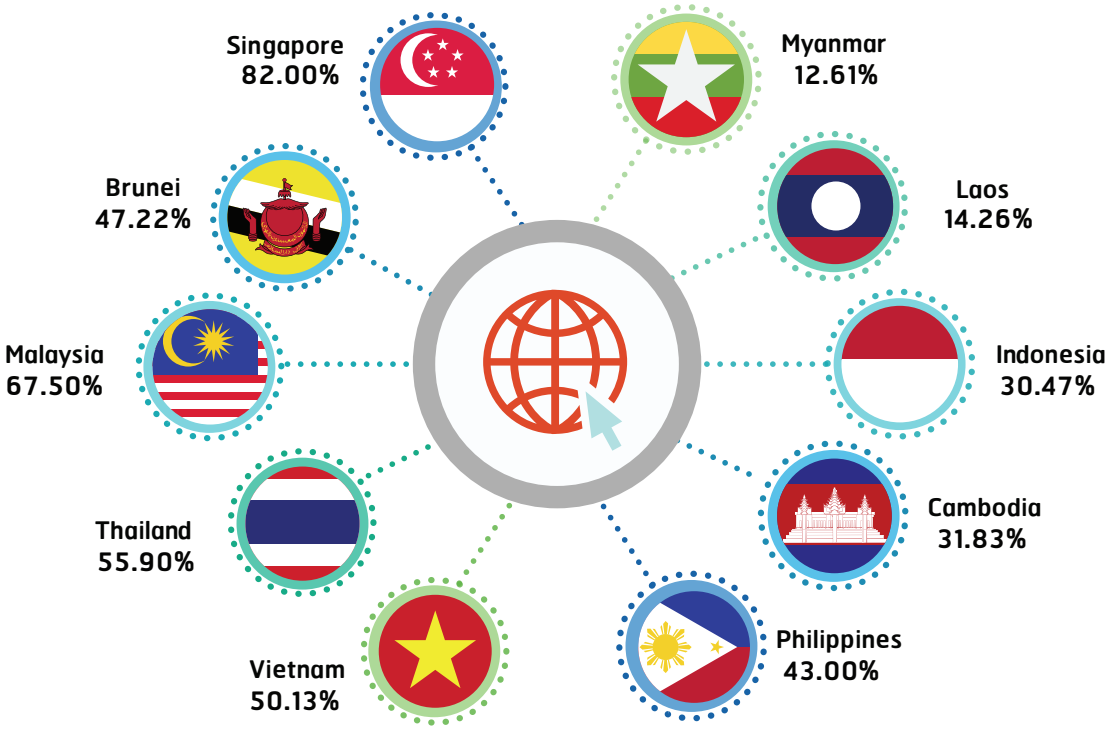
Technology Usage

Technology Usage Rates among Thai Population, 2015



Source: Results from a survey on the usage of information and communication technology in the household, National Statistical Office (NSO)

Internet Usage Rates among ASEAN Member Countries, 2015



Note: Data on the internet usage in Thailand is based on two different data sources and the figures are not the same due largely to different survey methods and sample populations.

Source: Internet World Stats

Chapter 2

Link between Trade and Investment

Disease Outbreaks

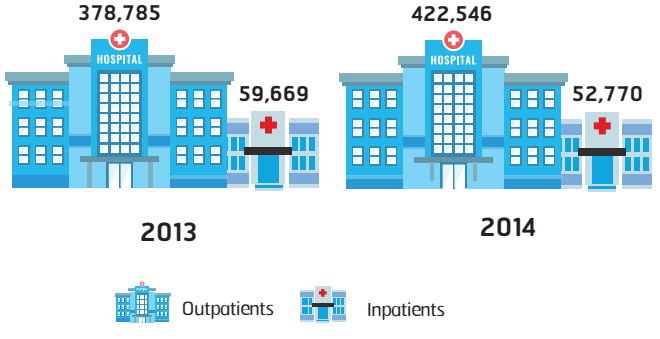
Incidence Rates of Malaria, Morbidity Rates from Tuberculosis (TB) and Sexually Transmitted Infections (STIs) in Provinces Located in Different Special Economic Zones (SEZs), 2014

	Disease	Entire Country	10 Province in SEZs	Ratio between 10 Provinces in SEZs : Entire Country
Incidence Rates	Malaria	0.38	0.86	2.26
Morbidity Rates	TB	80.90	170	2.10
	STIs	54	84.70	1.57

Notes: 1. Malaria incidence rates per 1,000 populations
2. TB and STIs morbidity rates per 100,000 populations
Source: (Draft) Public Health Strategic Plan for Special Economic Zones 2017-2021, Bureau of Policy and Strategy (BPS)

Provision of Health Care Services to Foreign Migrant Workers

Number of OPD and IPD visits by foreign migrant workers seeking medical care at Thailand-based health facilities, Fiscal Year 2013-2014



Expenses Associated with Health Care Services for Foreign Migrant Workers

Medical bills which could not be collected from foreign migrant workers by health facilities under the Ministry of Public Health (MOPH), Fiscal Year 2012-2014

Unit : Million baht

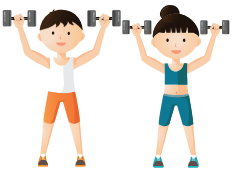
Source: (Draft) Public Health Strategic Plan for Special Economic Zones 2017-2021, Bureau of Policy and Strategy (BPS)

Chapter 3

Health Status

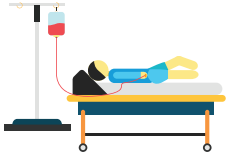
Chapter 3

Health Status



Health status of Thai population

Morbidity rates



Morbidity rates due to major diseases

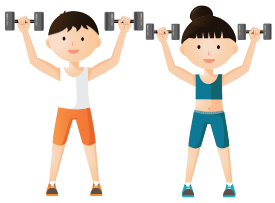
Emerging infectious diseases (EIDs)

Nowadays health status of Thai people is better than it was in the past as clearly evidenced by a constantly increasing life expectancy at birth (LE) and health-adjusted life expectancy (HALE) both in male and female populations. In 2015 average Thai people were found to have a life expectancy at birth (LE) of 74.9 years and health-adjusted life expectancy (HALE) of 66.8 years. Other important indexes indicating a significant improvement of the country's healthcare system included, for instance, maternal mortality rate as low as 24.6 per 100,000 live births, infant mortality rate at 6.2 per 1,000 live births, and mortality rate for children aged <5 years old having decreased to just 8.6 per 1,000 live births. However, the causes of Disability-Adjusted Life Years (DALYs)-related premature deaths of Thai population due to non-communicable diseases (NCDs) and chronic medical conditions have recently been found to be on a steady rise -- as opposed to the mortality caused mostly by infectious diseases in the past. In 2014, the four leading causes for Thai male population's DALYs were road accidents, cerebrovascular diseases, HIV/AIDS, and ischemic heart disease. In Thai females, the four leading causes for DALYs were diabetes, cerebrovascular diseases, ischemic heart disease, and osteoarthritis.

It should be noted that the leading causes of death in Thailand which are currently on the rise are road accidents, followed by self-inflicted fatal injuries, drowning, physical attacks, and falls. In the meantime, the leading causes of death attributable to chronic diseases which are presently on an upward trend include cancer, followed by cerebrovascular diseases, pneumonia, ischemic heart disease, and diabetes.

Regarding the causes of illness, based on the data in 2015 it was found that the largest number ofThai populations aged 0-59 years old had sought medical treatment for respiratory diseases, followed by diseases related to circulatory disorders,digestive disorders, cancer, and musculoskeletal disorders (MSDs). In the meantime, the leading causes for hospital visits among older people (those aged 60 and above) included circulatory disorders, followed by respiratory diseases, digestive disorders, cancer and musculoskeletal disorders (MSDs).

It is important to note that over the past three decadesemerging infectious diseases (EIDs), most of which are of zoonotic origin, have also been on a gradual rise and posed an increasing health threat. Major risk factors associated with the emergence of EIDs and cross-border outbreaks include transboundary movements of populations, merchandise, and migrant workers, as well as an increase in the number of animal reservoirs. Currently, some important health threats that need special attention, sustained prevention and control efforts, and close monitoring are, among others, Middle East Respiratory Syndrome (MERS), avian influenza, and influenza.



Health Status of Thai Population

Chapter 3

Life Expectancy at Birth (LE) and Health-Adjusted Life Expectancy (HALE) of Thai Population, 2015

Life Expectancy at Birth (LE)

74.9 Years

(LE)

Health-Adjusted Life Expectancy (HALE)

66.8 Years

(HALE)

Source: World Health Statistics 2016, WHO

Disability-Adjusted Life Years (DALYs) by Major Causes, 2014

Male

Road Accidents 10.1%	Cerebrovascular 6.6%	HIV/AIDS Diseases 5.1%	
Ischemic Heart Disease 4.9%	Alcohol Abuse 4.5%	Liver Cancer 4.4%	Diabetes 3.9%
Cirrhosis 3.6%	COPD 3.4%	Tracheal and Lung Cancer 2.3%	Other Diseases 51.2%

Female

Diabetes 8.4%	Cerebrovascular 7.3%	Ischemic Heart Disease 4.3%	
Osteoarthritis 3.9%	HIV/AIDS 3.6%	Road Accidents 3.6%	Dementia 3.1%
Liver Cancer 2.5%	Nephritis 2.2%	Breast Cancer 2.0%	Other 59.1%

Source: Report on Disease Burdens and Injuries among Thai Population, 2014, International Health Policy Program (IHPP)

Mortality Rates

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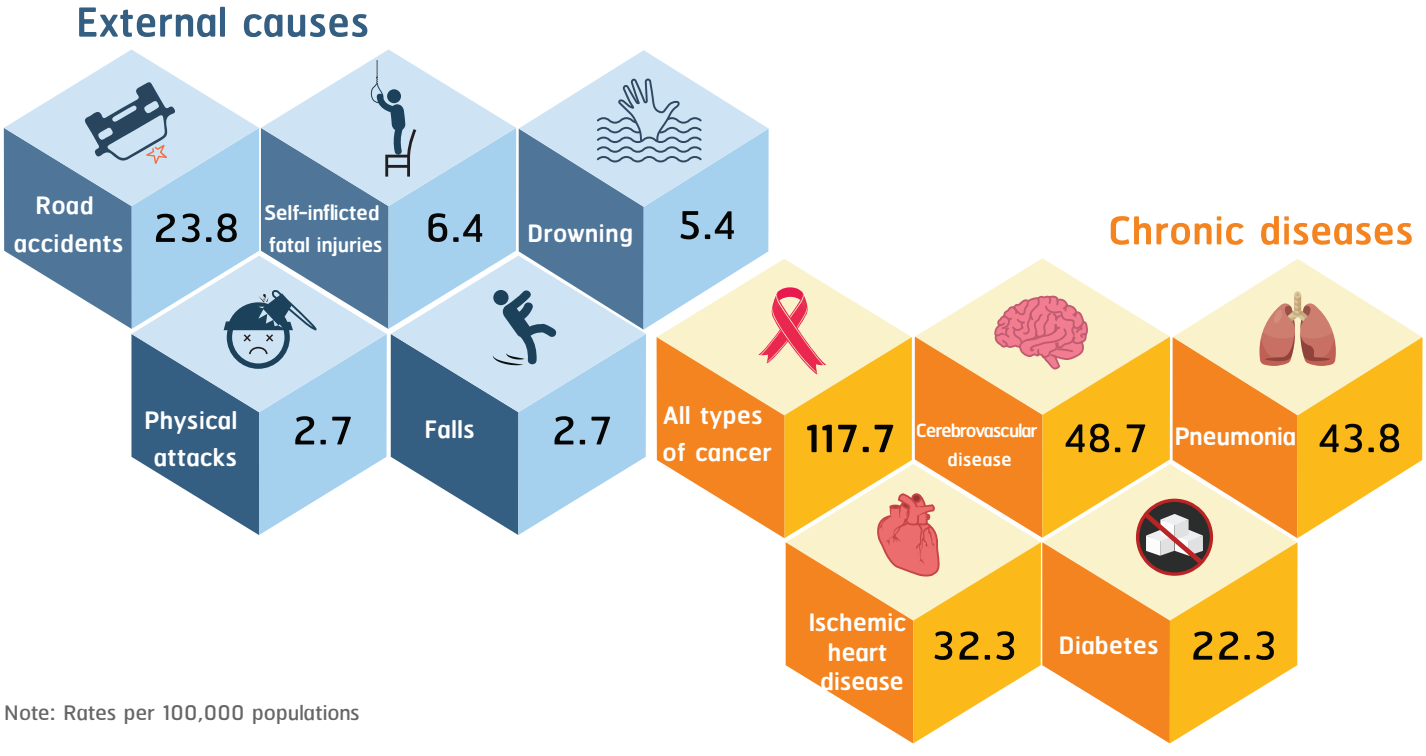
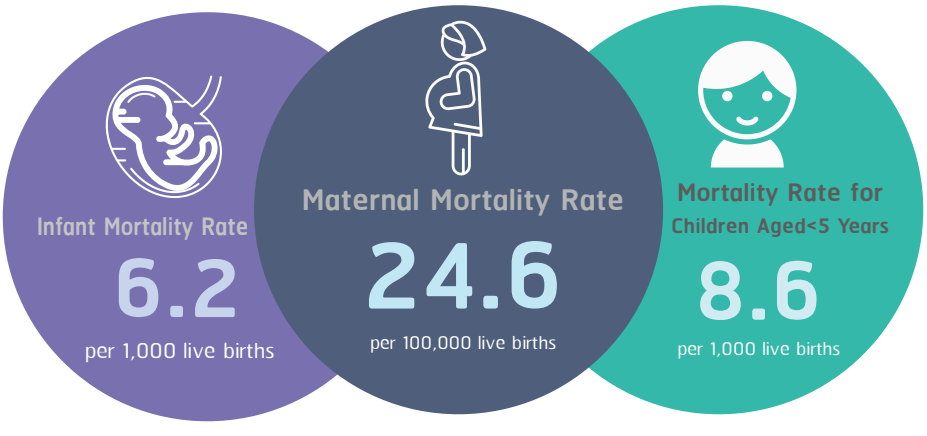
The First Five Mortality Rates due to External Causes and Chronic Diseases, 2016



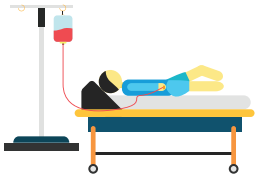
Note: Rates per 100,000 populations

Source: Public health statistics,2016, Strategy and Planning Division, Ministry of Public Health

Maternal Mortality Rate, Infant Mortality Rate, and Mortality Rate for Children Aged <5 Years Old, Thailand, 2015



Sources: 1. Bureau of Civil Registration, Ministry of Interior
2. World Health Statistics 2016, WHO
3. Health at a Glance OECD Indicators, 2016
4. 2016 Population Reference Bureau

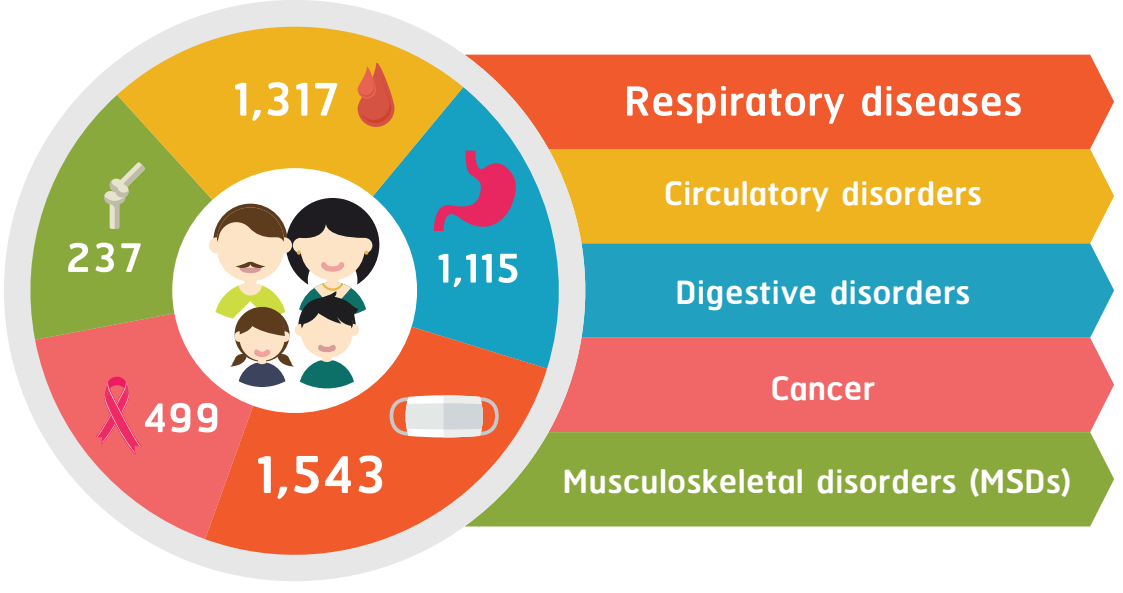


Chapter 3

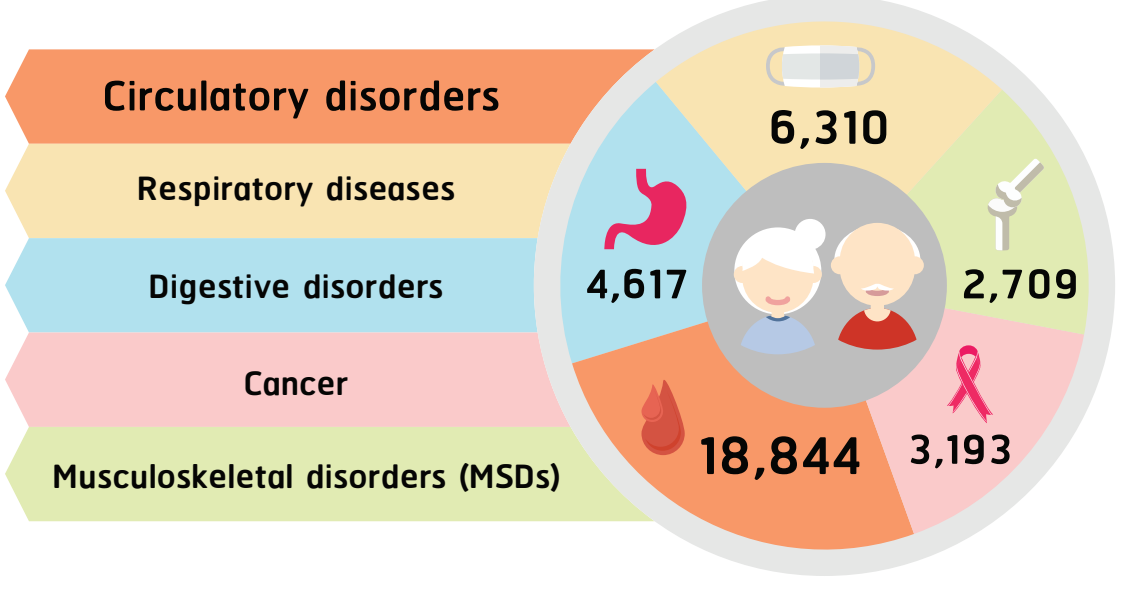
Morbidity Rates from Major Diseases

Proportion of inpatients per 100,000 populations due to major diseases, 2015

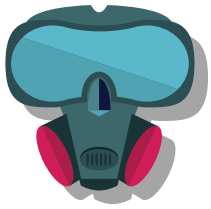
Proportion of inpatients per 100,000 populations due to major diseases, 0 to 59-year age group



Proportion of inpatients per 100,000 populations due to major diseases, those aged 60 and above

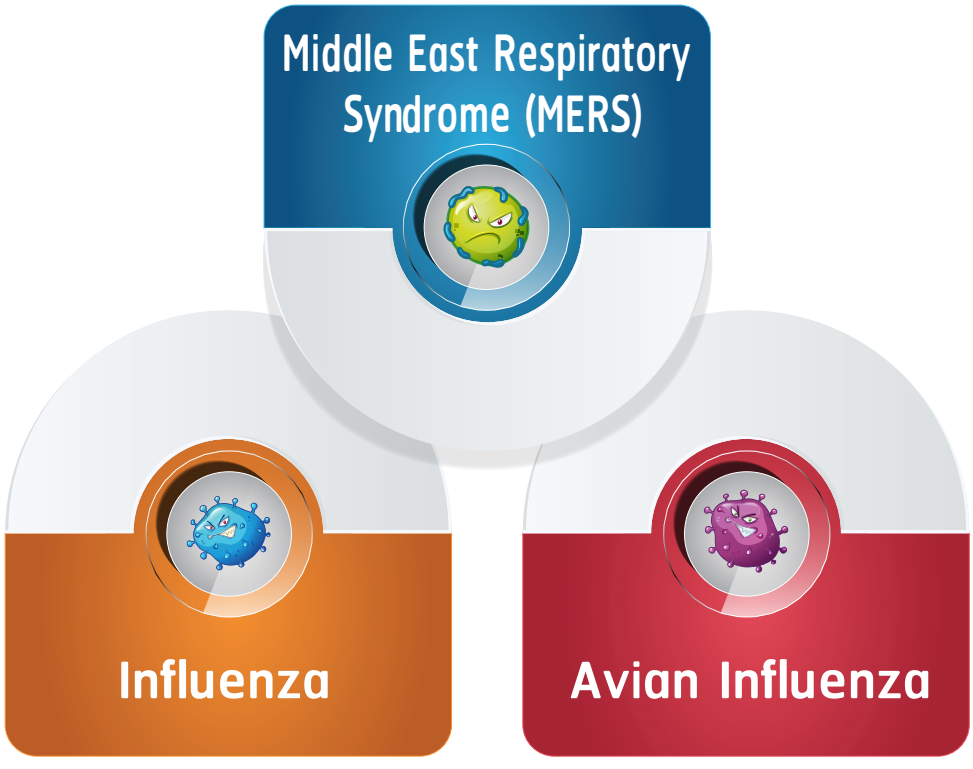


Source: Division of Strategy and Planning (DSP), Ministry of Public Health (MOPH)



Emerging Infectious Diseases

Chapter 3



MERS: Globally there have been a total of 2,103 reported cases of Middle East Respiratory Syndrome (MERS) (including 733 deaths) from 27 countries, with more outbreaks in Saudi Arabia, Qatar, Jordan, and Oman. In Thailand three imported MERS cases were identified (September 2012-October 2017).

Influenza: In Thailand a total of 192,593 influenza cases were reported from across the country (including 55 deaths) (January-December 2017).

Avian Influenza: Locally a total of 25 cases of avian influenza were identified (including 17 fatal cases) (2004-2006).

Sources: Bureau of Emerging Infectious Diseases (BEID) and the World Health Organization (WHO)

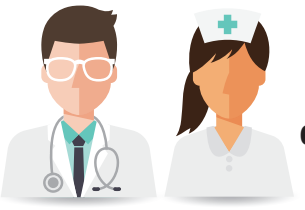
Chapter 4

Current State of Health Care Services

Chapter 4

Current State of Health Care Services

Current state of health care services



Current situation on health care workforce

Thailand's healthcare system has been undergoing continued development and expansion in all areas of health care services. More healthcare units are being established at primary, secondary, and tertiary care levels across the country. Hospital beds are being added in health facilities nationwide to accommodate an ever-increasing number of inpatients and to better provide ambulatory patient services.In 2016 health facilities under the Ministry of Public Health (MOPH) provided health care services to a total of 193,180,329 OPD visits and 9,449,326 inpatients, with an average hospital bed utilization rate of 76 percent of the total hospital beds available at health facilities nationwide.

Although the proportion of healthcare expenditures to Gross Domestic Product (GDP) had appeared to be decreasing due largely to the GDP growth, Thailand's total expenditures on healthcare actually increased from THB 371,832 million in 2009 to THB 476,430 million in 2013. In addition, according to the data of the same year, it was found Thai people had an average health expenditure as high as THB 7,357 per person per year, 77% of which was spent on health care services for state sector and the remaining 23% for private sector.

As for the current situation on health care workforce in five important disciplines – i.e. physician, dentist, pharmacist, registered nurse (RN), and technical nurse – despite a recent positive trend, the number of these health care workers (HCWs) is still considered insufficient and not properly distributed, particularly when comparing the number of HCWs in urban and rural areas of the country. In 2015 Thailand's ratio of physician to population was 1:2,035; dentist to population 1:9,352; pharmacist to population 1:5,317; registered nurse to population 1:436; and technical nurse to population 1:9,716 – which are well below international standards. Currently the local medical schools have a combined capacity to produce two medical graduates per 100,000 populations annually and 12 nurses per 100,000 populations annually. Give this human resources management is one of the important components of this national strategic plan.

Current State of Health Care Services

Chapter 4

2016

No. of Healthcare Facilities with

Beds for Overnight Admission: 1,221

No. of Hospital Beds:

141,500

No. of OPD Visits

193.2 million

No. of Inpatients

9.4 million

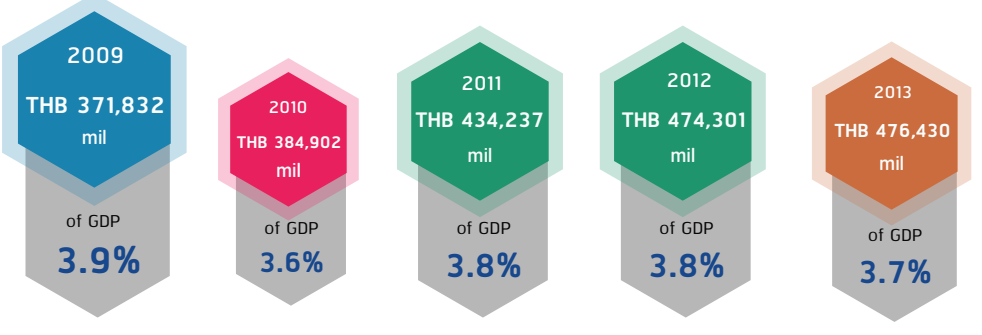
Bed Occupancy Rate

76 percent

Source: Division of Strategy and Planning, Ministry of Public Health

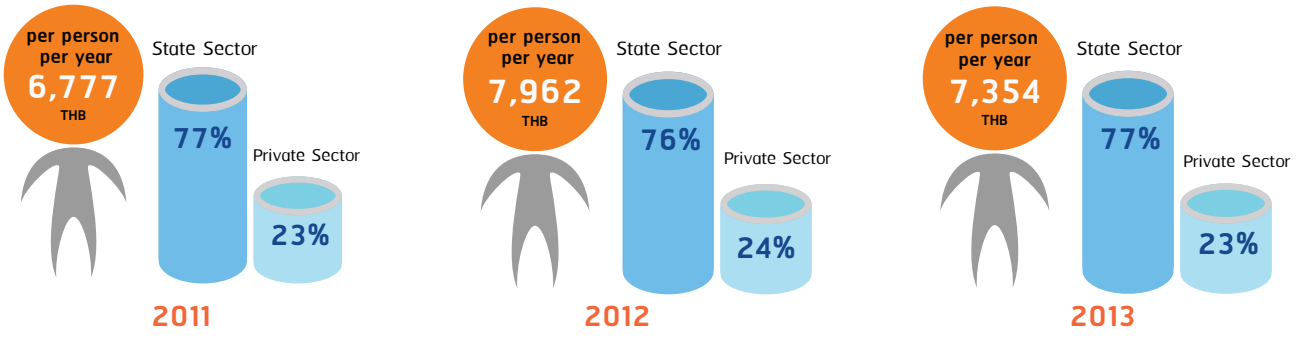
Healthcare Expenditures

Proportion of Healthcare Expenditures to Gross Domestic Product (GDP)



Source: Thailand National Healthcare Expenditure Account,International Health Policy Program (IHPP)

Proportion of Healthcare Expenditures between State and Private Sectors



Source:International Health Policy Program (IHPP)

Current Situation on Health Care Workforce

Chapter 4

Ratio of Important Health Care Workers (HCWs) to Population, Thailand, 2015

Ratio of physician to population

Physician	:	Population
1	:	2,035

Ratio of dentist to population

Dentist	:	Population
1	:	9,352

Ratio of pharmacist to population

Pharmacist	:	Population
1	:	5,317

Ratio of registered nurse to population

Registered Nurse	:	Population
1	:	436

Ratio of technical nurse to population

Technical Nurse	:	Population
1	:	9,716

Source: Healthcare Resources Report, Division of Strategy and Planning (DSP), Ministry of Public Health (MOPH)

Chapter 5

20-Year National Strategic Plan for Public Health 2017–2036

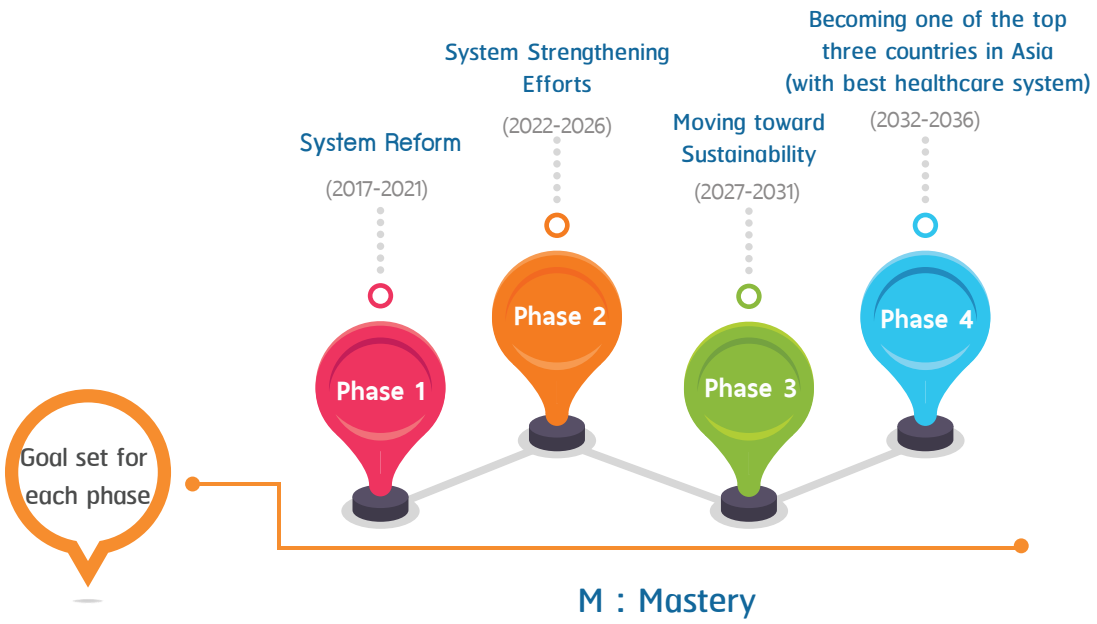
Chapter 5

20-Year National Strategic Plan for Public Health 2017-2036

This 20-Year National Strategic Plan for Public Health 2017-2036 has set out a vision for the Ministry of Public Health to become "a key health agency that mobilizes public and social engagement for the health and well-being of Thai people" by dividing the implementation plan into four five-year phases – namely, Phase 1: 2017-2021 System Reform; Phase 2: 2022-2026 System Strengthening Efforts; Phase 3: 2027-2031 Moving toward Sustainability; and Phase 4: 2032-2036 Becoming one of the top three countries in Asia (with best healthcare system). The implementation of this national strategy is aimed at attaining the goal of "Healthier People. Happier Health Care Workers. Sustainable Health System." Driven by a mission to develop and maintain a multi-sectoral engagement-based and sustainable healthcare system, this 20-Year National Strategic

Chapter 5

20-Year National Strategic Plan for Public Health 2017-2036



Values

M : Mastery
O : Originality
P : People centered
H : Humility

Mission

Developing and maintaining a multi-sectoral engagement-based and sustainable healthcare system

Vision

To become a key health agency that mobilizes public and social engagement for the health and well-being of Thai people

Goal

Healthier People. Happier Health Care Workers. Sustainable Health System.

4 Strategies of Excellence

8 Corporate Key Performance Indicators (KPIs)

1. Life Expectancy (LE)

Not less than **85** years

2. Health-Adjusted Life Expectancy (HALE)

Not less than **75** years

3. Happinometer Index

Not less than **70** percent

4. Happy Public Organization Index

Not less than **70** percent

5. Thai traditional medicine access rate

100 percent

6. Physician & bed coverage of MOPH-affiliated health facilities

Proportion of Physician **1** : 1,500 population

Proportion of bed **2** : 1,000 population

7. Number of HA-accredited health facilities

100 percent

8. Number of ITA (Governance)-certified MOPH-affiliated health agencies

Not less than **95** percent

Strategy NO.1

Promotion, Prevention and Protection (PP&P) Excellence

4 Work Plans

12 Projects

Phase 1 **26** KPIs

Phase 2 **27** KPIs

Phase 3 **26** KPIs

Phase 4 **28** KPIs

Work Plan 1

Improvement of quality of life (health) of Thai population in all age groups

Project 1 Building and strengthening capacity of women and children in their early childhood

Current situations

- Maternal mortality rate per 100,000 live births in 2012, 2013 and 2014 gradually increased from 17.6, 22.2, and 23.3, respectively.
- In 2016 an average intelligence quotient (IQ) of Thailand's first graders was 98.23 and in 2017 it was found that 21.5 percent of this group of children had suspected developmental delays (SDD).
- In 2017 only 49.5 percent of children aged 0-5 years were found to have a healthy weight-to-height ratio.

Objectives

- To develop a healthcare system of health facilities at all levels to meet the quality mother and child health standards.
- To ensure young children achieve proper developmental milestones.

20-year goal

Babies are born alive, mothers are safe, and children achieve proper developmental milestones.

KPIs/Goals

2017 - 2021 Phase 1

- 100 percent of health facilities have standard delivery services.
- Thailand's maternal mortality rate is <15 per 100,000 live births.
- 85 percent of children aged 0-5 years achieve proper developmental milestones.
- percent of children aged 0-5 years have a healthy weight-to-height ratio.

2022 - 2026 Phase 2

- 100 percent of health facilities have standard delivery services.
- Thailand's maternal mortality rate is <14 per 100,000 live births.
- 90 percent of children aged 0-5 years achieve proper developmental milestones.
- 78 percent of children aged 0-5 years have a healthy weight-to-height ratio.

2027 - 2031 Phase 3

- 100 percent of health facilities have standard delivery services.
- Thailand's maternal mortality rate is <12 per 100,000 live births.
- 95 percent of children aged 0-5 years achieve proper developmental milestones.
- 88 percent of children aged 0-5 years have a healthy weight-to-height ratio.

2032 - 2036 Phase 4

- 100 percent of health facilities have standard delivery services.
- Thailand's maternal mortality rate is <10 per 100,000 live births.
- 100 percent of children aged 0-5 years achieve proper developmental milestones.
- 90 percent of children aged 0-5 years have a healthy weight-to-height ratio.

Key Measures

- Improving quality standards of hospitals providing mother and child care services
- Developing and improving data system, surveillance system, and referral system
- Promoting and strengthening family institution, communities, and partnership networks
- Having in place mechanisms for advancing program implementation at the local level, e.g. Maternal Child Health Board, District Health Board (DHB)
- Implementing personnel capacity building program for HCWs and those of partnership networks
- Developing knowledge base, innovations, guidelines, and implementing public relations and awareness campaign
- Developing standard and seamless delivery services and quality antenatal care (ANC) services
- Advocating and pushing for new legislations relating to the promotion of early childhood development
- Creating the environments that are conducive to child development

Responsible agencies: Department of Medical Services (DMS)/Department of Health (DOH)

Work Plan 1

Improvement of quality of life (health) of Thai population in all age groups

Project 2 Building and strengthening capacity of school-age children and adolescents

Current situations

- In 2016 it was found an intelligence quotient (IQ) and emotional quotient (EQ) of Thailand's first graders was 98.23 and 77 percent of schoolchildren aged 6-11 years had a standard EQ or higher.
- In 2017 the number of school-age children who have a healthy weight-to-height ratio increased to 65.1 percent from 64.2 percent in 2016 and 71.81 percent of children aged 0-12 years enjoyed good dental health and were cavity-free.
- Delivery rates among adolescents aged 15-19 years continuously dropped from 54.3 per 1,000 populations in 2012 to 42.5 in 2016.

Objectives

- To encourage all parties involved to take appropriate steps to ensure that school-age children have a healthy weight-to-height ratio and the level of intelligence quotient (IQ) and emotional quotient (EQ) that meets international standards.
- To ensure that steps are taken to control oral cavity disease and to prevent a loss permanent teeth in children aged 12 years old.
- To prevent and address the problems of pregnancy in adolescents.

20-year goals

- School-age children have IQ/EQ levels that meet international standards, have a healthy weight-to-height ratio, and enjoy good dental health and are cavity-free.
- Live birth rate among young women aged 15-19 years will have decreased.

KPIs/Goals

2017 - 2021 Phase 1

- Thai children have an average intelligence quotient (IQ) of not less than 100.
- 80 percent of Thai children have an emotional quotient at a normal level or higher.
- 66 percent of school-age children have a healthy weight-to-height ratio.
- 60percent of children aged 0-12 years enjoy good dental health and are cavity-free.
- Live birth rate among young women aged 15-19 years is not more than 34 per 1,000 populations.

2022 - 2026 Phase 2

- Thai children have an average intelligence quotient (IQ) of not less than 101.
- 82 percent of Thai children have an emotional quotient at a normal level or higher.
- 67 percent of school-age children have a healthy weight-to-height ratio.
- 80 percent of children aged 0-12 years enjoy good dental health and are cavity-free.
- Live birth rate among young women aged 15-19 years is not more than 25 per 1,000 populations.

2027 - 2031 Phase 3

- Thai children have an average intelligence quotient (IQ) of not less than 103.
- 84 percent of Thai children have an emotional quotient at a normal level or higher.
- 68 percent of school-age children have a healthy weight-to-height ratio.
- 85 percent of children aged 0-12 years enjoy good dental health and are cavity-free.
- Live birth rate among young women aged 15-19 years is not more than 20 per 1,000 populations.

2032 - 2036 Phase 4

- Thai children have an average intelligence quotient (IQ) of not less than 105.
- 85 percent of Thai children have an emotional quotient at a normal level or higher.
- 69 percent of school-age children have a health weight-to-height ratio.
- 90 percent of children aged 0-12 years enjoy good dental health and are cavity-free.
- Live birth rate among young women aged 15-19 years is not more than 15 per 1,000 populations.

Key Measures

- Advocating and pushing for collaboration at the policy level to implement health promotion program for school-age children through multi-sectoral
- Developing physical/mental healthcare system that are teenager-friendly and ensuring linkage between healthcare system and schools
- Advancing a program implementation in line with the Teenage Pregnancy Prevention and Response Act B.E. 2559 (2016)
- Developing communication media, guidelines, tools, and environments that contribute to capacity building and strengthening of school-age children and adolescents
- Encouraging more active engagement between parents, communities, and schools in taking care of physical/mental health of school-age children and adolescents
- Developing support and care system for high-risk children
- Having in place a mechanism for program implementation both at the policy and local levels
- Advocating and pushing for new legislations relating to capacity building and strengthening of school-age children and adolescents
- Implementing capacity building program for HCWs and those of partnership networks

Responsible agencies: Department of Mental Health (DMH)/Department of Health (DOH)

Work Plan 1

Improvement of quality of life (health) of Thai population in all age groups

Project 3 Building and strengthening capacity of the working-age population

Current situations

Currently 51.80 percent of Thailand's working-age population-i.e. those aged 30-44 years old – has been found to have a normal Body Mass Index (BMI). This represents a downward trend compared with the data from the previous three years (from 2014-2016), of which the BMIs for this group of population were 54.75, 53.80, and 54.08 percent, respectively.

Objectives

- To promote good nutrition among members of the working-age population.
- To encourage people to adopt desirable health behaviors

20-year goal

Thailand's members of the working-age population have a normal Body Mass Index (BMI).

KPIs/Goals

2017 - 2021 Phase 1

- 56 percent of working-age population aged 30-44 years have a normal Body Mass Index (BMI).

2022 - 2026 Phase 2

- 61 percent of working-age population aged 30-44 years have a normal Body Mass Index (BMI).
- 75 percent of working-age population aged >15 years have adequate levels of physical activity.

2027 - 2031 Phase 3

- 66 percent of working-age population aged 30-44 years have a normal Body Mass Index (BMI).
- 80 percent of working-age population aged >15 years have adequate levels of physical activity.

2032 - 2036 Phase 4

- 71 percent of working-age population aged 30-44 years have a normal Body Mass Index (BMI).
- 85 percent of working-age population aged >15 years have adequate levels of physical activity.

Key Measures

- Providing sustained funding in the communities, health facilities, and workplace
- Implementing capacity building program for HCWs and those of partnership networks at all levels
- Creating intervention programs that are suitable for the context of each local setting
- Implementing healthy eating/active living/environmental health policies
- Designating leaders to promote desirable health behaviors in the communities and workplace
- Developing and improving a surveillance system for desirable health behaviors and BMI for working-age population

Responsible agency: Department of Health (DOH)

Work Plan 1

Improvement of quality of life (health) of Thai population in all age groups

Project 4 Building and strengthening capacity of the older population

Current situations

- Currently 88.6 percent of the elderly people can help themselves with the activities of daily living; less than 28 percent of the older population has received screening/assessment for elderly person syndrome;16.9 percent of the elderly are vulnerable to falls; and 8.1 percent has an increased risk for dementia.
- In 2017 a total of 177,541 dependent elderly persons participated in a long-term care (LTC) program.
- In 2017 a total of 4,424 care managers (CMs) and 22,344 caregivers (CGs) were produced.

Objectives

- To provide the elderly people with effective health promotion, disease prevention, treatment and care, and rehabilitation services through active engagement of their family, community, and the local administration organizations.
- To enable the elderly people to help themselves with the activities of daily living based on their individual capacity; and to provide the elderly people with healthcare services that specifically address their health issues.

20-year goals

- Tambon Administration Organizations have in place a long-term health promotion system for the elderly people in the communities that meet the established criteria.
- The ratio of elderly people who can help themselves with daily activities must at least be 8 times those who are dependent on help from other people.
- 95 percent of state health facilities have a dedicated clinic for the elderly people.

KPIs/Goals

2017 - 2021 Phase 1

- LTC is available in 95 percent of health facilities.
- The ratio of elderly people who can help themselves with the activities of daily living will have increased or remained stable.
- At least 75 percent of community hospitals have a dedicated healthcare unit for the elderly people.

2022 - 2026 Phase 2

- LTC is available in 100 percent of health facilities + quality.
- The ratio of elderly people who can help themselves with the activities of daily living will have increased or remained stable.
- At least 80 percent of community hospitals have a dedicated healthcare unit for the elderly people.

2027 - 2031 Phase 3

- LTC is available in 100 percent of health facilities + quality.
- The ratio of elderly people who can help themselves with the activities of daily living will have increased or remained stable.
- At least 85 percent of community hospitals have a dedicated healthcare unit for the elderly people.

2032 - 2036 Phase 4

- LTC is available in 100 percent of health facilities + quality.
- The ratio of elderly people who can help themselves with the activities of daily living will have increased or remained stable.
- At least 90 percent of community hospitals have a dedicated healthcare unit for the elderly people.

Key Measures

- Developing and advocating for the enforcement of legislations relating to healthcare programs for the elderly population
- Having in place a mechanism for program implementation at national, regional, and community levels
- Implementing capacity building program for HCWs, care managers (CMs), and caregivers (CGs)
- Advancing an Active Ageing Program in model districts for health promotion purposes
- Encouraging more active participation from communities and partnership networks in an effort to provide quality care to the elderly people in communities
- Creating and developing innovations, guidelines, information package, and communication materials related to elderly care
- Developing a community-based, long-term elderly care system, elderly health screening/assessment system, and database system

Responsible agencies: Department of Medical Services (DMS)/Department of Health (DOH)

Chapter 5

Work Plan 2

Improvement of quality of life at a district level

Project 5 Improvement of quality of life at a district level

Current situations

On June 5, 2017 the Prime Minister and the meeting of the Strategic State Administration Committee resolved to approve the proposal drafted by the Ministry of Public Health (MOPH) for the implementation of public health reform to complete within one year and four months. This includes the issuance of the Prime Minister's Office Regulations appointing the District Health Boards (DHBs) to promote a state-people collaboration effort. In 2016 there were 73 DHBs appointed and the number of DHBs increased to 200 nationwide in 2017.

Objective

- To improve quality of life of the local people based on the local-based, people-center principle.

20-year goal

Every district across the country has a functional District Health Board (DHB).

KPIs/Goals

2017 - 2021 Phase 1

Eighty percent of districts nationwide (702 districts) have a fully functional District Health Board (DHB).

2022 - 2026 Phase 2

One hundred percent of districts nationwide (878 districts) have a fully functional District Health Board (DHB).

Key Measures

- Systematically establishing and developing service providers/ teams both in healthcare facilities and healthcare networks
- Promoting multi-sectoral collaboration and engagement from all sectors having an impact on health
- Strengthening data system and surveillance system
- Managing resource mobilization in each sector
- Advocating and pushing for the development and enforcement of relevant legislations and regulations

Responsible agencies: Division of Public Health Administration (DPHA)/Thailand Healthy Strategic Management Office (THSMO)

Work Plan 3

Disease prevention and control and reduction of health risk factors

Project 6 Development of emergency and health threats response system

Current situations

Currently the emergence of diseases and health threats is increasingly becoming more severe than ever before and it is more likely to trigger widespread transmissions and outbreaks. Given this an early aberration detection system will need to be developed and implemented so as to ensure a rapid response jointly carried out by Emergency Operations Center (EOC), Situation Awareness Team (SAT), Disease Investigation and Control Team (DICT), and other relevant agencies. Together, this collective effort is called a national public health emergency management system and it is aimed at meeting the IHR international standards known as Joint External Evaluation (JEE).

Objective

To develop an emergency operations system that can effectively respond to public health emergency resulting from disease outbreaks and health threats.

KPI/Goal

One hundred percent of provinces nationwide have a fully functional Emergency Operations Center (EOC) and Situation Awareness Team (SAT).

Key Measures

- Conducting an exercise/drill based on Incident Command System (ICS) to respond to a scenario of public health emergency at a provincial level
- Implementing capacity building program for managers of provincial EOC
- Establishing a team dedicated for surveillance and evaluation of trends of diseases and health threats and public health emergency response team at provincial level

Responsible agency: Department of Disease Control (DDC)

Chapter 5

Work Plan 3

Disease prevention and control and reduction of health risk factors

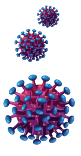
Project 7 Prevention and control of communicable diseases

Current situations

- HIV and sexually transmitted infections (STIs): In 2015 Thailand had an estimated 437,000 people living with HIV and 6,900 new cases of HIV infection, or an average of 19 cases per day, representing a reduction of 77 percent compared with that of the year 2000. There were 16,100 deaths due to HIV infection.
- Opisthorchiasis (liver flukes) and cholangiocarcinoma (bile duct cancer):In 2013 a mortality rate due to bile duct cancer was 23.9 percent. There were 1,765 new cases of liver cancer and bile duct cancer. Of these, 63 percent of the patients was diagnosed with liver cancer and 55 percent was bile duct cancer. In 2014, an overall prevalence rate nationwide was 5.1 percent.

Objectives

- To reduce morbidity and mortality rates from HIV infections and STIs
- To ensure that all those affected by the infections have access to antiviral medications
- To reduce opisthorchiasis infection rates in 29 high-risk provinces



20-year goals

- The number of new cases of HIV infection is kept below 1,000 [per year].
- There is no baby born with HIV infection.
- All HIV-positive individuals have access to antiretroviral therapy.
- HIV-related deaths are reduced to below 4,000 [per year].
- Stigmatization and discrimination rate is no more than 6 percent.
- Mortality rate associated with bile duct cancer is reduced by half.
- Live fluke infection rate is reduced to just below 1 percent.

KPIs/Goals

2017- 2021 — Phase 1

- 94 percent of mainstream population have access to proactive HIV and STI prevention services.
- 80 percent of tambons (sub-districts) have in place a health management program dedicated for surveillance, prevention and control of liver fluke infection and bile duct cancer.

2022 - 2026 — Phase 2

- 100 percent of mainstream population have access to proactive HIV and STI prevention services.
- 80 percent of tambons (sub-districts) have in place a health management program dedicated for surveillance, prevention and control of liver fluke infection and bile duct cancer.

2027 - 2031 — Phase 3

- 100 percent of mainstream population have access to proactive HIV and STI prevention services.
- 100 percent of tambons (sub-districts) have in place a health management program dedicated for surveillance, prevention and control of liver fluke infection and bile duct cancer.

2032 - 2036 — Phase 4

- The number of deaths due to HIV infection is reduced by 80 percent.
- 100 percent of tambons (sub-districts) have in place a health management program dedicated for surveillance, prevention and control of liver fluke infection and bile duct cancer.

Key Measures

- Stepping up a campaign to reduce stigmatization and discrimination against those affected by HIV infection and managing the environment to facilitate campaign implementation
- Foster collaboration at national level and among countries in the Greater Mekong Sub-region
- Developing structural system, mechanism and guidelines for risk communications
- Advancing a campaign to stop HIV/AIDS and STIs
- Developing health management program dedicated for surveillance, prevention and control of liver fluke infection and bile duct cancer at the tambon (sub- district) level
- Supporting and building capacity and encouraging more active participation from civil society and local administration organizations
- Developing an integrated approach to implementing disease surveillance/ screening/prevention and control/ diagnosis/care/treatment/referral/

Responsible agency: Department of Disease Control (DDC)

Chapter 5

Work Plan 3

Disease prevention and control and reduction of health risk factors

Project 8 Prevention and control of non-communicable diseases (NCDs) and health threats

Current situations

- Drowning is a leading cause of death among Thai children aged <15 years, with an average mortality of 1,015 annually.
- In 2016 based on the national consolidated database a mortality rate due to road traffic injuries was 33.45 per 100,000 populations (21,745 deaths).
- From 2015-2017 on average there were 200,000 new cases of diabetes mellitus (DM) annually and 400,000 new cases of hypertension (HT) per year, according to Health Data Center (HDC).
- From 2009-2014 DM prevalence increased from 6.9 to 8.9 percent, while HT prevalence increased from 21.4 to 24.7 percent, according to Thai National Health Examination Survey IV-V (NHES IV-V).

Objectives

To reduce mortality rates from drowning and road traffic injuries, as well as reducing the number of new cases of diabetes mellitus and hypertension

20-year goals

- Mortality rates from drowning and road traffic injuries will have dropped.
- The number of new cases of diabetes mellitus (DM) from individuals at risk of developing DM and the number of new cases of hypertension (HT) from those at risk of developing HT will have decreased.

KPIs/Goals

2017 - 2021 Phase 1

- Mortality rate from drowning among children aged <15 years is < 3.0 percent.
- Mortality rate from road traffic injuries decreases by 50 percent from 2011.
- The number of new DM cases from high-risk group is <2.16 percent and the number of new HT cases is xxx percent,with >40 percent of those suspected of having HT regularly measuring their blood pressure at home.

2022 - 2026 Phase 2

- Mortality rate from drowning among children aged <15 years is <2.5 percent.
- Mortality rate from drowning in all age groups decreases by at least 20 percent from 2017.
- Mortality rate from road traffic injuries decreases by 10 percent from 2021.
- The number of new DM cases from high-risk group is <2.04 percent and the number of new HT cases decreases by 3 percent (from baseline data in 2021).

2027 - 2031 Phase 3

- Mortality rate from drowning among children aged <15 years is < 2.5 percent.
- Mortality rate from drowning in all age groups decreases by at least 40 percent from 2017.
- Mortality rate from road traffic injuries decreases by 10 percent from 2026.
- The number of new DM cases from high-risk group is <1.92 percent and the number of new HT cases decreases by 3 percent (from baseline data in 2026).

2032 - 2036 Phase 4

- Mortality rate from drowning among children aged <15 years is < 2.5 percent.
- Mortality rate from drowning in all age groups decreases by at least 50 percent from 2017.
- Mortality rate from road traffic injuries decreases by 10 percent from 2031.
- The number of new DM cases from high-risk group is <1.80 percent and the number of new HT cases decreases by 3 percent (from baseline data in 2031)

Key Measures

- Having in place a mechanism for program implementation at policy and local levels
- Developing measures to prevent drowning and road accidents
- Developing standards, rules and regulations, and legislations related to water and road safety
- Developing emergency response system for water and road accidents
- Developing and producing communications materials and guidelines using conveniently accessible modern media in support of program implementation
- Supporting and strengthening partnership networks working on the prevention of drowning and road accidents
- Developing and implementing information and data system in an effort to prevent non-communicable diseases (NCDs) and health threats
- Advocating and pushing for the implementation of national strategy for NCD prevention and control
- Developing related curriculum and implementing capacity building program for relevant personnel

Responsible agency: Department of Disease Control (DDC)

Work Plan 3

Disease prevention and control and reduction of health risk factors

Project 9 Promoting and developing food safety standards

Current situations

Currently it has been found that 37.91 percent of vegetables and fruits and 13.79 percent of school milk fail to meet hygiene and safety standards as they are contaminated with microorganisms that are likely to have a detrimental health impact on students in over 40,000 schools across the country.

Objective

To ensure the consumers are offered food products that meet hygiene and safety standards.

20-year goal

Members of the public have access to food products that meet hygiene and safety standards and have proper understanding and knowledge about safe and healthy eating habits.

KPIs/Goals

- 2017 - 2021 **Phase 1**: Seventy percent of fresh and processed foods meet hygiene and safety standards.
- 2022 - 2026 **Phase 2**: Seventy-five percent of fresh and processed foods meet hygiene and safety standards.
- 2027 - 2031 **Phase 3**: Seventy-eight percent of fresh and processed foods meet hygiene and safety standards.
- 2032 - 2036 **Phase 4**: Eighty percent of fresh and processed foods meet hygiene and safety standards.

Key Measures

- Reviewing and updating applicable laws to ensure alignment with international practices and providing necessary support to business operators to ensure compliance with food safety standards
- Developing a mechanism for consumer protection and working collaboratively with partnership networks
- Developing and encouraging business operators to produce/import food products that meet international standards
- Implementing personnel capacity building program
- Developing and implementing an effective, rapid food safety surveillance and alert system
- Developing communications materials, information sources, tools that areconveniently accessible and tailor-made for specific target audience
- Developing food database system and effective monitoring and evaluation (M&E) system
- Implementing laboratory capacity building program to ensure all laboratories have the same diagnostic capacity

Responsible agency: Food and Drug Administration (FDA)

Chapter 5

Work Plan 3

Disease prevention and control and reduction of health risk factors

Project 10 Protecting consumers against falsified and substandard healthcare products and services

Current situations

- Unnecessary and inappropriate consumption of healthcare products may lead to health problems.
- 63.12 percent of healthcare businesses have been found to meet established standards.
- Current problems include, for instance, a delay in the enactment and enforcement of healthcare-related legislations, lack of clarity about legal compliance, lack of understanding on the part of business operators and healthcare personnel, health services being provided by unlicensed healthcare providers, and importation and usage of medical devices that are not approved and certified by the industry and regulatory authorities.

Objectives

- To ensure the consumers receive quality healthcare products.
- To ensure health facilities and healthcare businesses meet the established standards and members of the public receive quality healthcare

20-year goal

Members of the public have access to quality healthcare products and services.

KPIs/Goals

2017 - 2021 Phase 1

- 99 percent of healthcare products that are subject to inspection meet the standard requirements.
- 100 percent of health facilities meet the standards required by applicable laws and regulations.
- Healthcare businesses receive necessary support so they can develop their services to meet the standards required by applicable laws and regulations.

2022 - 2026 Phase 2

- 100 percent of healthcare products that are subject to inspection meet the standard requirements.
- 100 percent of health facilities meet the standards required by applicable laws and regulations.
- Healthcare businesses receive necessary support so they can develop their services to meet international standards.

2027 - 2031 Phase 3

- 100 percent of healthcare products that are subject to inspection meet the standard requirements.
- 100 percent of health facilities meet the standards required by applicable laws and regulations.
- Each category of Thailand's healthcare businesses is rated as one of the top three in Asia.

2032 - 2036 Phase 4

- 100 percent of healthcare products that are subject to inspection meet the standard requirements.
- 100 percent of health facilities meet the standards required by applicable laws and regulations.
- Each category of Thailand's healthcare businesses is rated as one of the top 10 in the world.

Key Measures

- Developing health safety surveillance and alert system
- Developing knowledge base and guidelines for consumer protection
- Strengthening existing mechanism and networks
- Developing marketing measures
- Updating relevant laws and regulations and encouraging local administration organizations to enact bylaws
- Implementing capacity building program for healthcare personnel and businesses to increase and maintain commercial competitiveness
- Developing information database system and expanding communications/ public relations channels to ensure data linkage throughout the country

Responsible agencies: Department of Health Service Support (DHSS)/Food and Drug Administration (FDA)

Work Plan 4

Environmental management

Project 11 Environmental management

Current situations

In 2017 it was found that 90 percent of hospitals under the Ministry of Public Health (MOPH) had developed its environmental health program that successfully meets the basic requirements of GREEN & CLEAN Hospital Initiative.

Objectives

To encourage MOPH-affiliated hospitals to develop and implement the environmental health programthat meets the requirements of GREEN & CLEAN Hospital Initiative.

20-year goal

Hospitals under the MOPH are environmentally friendly and serve as a learning center for environmental management for the local communities.

KPIs/Goals

Phase 1 (2017 - 2021)
Hospitals under the Ministry of Public Health (MOPH) have in place infectious waste management program using Digital Infectious Control System.

Phase 2 (2022 - 2026)
Smart energy hospitals

Phase 3 (2027 - 2031)
Healing environments and smart environment hospitals

Phase 4 (2032 - 2036)
- Infectious waste from all sources are managed by Digital Infectious Control System.
- Hospitals use clean, environmentally friendly energy.
- Hospitals have a zero waste management approach.

Key Measures

- Implementing capacity building program for hospital staff and relevant personnel
- Developing hospital environmental management system
- Developing knowledge base and communications materials
- Working closely with Ministry of Energy to develop the energy conservation guidelines and to increase the utilization of renewable energy
- Encouraging GREEN & CLEAN hospitals to become a learning center for local communities
- Designing/improving hospital buildings to make them environmentally friendly hospitals/model hospitals for energy conservation
- Developing and expanding GREEN & CLEAN Hospital network

Responsible agency: Department of Health (DOH)

Work Plan 4

Environmental management

Project 12 Protecting people's health against environmental pollution in high-risk areas

Current situations

In 2017 it was found that 60.53 percent of the provinces (46 provinces) had in place an environmental and health risk factors management system that meets the basic requirements.

Objectives

To provide Thai people with protection against health risk factors associated with environmental pollution

20-year goal

Detrimental health impact from waste and environmental pollution is significantly reduced.

KPIs/Goals

- 2017 - 2021 **Phase 1**: Seventy percent of the provinces have successfully passed the assessment with an excellent result.
- 2022 - 2026 **Phase 2**: Ninety percent of the provinces have successfully passed the assessment with an excellent result.
- 2027 - 2031 **Phase 3**: Provinces have in place an environmental and health risk factors management systemthat has successfully passed the assessment with an excellent result and environmentally friendly surroundings have been created.
- 2032 - 2036 **Phase 4**: Eighty percent of health agencies at all levels in each province have in place an environmental and health risk factors management system that is implemented under the principle of all health-oriented policies.

Key Measures

- Promoting quality improvement of Environmental Health Impact Assessment (EHIA) services
- Developing database system that can be linked on a real-time basis to all relevant agencies at the provincial level
- Promoting the creation of sub-districts with strong community in terms of environmental health and risk communications and alert related to health impact
- Drafting new legislations/subordinate legislations and advocating for enforcement and encouraging local administration organizations to enact bylaws
- Providing occupational and environmental health tools, surveillance guidelines that are in line with those of the high-risk areas at the provincial level
- Implementing capacity building program for health care workers/staff of local organizations/partnership networks to manage health problems of the local people
- Supporting healthcare system management program and developing disease surveillance system to cover diseases and health threats caused by environmental pollution

Responsible agency: Department of Health (DOH)

Strategy No. 2

Service Excellence

5 Work Plans

22 Projects

Phase 1 58 KPIs

Phase 2 62 KPIs

Phase 3 58 KPIs

Phase 4 59 KPIs

Work Plan 5

Development of Primary Care Cluster (PCC)

Project 13 Development of Primary Care Cluster (PCC)

Current situations

1. The Constitution of the Kingdom of Thailand B.E.2560 (2017) stipulates that "primary care services should be provided to Thai people, with a suitable proportion between a family medicine doctor and population."
2. The development of Primary Care Cluster (PCC) is therefore considered an important foundation for the country's healthcare system. Nevertheless, it has been found people living in urban areas have been unable to gain access to primary care services. This has prompted this group of population to seek medical care directly from medical specialists at regional and general hospitals, thus resulting in these large health facilities becoming overcrowded.
3. To address this pressing public health issue, the Ministry of Public Health (MOPH) has drawn up a policy for the development of Primary Care Cluster (PCC) and family medicine clinic.

Objectives

To ensure that all Thais have access to health care services at both health facilities and in the communities, which are provided by family medicine doctors, so that they could stay healthy and properly take care of themselves and family members when getting sick.

20-year goal

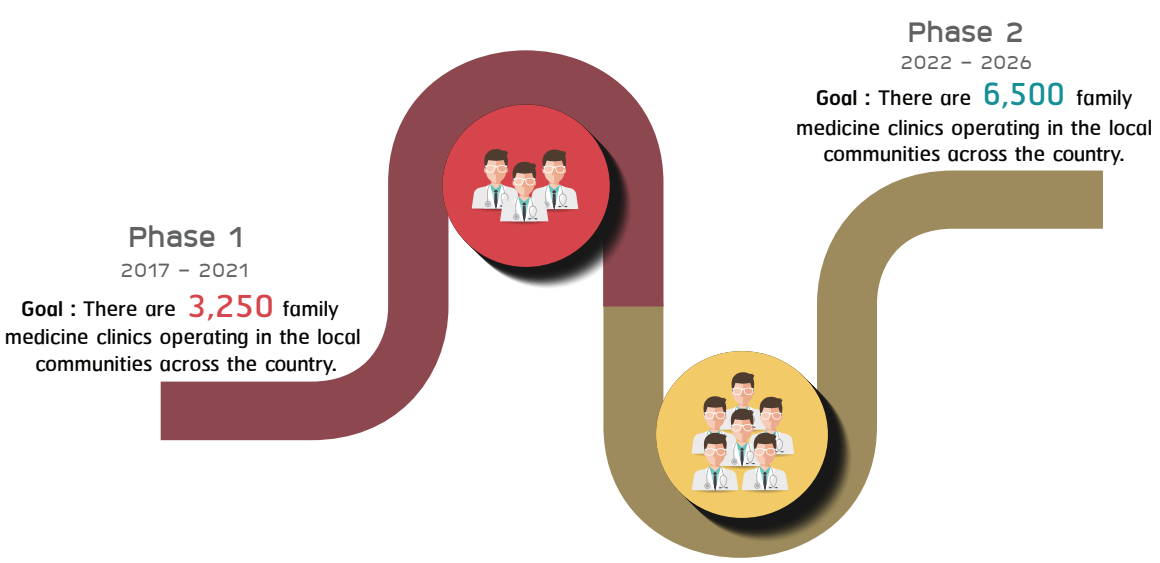
The goal for a 10-year implementation period (2017-2026) is to establish and operate 6,500 family medicine clinics to ensure that all Thais have access to family medicine doctors and interdisciplinary medical teams.

KPI

Successful operations of family medicine clinics in the local areas across the country

Key Measures

1. Developing megacity/urban area/rural area service model
2. Producing family medicine doctors and developing interdisciplinary medical teams that are sufficient to provide primary care services to all Thais.
3. Developing technologies to support program implementation
4. Providing necessary supplies and equipment to ensure successful program implementation
5. Developing and implementing staff incentive program
6. Developing and implementing monitoring and evaluation (M&E) system
7. Conducting research study to develop service model and supporting system
8. Advocating and pushing for the passage of the draft Primary Care Bill B.E... ... .



Responsible agency: Office of Primary Care System and Family Medicine Clinic

Work Plan 6

Development of Healthcare System

Project 14 Development ofhealthcare system to addressnon-communicable Diseases (NCDs)

Current situations

Based on the data from Thai population health surveys conducted in 2009 and 2014, it was found that the prevalence rate of diabetes mellitus (DM) had increased from 6.9 to 8.9 percent, while the prevalence rate of hypertension (HT) had increased from 21.4 to 24.7 percent. In addition, the mortality rate of cerebrovascular disease was 8.3 percent, according to the data in 2016.

Objectives

To improve quality of healthcare system on treatment and care of non-communicable diseases (NCDs) so that DM patients can keep blood sugar level under control and HT patients can effectively control their blood pressure.

20-year goal

The number of NCD patients has decreased when compared with baseline data.

Key Measures

1. Supporting the implementation of NCD program in health facilities at all levels across the country
2. Developing and evaluating preventive interventions
3. Having in place stroke fast-track system, stroke unit, stroke center certification standards, stroke referral network
4. Implementing capacity building program for health care workers in such areas as preventive interventions, user data dashboard, e-NCDs Health Informatics, cardiovascular disease (CVD), and chronic kidney disease (CKD).
5. Developing and maintaining a national, standardized, consolidated databases, e.g. Data Dashboard for DM/HT, HDC.
6. Developing and utilizing tools, technologies, and communication media for the purpose of program implementation, for instance, guidelines for preventive interventions/NCD Clinic Plus/CNN, and VTR media applications
7. Improving NCDs health literacy
8. Supporting community-based efforts to reduce risk factors associated with cardiovascular disease (CVD) and kidney disease
9. Creating and maintaining the environments that are conducive to health promotion in health facilities

Phase 1
2017 – 2021

Goals/KPIs

1. >40% of DM patients can keep blood sugar level under control.
2. >50% of HT patients can keep blood pressure under control.
3. >90% of registered DM and HT patients receive clinical evaluation for the risk of developing cardiovascular disease (CVD).
4. Mortality rate due to cerebrovascular diseases (160-169) is below 7 percent.

Phase 2
2022 – 2026

Goals/KPIs

1. >40% of DM patients can keep blood sugar level under control.
2. >50% of HT patients can keep blood pressure under control.
3. >92% of registered DM and HT patients receive clinical evaluation for the risk of developing cardiovascular disease (CVD).
4. Mortality rate due to cerebrovascular diseases (160-169) is below 7 percent.

Phase 3
2027 – 2031

Goals/KPIs

1. >40% of DM patients can keep blood sugar level under control.
2. >50% of HT patients can keep blood pressure under control.
3. >94% of registered DM and HT patients receive clinical evaluation for the risk of developing cardiovascular disease (CVD).
4. Mortality rate due to cerebrovascular diseases (160-169) is kept below 7 percent.

Phase 4
2032 – 22036

Goals/KPIs

1. >40% of DM patients can keep blood sugar level under control.
2. >50% of HT patients can keep blood pressure under control.
3. >96% of registered DM and HT patients receive clinical evaluation for the risk of developing cardiovascular disease (CVD).
4. Mortality rate due to cerebrovascular diseases (160-169) is kept below 7 percent.

Responsible agencies: Department of Medical Services (DMS)/ Department of Disease Control (DDC)

Work Plan 6

Development of Healthcare System

Project 15 Prevention and control of antimicrobial resistance (AMR) and encouraging rational drug use (RDU)

Current situations

System development is currently underway to encourage rational drug use (RDU) in health facilities at all levels, from tertiary to primary health facilities. At the end of Fiscal Year 2017 it was found 61.49 percent of hospitals had achieved a level I rational drug use (data as of September 2017). Ninety-one percent of regional/general hospitals had in place an antimicrobial resistance (AMR) response plan but still lack the data for assessment of the entire system.

Objectives

1. To develop and implement safe and cost-effective prescription drug management system
2. To reduce morbidity rates due to antimicrobial resistance and inappropriate use of antibiotics

20-year goal

1. Patients are prescribed medications suitable to address their individual health problems, with appropriate dosage and treatment duration, while minimizing financial burdens on the patients and communities.
2. Reduction in morbidity rates attributed to infections caused by antimicrobial-resistant pathogens

Key Performance Indicators (KPIs)

Process/output KPIs

1. Percentage of health facilities achieving rational drug use (RDU)
2. Percentage of health facilities having in place an integrated approach to addressing antimicrobial resistance

Outcome KPIs

1. Decrease in incidence of drug-related problems (DRPs)
2. Reduction in inappropriate use of broad-spectrum antibiotics
3. Decrease in morbidity rates due to infections caused by antimicrobial resistance
4. Reduction in expenditures on prescription drugs*

Key Measures

1. Developing prescription drug quality control system to ensure rational drug use (RDU) in health facilities at all levels based on PLEASE key
2. Ensuring that health facilities have in place an effective, integrated AMR response system
3. Encouraging health care workers (HCWs) to stay updated on the latest development of AMR issue
4. Developing data and information system at all levels to ensure continued program development and for the purposes of monitoring and evaluation (M&E)
5. Strengthening local communities by taking advantage of the mechanism of District Health Board (DHB) to encourage rational drug use (RDU) and reduce the problems due to antimicrobial resistance
6. Supporting the development of partnership networks, both formal (regional/provincial) and informal ones, to encourage learning and development among network members

Phase 1
2017 – 2021
Health System Integration

KPIs/Goals

1. >80% of health facilities achieves a level III RDU.
2. >70% of health facilities have integrated system to address AMR problems.
3. DRPs decrease by 20 percent.
4. Inappropriate use of broad-spectrum antibiotics decreases by 20 percent.
5. Morbidity rate due to infections caused by antimicrobial resistance decreases by 20 percent.
6. National AMR management and response system meets Level IV international standards stipulated by IHRs Joint External Evaluation (JEE) tools.
7. Expenditures on prescription drugs decrease by 50 percent.

Phase 2
2022 – 2026
Routine Work System

KPIs/Goals

1. >100% of health facilities achieves a level III RDU.
2. >100% of health facilities have integrated system to address AMR problems.
3. DRPs decrease by 40 percent.
4. Inappropriate use of broad-spectrum antibiotics decreases by 40 percent.
5. Morbidity rate due to infections caused by antimicrobial resistance decreases by 60 percent.
6. National AMR management and response system meets Level IV international standards stipulated by IHRs Joint External Evaluation (JEE) tools
7. Expenditures on prescription drugs decrease by 60 percent.

Phase 3
2027– 2031
RDU Country

KPIs/Goals

1. DRPs decrease by 60 percent.
2. Inappropriate use of broad-spectrum antibiotics decreases by 60 percent.
3. Morbidity rate due to infections caused by antimicrobial resistance decreases by 70 percent.
4. National AMR management and response system meets Level IV international standards stipulated by IHRs Joint External Evaluation (JEE) tools.
5. Expenditures on prescription drugs decrease by 70 percent.

Phase 4
2032– 2036
RDU Country

KPIs/Goals

1. DRPs decrease by 60 percent.
2. Inappropriate use of broad-spectrum antibiotics decreases by 60 percent.
3. Morbidity rate due to infections caused by antimicrobial resistance decreases by 80 percent.
4. National AMR management and response system meets Level IV international standards stipulated by IHRs Joint External Evaluation (JEE) tools.
5. Expenditures on prescription drugs decrease by 70 percent.

Note: *Expenditures on prescription drugs refer to the expenses incurred as a result of inappropriate and unnecessary use of prescription drugs, as well as the expenses associated with the illnesses due to preventable, drug use-related problems.

Responsible agencies: Department of Medical Sciences (DMSs)/Food and Drug Administration (FDA)/Division of Public Health Administration (DPHA)

Work Plan 6

Development of Healthcare System

Project 16 Development of centers for medical excellence

Current situations

Currently there are disparities in health care services between different health zones across the countrydue largely to limited resources. This has resulted in increasingly higher numbers of patient referrals from one health zone to another with higher capacity.

Objectives

1. To continue to developand enhance capacity of different areas of healthcare services and referral system in each health zone
2. To ensure people have access to appropriate health care services and referral system

20-year goal

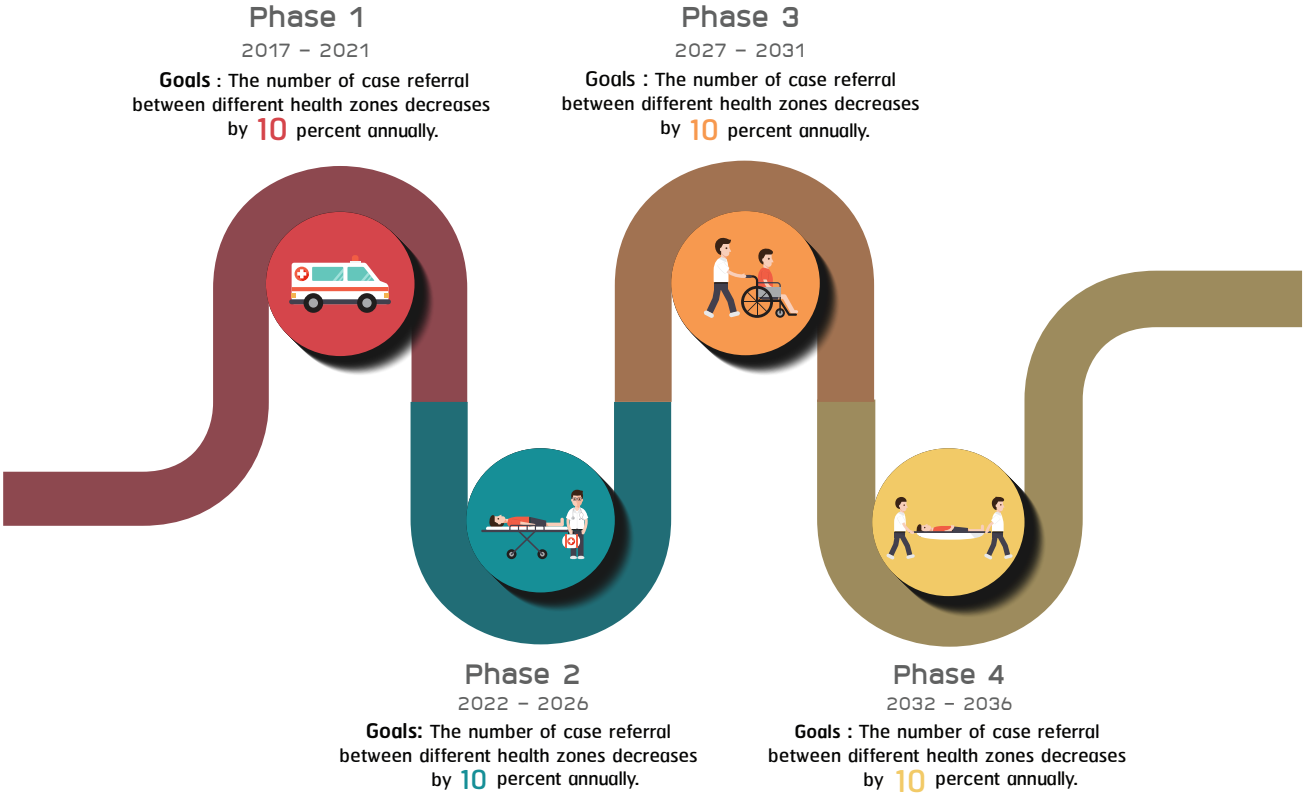
An increase in capacity of health care services in health facilities in each health zone and decrease in the number of case referral to another health zone

Key Performance Indicators (KPIs)

A drop in the number of case referral from one health zone to another

Key Measures

1. Having in place health care services development plan (Service Plan)
2. Enhancing capacity of health care services according to Service Plan in different disciplines including that of specialized medical center for heart disease, cancer, trauma and injury care/emergency medical services, and infant care
3. Having in place a coordinating and development center for patient referral services to coordinate with health facilities at regional, provincial, and individual health facility levels
4. Developing and implementing a patient referral application for use among health facilities within each health zone/ province
5. Developing medical specialists in different disciplines and multidisciplinary medical team
6. Having in place a mechanism to advance program implementation at regional and provincial levels including regional/provincial health boards



Responsible agency: Division of Public Health Administration (DPHA)

Work Plan 6

Development of Healthcare System

Project 17 Development of healthcare system for neonatal care

Current situations

Currently there are 700,000 live births annually and the neonatal mortality rate is 3.94 per 1,000 live births. The leading causes of neonatal death include preterm birth (25%), birth asphyxia (24%), congenital heart disease (14%), and other (10%).

Objectives

To improve the quality and effectiveness of neonatal care in health facilities across the existing health zones.

20-year goal

A reduction in neonatal mortality rate in Thailand

Key Performance Indicators (KPIs)

Neonatal mortality rate

Key Measures

1. Increasing the number of neonatal intensive care unit (NICU) to meet the standard of 1 NICU per 500 live births
2. Increasing the number of medical personnel and nurses to meet the standard requirements
3. Providing trainings on neonatal care tolicensed practical nurses
4. Ensuring that neonatal care medical specialists are evenly distributed across health zones nationwide
5. Developing and publicizing the knowledge and guidance for neonatal intensive care
6. Establishinga collaborative organization between obstetrics and gynecology and neonatal care professionals

Phase 1
2017 – 2021

Goals

Neonatal mortality rate is <2.5 per 1,000 live births.

Phase 2
2022 – 2026

Goals

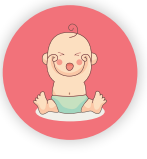
Neonatal mortality rate is <2.0 per 1,000 live births.

Phase 3
2027 – 2031

Goals

Neonatal mortality rate is <1.8 per 1,000 live births.

Phase 4
2032 – 2036



Goals

Neonatal mortality rate is <1.5 per 1,000 live births.

Responsible agency: Department of Medical Services (DMS)

Work Plan 6

Development of Healthcare System

Project 18 Development of Palliative Care

Current situations

Providingtreatment and care to terminally ill patients according to the patient and family-centered palliative care guidelines is intended to improve the patients' quality of life and alleviate pain and suffering due to their incurable medical conditions.

Medical conditions (terminal illness) requiring palliative care include 1) cancer, 2) neurological disease/stroke, 3) renal disease requiring hemodialysis, 4) pulmonary and heart disease, 5) multiple trauma patient, 6) infectious diseases, HIV/AIDS, 7) pediatric diseases, and 8) aging/dementia.

20-year goals

1. A-,S-,M-,and F-level health facilities have in place a standard palliative care unit for terminally ill patients.
2. Terminally ill patients have access to palliative care services.

Objectives

1. To provide terminally ill patients with standard palliative care until the days of their life
2. To ensure accessibility for terminally ill patients to palliative care from a family and community healthcare team and palliative care services are properly provided based on the stages of disease and current conditions.
3. To ensure terminally ill patients and their family receive as much information as possible and are actively involved in developing an advance care plan with the aim for the patients to achieve the best possible quality of life until their last days of life.

Key Measures

1. Educating members of healthcare team at A-,S-,M-,and F-level health facilities so that palliative care that meets the established standards is provided to terminally ill patients.
2. Developing palliative care network among A-,S-,M-,and F-level health facilities to ensure coverage of palliative care servicesfor all patients

Phase 1

2017 – 2021

KPIs/Goals

1. 85 percent of patients suffering from one of the above mentioned eight medical conditions requiring palliative care are provided with standard palliative care in a timely manner.
2. Palliative care network is developed and implemented in 50 percent of A-,S-,M-,and F-level health facilities.
3. Knowledge base about palliative care is developed in 50 percent of A-,S-,M-,and F-level health facilities.
4. Stockpile of tools is established for home-based palliative care in the respective catchment areas of 50 percent of A-,S-,M-,and F-level health facilities.
5. Opioids model is developed in 50 percent of A-,S-,M-,and F-level health facilities.
6. Home-based palliative care system is developed for use in the respective catchment areas of 50 percent of A-,S-,M-,and F-level health facilities.

Phase 2

2022 – 2026

KPIs/Goals

1. 90 percent of patients suffering from one of the above mentioned eight medical conditions requiring palliative care are provided with standard palliative care in a timely manner.
2. Palliative care network is developedand implemented in 60 percent of A-,S-,M-,and F-level health facilities.
3. Knowledge base about palliative care is developed in 60 percent of A-,S-,M-,and F-level health facilities.
4. Stockpile of tools is established for home-based palliative care in the respective catchment areas of 60 percent of A-,S-,M-,and F-level health facilities.
5. Opioids model is developed in 50 percent of A-,S-,M-,and F-level health facilities.
6. Home-based palliative care system is developed for use in the respective catchment areas of 50 percent of A-,S-,M-,and F-level health facilities.

Phase 3

2027 – 2031

KPIs/Goals

1. 90 percent of patients suffering from one of the above mentioned eight medical conditions requiring palliative care are provided with standard palliative care in a timely manner.
2. Palliative care network is developed and implemented in 70 percent of A-,S-,M-,and F-level health facilities.
3. Knowledge base about palliative care is developed in 70 percent of A-,S-,M-,and F-level health facilities.
4. Stockpile of tools is established for home-based palliative care in the respective catchment areas of 70 percent of A-,S-,M-,and F-level health facilities.
5. Opioids model is developed in 50 percent of A-,S-,M-,and F-level health facilities.
6. Home-based palliative care system is developed for use in the respective catchment areas of 50 percent of A-,S-,M-,and F-level health facilities.

Phase 4

2027 – 2031

KPIs/Goals

1. 90 percent of patients suffering from one of the above mentioned eight medical conditions requiring palliative care are provided with standard palliative care in a timely manner.
2. Palliative care network is developed and implemented in 80 percent of A-,S-,M-,and F-level health facilities.
3. Knowledge base about palliative care is developed in 80 percent of A-,S-,M-,and F-level health facilities.
4. Stockpile of tools is established for home-based palliative care in the respective catchment areas of 80 percent of A-,S-,M-,and F-level health facilities.
5. Opioids model is developed in 50 percent of A-,S-,M-,and F-level health facilities.
6. Home-based palliative care system is developed for use in the respective catchment areas of 50 percent of A-,S-,M-,and F-level health facilities.

Responsible agency: Department of Medical Services (DMS)

Work Plan 6

Development of Healthcare System

Project 19 Development of Thai traditional and alternative medicine service system

Current situations

An increasing number of people are expected to have access to Thai traditional and alternative medicine services. Based on the most recent data, 16.02 percent of outpatients had access to standard Thai traditional and alternative medicine services in 2014, 17.51 percent in 2015, 17.15 percent in 2016, and 19.82 percent in 2017.

Objectives

To increase an access to Thai traditional and alternative medicine services, which are part of the comprehensive healthcare services.

20-year goal

Members of the public have access to quality and standard Thai traditional and alternative medicine services.

Key Performance Indicators (KPIs)

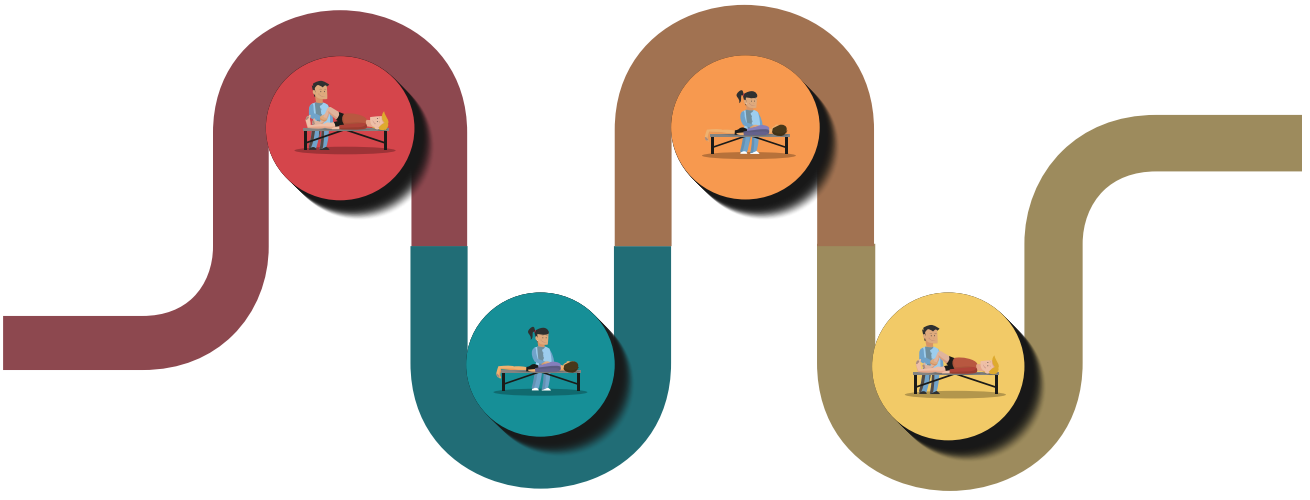
Twenty percent of outpatients have access to Thai traditional and alternative medicine services.

Key Measures

1. Developing a Thai traditional and alternative medicine clinic in regional/general hospitals (A-M1) and community hospitals (M2-F3) to achieve quality standard certification
2. Establishing special hospital specialized in Thai traditional and alternative medicine services
3. Promoting Thai herbal medicine as first-line drug in every level of healthcare units and prescribing of personalized herbal medicine formulations at regional/general hospitals and community hospitals
4. Incorporating Thai traditional medicine into the curriculum of local medical schools and residency program centers
5. Implementing capacity building program for traditional medicine practitioners to ensure they have appropriate skills and knowledge to provide quality services
6. Developing the database for Thai traditional and alternative medicine through HDC
7. Developing the information system and publicizing via digital communication media Thailand's local wisdom on Thai traditional medicine
8. Having in place a mechanism for program implementation at the local level through Chief Thai Traditional Medicine Officer (CTMO) in all health zones/provinces.

Phase 1
2017 – 2021
Goal : 20 percent of outpatients have access to Thai traditional and alternative medicine that meets established standards.

Phase 3
2027 – 2031
Goal : 20 percent of outpatients have access to Thai traditional and alternative medicine that meets established standards.



Phase 2
2022 – 2026
Goal : 20 percent of outpatients have access to Thai traditional and alternative medicine that meets established standards.

Phase 4
2032 – 2036
Goal : 20 percent of outpatients have access to Thai traditional and alternative medicine that meets established standards.

Responsible agency: Department of Thai Traditional and Alternative Medicine (DTAM)

Work Plan 6

Development of Healthcare System

Project 20 Development of healthcare system for mental health and psychiatric care

Current situations

From 2009-2017 53.49 percent of persons with depressive disorder had access to mental health services and suicide attempt rates were found to be on the rise. In 2013, 2014, and 2015 successful suicide attempts were 6.08, 6.08, and 6.47 per 100,000 populations, respectively.

Objectives

To ensure that persons with depressive disorder receive timely, standard, continued treatment and care so that the severity and duration of the condition are adequately reduced, thus preventing suicide attempts and recurrence.

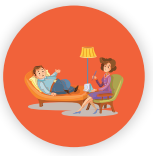
20-year goals

Eighty-five percent of those who are suffering from depression have access to mental health servicesand successful suicide attempts are kept at <5.1 per 100,000 populations.

Key Measures

1. Developing a standardized screening, surveillance, and monitoring system intended specifically for high-risk groups at healthcare units at all levels
2. Developing a screening, surveillance, and monitoring system intended specifically for high-risk groups including a referral to network center according to established standards
3. Ensuring mental health services system is made available in health facilities at all levels
4. Encouraging the establishment of family and social support system
5. Allocating sufficient manpower
6. Developing and implementing the national suicide database (web-based services: suicidethai.com)
7. Developing guidelines, knowledge base, technologies and communications media to enhance program performance

Phase 1
2017 – 2021



Goals/KPIs

1. Seventy percent of persons with depressive disorder have access to mental health services.
2. Successful suicide attempts are kept at <6.0 per 100,000 populations.

Phase 2
2022 – 2026

Goals/KPIs

1. Seventy-five percent of persons with depressive disorder have access to mental health services.
2. Successful suicide attempts are kept at <5.6 per 100,000 populations.

Phase 3
2027 – 2031

Goals/KPIs

1. Eighty percent of persons with depressive disorder have access to mental health services.
2. Successful suicide attempts are kept at <5.3 per 100,000 populations.

Phase 4
2032– 2036

Goals/KPIs

1. Eighty-five percent of persons with depressive disorder have access to mental health services.
2. Successful suicide attempts are kept at <5.1 per 100,000 populations.

Responsible agency: Department of Mental Health (DMH)

Chapter 5

Work Plan 6

Development of Healthcare System

Project 21 Development of five key areas of healthcare system

Current situations

1. According to the National Health Security Office (NHSO) the number of sepsis cases has been found to be on the rise annually. In 2015 a total of 179,483 sepsis cases were reported.
2. The number of fatal sepsis cases is 64.244/200.413, representing 32.03 percent of mortality rate due to sepsis/septic shock.
3. Geriatric hip fracture remains the number one orthopedic condition leading to hospitalization in geriatric patients, as well as incurring a substantial financial burden. Additionally, as high as 30 percent of this patient population has been found to have recurrent hip fracture. In other countries where the Capture the Fracture Program, a coordinated, multi-disciplinary models of care for secondary fracture prevention, is being implemented, it has been found that annually the program has achieved up to 50-percent reduction in the incidence of recurrent hip fracture in the elderly population.

Objectives

1. To reduce mortality rate among patients hospitalized with sepsis, a severe bloodstream infection, and to develop sepsis care network
2. To reduce mortality rate and complications due to osteoporosis among patients aged > 50 years
3. To assemble Capture the Fracture Teams (CFTs) within the MOPH-affiliated healthcare system nationwide so as to properly provide treatment and care to the elderly patients suffering from geriatric hip fracture as a result of osteoporosis

20-year goals

1. Reduction in mortality rate due to community-acquired sepsis
2. S-level hospitals and above have Capture the Fracture Teams (CFTs) in place to the elderly patients suffering from geriatric hip fracture as a result of osteoporosis; thus helping to reduce secondary hip fracture and provide early hip fracture surgery within 72 hours.

Key Measures

Sepsis:

1. A multidisciplinary sepsis working group within eachhospital is appointed at hospitals ofall levels.
2. Sepsis care management staff, consisting of at least one physician and one nurse, is designated in each hospital to monitor relevant indicators and the results are reported to the working group on a quarterly basis.
3. Results from HDC database or hospital database, presented as overall picture for that particular province and health zone, are reported to the working group on a quarterly basis.

Capture the fracture:

1. Capture the Fracture Teams (CFTs) are established within MOPH-affiliated health facilities.
2. Information network dedicated to the program is established to provide data linkage of local elderly populations.
3. Appropriate staffing level and capacity building program are provided to each Capture the Fracture Team (CFT).

Phase 1
2017 – 2021

KPIs/Goals

1. Mortality rate among patients hospitalized with community-acquired sepsis is less than 24 percent [including those allowed discharge who died at home, excluding those on palliative treatment (Code: Z51.5)] and less than 48 percent among patients with hospital-acquired sepsis.
2. Forty percent of S-level hospitals have their Capture the Fracture Team (CFT).
   2.1 Less than 20 percent of patients under Capture the Fracture Program experience refracture.
   2.2 More than 50 percent of patients under Capture the Fracture Program receive early surgery within 72 hours of being admitted.

Phase 2
2022 – 2026

KPIs/Goals

1. Mortality rate among patients hospitalized with community-acquired sepsis is less than … .. percent [including those allowed discharge who died at home, excluding those on palliative treatment (Code: Z51.5)] and less than … .. percent among patients with hospital-acquired sepsis.
2. Forty percent of S-level hospitals have their Capture the Fracture Team (CFT).
   2.1 Less than 18 percent of patients under Capture the Fracture Program experience refracture.
   2.2 More than 50 percent of patients under Capture the Fracture Program receive early surgery within 72 hours of being admitted.

Phase 3
2027 – 2031

KPIs/Goals

1. Mortality rate among patients hospitalized with community-acquired sepsis is less than … .. percent [including those allowed discharge who died at home, excluding those on palliative treatment (Code: Z51.5)] and less than … .. percent among patients with hospital-acquired sepsis.
2. Forty percent of S-level hospitals have their Capture the Fracture Team (CFT).
   2.1 Less than 15 percent of patients under Capture the Fracture Program experience refracture.
   2.2 More than 60 percent of patients under Capture the Fracture Program receive early surgery within 72 hours of being admitted.

Phase 4
2032– 2036

KPIs/Goals

1. Mortality rate among patients hospitalized with community-acquired sepsis is less than … .. percent [including those allowed discharge who died at home, excluding those on palliative treatment (Code: Z51.5)] and less than … .. percent among patients with hospital-acquired sepsis.
2. Forty percent of S-level hospitals have their Capture the Fracture Team (CFT).
   2.1 Less than 10 percent of patients under Capture the Fracture Program experience refracture.
   2.2 More than 65 percent of patients under Capture the Fracture Program receive early surgery within 72 hours of being admitted.

Responsible agency: Department of Medical Services (DMS)

Work Plan 6

Development of Healthcare System

Project 22 Development of healthcare system on heart disease

Current situations

In 2017 there were 20,098 reported cases of acute ischemic heart disease with mortality rate of 20.94 per 100,000 populations.

Objectives

1. To improve the quality of existing healthcare system on heart disease
2. To reduce mortality rate among those suffering from heart disease
3. To reduce readmission rate
4. To improve the patients' quality of life

20-year goal

Mortality rate due to cardiovascular diseases is less than 20 per 100,000 populations.

Key Measures

1. Increasing efficiency and expanding network to enable health facilities to provide 24/7 cardiac catheterization and administration of anticoagulants
2. Setting up specialized clinic in all hospitals, all provincial heart centers, and F2-level health facilities and above
3. Developing a long-term plan to produce internists and surgeons to keep up with an ever-increasing demand; as for health facilities with cardiac catheterization room, it must be staffed by at least three internists who are capable of performing cardiac catheterization.
4. Establishing a centralized data center for each health zone; Department of Medical Services (DMS) working closely with heart disease network to implement the registry program for patients with acute coronary syndrome; setting up national cardiovascular data center (acute coronary syndrome, heart failure clinic, anticoagulant clinic, and surgery queueing management system)
5. Implementing "Heart Attack Alert" campaign to encourage patients with symptoms of heart disease to come to hospital within 12 hours

Phase 1
2560 – 2564

KPIs/Goals

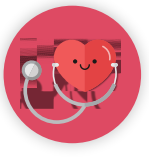
1. In health facilities with heart center, 80 percent of STEMI patients receive cardiac catheterization, coronary angioplasty, and anticoagulant administration
2. Mortality rate due to cardiovascular diseases is <24 per 100,000 populations.
3. Heart failure clinic, which is staffed by multidisciplinary team of medical and clinical professionals, is set up in all hospitals and >50 percent of patients suffering from heart failure with reduced ejection fraction receive appropriate medications.
4. Anticoagulant clinic, which is staffed by multidisciplinary team of medical and clinical professionals, is set up in all hospitals and >60 percent of patients with arrhythmia receive anticoagulants.
5. "Heart Attack Alert" campaign is actively implemented to ensure approximately 50 percent of patients with symptoms of heart disease arrive at hospital within 12 hours.

Phase 2
2565 – 2569

KPIs/Goals

1. In health facilities with heart center, 80 percent of STEMI patients receive cardiac catheterization, coronary angioplasty, and anticoagulant administration.
2. In health facilities with heart center, 70 percent of high-risk STEMI patients receive cardiac catheterization and coronary angioplasty procedures.
3. Mortality rate due to cardiovascular diseases is <22 per 100,000 populations.
4. Heart failure clinic, which is staffed by multidisciplinary team of medical and clinical professionals, is set up in all hospitals and >60 percent of patients suffering from heart failure with reduced ejection fraction receive appropriate medications.
5. Anticoagulant clinic, which is staffed by multidisciplinary team of medical and clinical professionals, is set up in all hospitals and >70 percent of patients with arrhythmia receive anticoagulants.
6. "Heart Attack Alert" campaign is actively implemented to ensure approximately 60 percent of patients with symptoms of heart disease arrive at hospital within 12 hours.

Phase 3
2570 – 2574



KPIs/Goals

1. In health facilities with heart center, 80 percent of STEMI patients receive cardiac catheterization, coronary angioplasty, and anticoagulant administration.
2. In health facilities with heart center, 75 percent of high-risk STEMI patients receive cardiac catheterization and coronary angioplasty procedures.
3. Mortality rate due to cardiovascular diseases is <22 per 100,000 populations.
4. Heart failure clinic, which is staffed by multidisciplinary team of medical and clinical professionals, is set up in all hospitals and >70 percent of patients suffering from heart failure with reduced ejection fraction receive appropriate medications.
5. Anticoagulant clinic, which is staffed by multidisciplinary team of medical and clinical professionals, is set up in all hospitals and >80 percent of patients with arrhythmia receive anticoagulants.
6. "Heart Attack Alert" campaign is actively implemented to ensure approximately 70 percent of patients with symptoms of heart disease arrive at hospital within 12 hours.

Phase 4
2575 – 2579

KPIs/Goals

1. In health facilities with heart center, 80 percent of STEMI patients receive cardiac catheterization, coronary angioplasty, and anticoagulant administration.
2. In health facilities with heart center, 80 percent of high-risk STEMI patients receive cardiac catheterization and coronary angioplasty procedures.
3. Mortality rate due to cardiovascular diseases is <20 per 100,000 populations.
4. Heart failure clinic, which is staffed by multidisciplinary team of medical and clinical professionals, is set up in all hospitals and >80 percent of patients suffering from heart failure with reduced ejection fraction receive appropriate medications.
5. Anticoagulant clinic, which is staffed by multidisciplinary team of medical and clinical professionals, is set up in all hospitals and >90 percent of patients with arrhythmia receive anticoagulants.
6. "Heart Attack Alert" campaign is actively implemented to ensure approximately 80 percent of patients with symptoms of heart disease arrive at hospital within 12 hours.

Responsible agency: Department of Medical Services (DMS)

Work Plan 6

Development of Healthcare System

Project 23 Development of healthcare system on cancer

Current situations

Based on the national cancer registry database, in 2011 there were a total of 112,392 reported cases of cancer (54,586 males and 57,806 females). According to the data provided by Bureau of Policy and Strategy (BPS), Ministry of Public Health (MOPH), in 2011 there were a total of 61,082 cancer mortalities (35,437 males, 25,645 females).

Objective

To reduce morbidity rate and mortality rate associated with cancer; to prevent health facilities from being overwhelmed by cancer patients; and to reduce waiting time for cancer patients to receive treatment and care services.

20-year goal

Mortality rate due to all types of cancer is reduced by five percent.

Key Measures

1. Consistently implementing public awareness campaign to educate people about risk factors associated with lung cancer, liver cancer, and other types of cancer
2. Developing screening system for selected types of cancer that remain an ongoing health threat
3. Developing a standard screening, diagnosis, and treatment system that can be performed in a timely manner, as well as efficient care for terminally ill patients based on the capacity of health facilities and with linkage within the network
4. Developing cancer information system that provide a standardized, centralized national system for data linkage and reporting
5. Improving cancer research study so that findings from the study can be used more effectively for cancer treatment

Phase 1
2017 – 2021

KPIs/Goals

1. Eighty-five percent of patients with one of the five most common cancers receive cancer therapy with a specified period of time.
2. Mortality rate associated with liver cancer is 23.7 per 100,000 populations.
3. Mortality rate associated with lung cancer is 19 per 100,000 populations.

Phase 2
2022 – 2026

KPIs/Goals

1. Ninety percent of patients with one of the five most common cancers receive cancer therapy with a specified period of time.
2. Mortality rate associated with liver cancer has decreased by >5 percent compared with baseline data in 2021.
3. Mortality rate associated with lung cancer has decreased by >5 percent compared with baseline data in 2021.

Phase 3
2027 – 2031

KPIs/Goals

1. Ninety percent of patients with one of the five most common cancers receive cancer therapy with a specified period of time.
2. Mortality rate associated with liver cancer has decreased by >5 percent compared with baseline data in 2026.
3. Mortality rate associated with lung cancer has decreased by >5 percent compared with baseline data in 2026.

Phase 4
2032 – 2036

KPIs/Goals

1. Ninety percent of patients with one of the five most common cancers receive cancer therapy with a specified period of time.
2. Mortality rate associated with liver cancer has decreased by >5 percent compared with baseline data in 2031.
3. Mortality rate associated with lung cancer has decreased by >5 percent compared with baseline data in 2031.

Responsible agency: Department of Medical Services (DMS)

Work Plan 6

Development of Healthcare System

Project 24 Development of healthcare system on kidney disease

Current situations

Out of an estimated 8,000,000 patients with chronic kidney disease nationwide, approximately 100,000 are those who are suffering from end-stage renal disease requiring renal replacement therapy and the number is increasing by 15-20 percent annually.

Objective

To delay renal dysfunction in patients with chronic kidney disease (CKD)

20-year goal

The number of patients with end-stage renal disease has decreased from baseline and the Thai MOPH Excellence Center for Kidney Disease is ranked as one of the top three kidney centers in Asia.

Key Measures

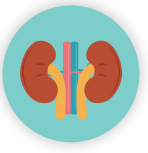
1. Expanding services offered by kidney dysfunction prevention clinic to cover all F3-level hospitals and above and providing service linkage with primary care cluster (PCC) and district health system (DHS)
2. Expanding peritoneal dialysis service network to cover M2- and F1-level health facilities with proper capacity to provide this service
3. Developing and integrating the database for monitoring and referral of CKD patients
4. Integrating the work of kidney dysfunction prevention clinic with that of non-communicable disease (NCD) clinic to ensure seamless operations
5. Opening the center for construction and repair of vascular access for hemodialysis in all health zones
6. Working collaboratively among partnership network to develop research studies and innovations and assess technologies for treatment and care of CKD patients
7. Integrating healthcare benefit plans of the three existing healthcare schemes for kidney patients
8. Producing and developing medical specialists and interdisciplinary nurses in collaboration with the royal colleges and various medical and public health professional associations
9. Enhancing service quality of the existing hemodialysis and peritoneal dialysis centers

Phase 1
2017- 2021

KPIs/Goals

Sixty-nine percent of CKD patients have experienced a reduction in eGFR to <4ml/min/1.73m2/yr.

Phase 2
2022 - 2026



KPIs/Goals

The incidence of end-stage renal disease (ESRD) at the end of 2026 has increased by five percent.

Phase 3
2027- 2031

KPIs/Goals

The incidence of end-stage renal disease (ESRD) at the end of 2031 has increased by zero percent.

Phase 4
2032 - 2036

KPIs/Goals

The incidence of end-stage renal disease (ESRD) at the end of 2026 has increased by minus five percent.

Responsible agency: Department of Medical Services (DMS)

Work Plan 6

Development of Healthcare System

Project 25 Development of healthcare system on ophthalmology

Current situations

Based on the recent survey conducted on Thai population, the prevalence rate of blindness and low vision is 0.59 and 1.57 percent, respectively. The leading causes of blindness include cataract (51%), glaucoma (9.8%), childhood blindness (5.7%), diabetic retinopathy (2.5%), and corneal opacity (2.0%). It should be noted that 80 percent of blindness is preventable and curable if properly screened and treated. The World Health Organization (WHO) has set the goal to keep the prevalence of blindness to below 0.50 percent by 2020.

Objective

To improve the quality of life of the people by minimizing the prevalence rate of blindness due to cataract; this will be achieved by proactively implementing both vision screening and performing surgery and strengthening the ophthalmological care services system in a sustainable way by increasing the quality of and access to services, reducing waiting time and case referral to other health zones.

20-year goal

Prevalence rate of blindness has decreased to below 0.50 percent.

Key Measures

1. Increasing access to ophthalmological care services by expanding the retina center and cornea center to cover more areas
2. Enhancing efficiency in vision screening for cataract, glaucoma, and diabetic retinopathy in older people aged >60 years old and implementing vision screening program among schoolchildren
3. Enhancing treatment quality and efficiency
4. Implementing personnel capacity building program for staff at all levels to enhance the capacity in ophthalmological care services
5. Developing and integrating the existing IT systems for successful implementation via Vision 2020 Program
6. Advancing the policy through the service plan committee on ophthalmology at the ministerial, health zone, and provincial levels
7. Establishing and maintaining strong partnership network to ensure efficient collaboration and coordination at all levels including hospitals, health promotion centers, local administration organizations, and other relevant agencies

Phase 1

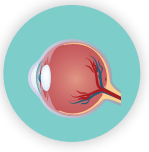
2017– 2021

KPIs/Goals

>80 percent of patients with blinding cataract receive surgery within 30 days of diagnosis.

Phase 2

2022 – 2026



KPIs/Goals

1. >90 percent of patients with blinding cataract receive surgery within 30 days of diagnosis.
2. 60 percent ofpatients with glaucoma whose condition was identified during vision screening receive proper medical treatment from oculist.

Phase 3

2027 – 2031

KPIs/Goals

1. >90 percent of patients with blinding cataract receive surgery within 30 days of diagnosis.
2. 70 percent ofpatients with glaucoma whose condition was identified during vision screening receive proper medical treatment from oculist.

Phase 4

2032 – 2036

KPIs/Goals

1. 100 percent of patients with blinding cataract receive surgery within 30 days of diagnosis.
2. 80 percent ofpatients with glaucoma whose condition was identified during vision screening receive proper medical treatment from oculist.

Responsible agency: Department of Medical Services (DMS)

Work Plan 6

Development of Healthcare System

Project 26 Development of healthcare system on organ transplantation

Current situations

Currently more than 5,000 patients nationwide are waiting to receive organ transplantation. Of these patients, approximately 700-800 have organ transplant successfully performed, whereas 100-200 of those who are not fortunate enough die while awaiting organ donation annually. In the meantime, more than 10,000 people are waiting to have their cornea replaced each year. Of these, only 1,000 receive cornea transplantation each year. The low organ transplantation rates are due primarily to a lack of organ donation.

Objective

To increase the number of people who are willing to donate organs from brain-dead patients and increase the number of quality and safe transplantation of organs and tissues

20-year goal

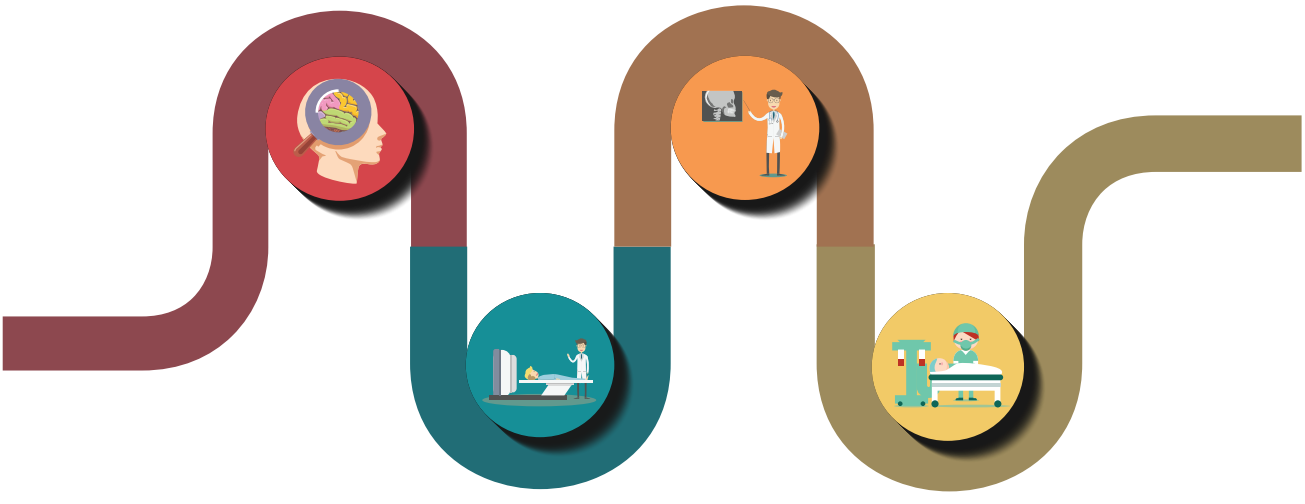
There are sufficient donated organs and tissues for providing quality and safe transplantation of organs and tissues to patients from across the country who are awaiting organ and tissue transplantation.

Key Measures

1. Expanding organ and eye donation center to cover all regional and general hospitals (organ donation: at all A- and S- level hospitals; eye donation: at all A-, S-, and M1-level hospitals)
2. Expanding kidney, liver, and cornea transplant centers to cover more health facilities
3. Developing organ/tissue transportation system
4. Implementing capacity building program for relevant health personnel and developing the capacity of regional organ retrieval teams (transplant centers only
5. Developing and maintaining the organ donation and transplantation database as well as the reporting system via HDC
6. Integrating the existing three healthcare schemes relating to the operations of both organ donation and transplantation programs
7. Advocating for the amendments of legislation relating to the transportation of donated organs and tissues
8. Creating and implementing a monitoring system to ensure the quality of the donation and transplantation of organs and tissues

Phase 1
2017 – 2021
KPIs/Goals: The ratio of actual deceased donor to hospital death is 1.0 : 100

Phase 3
2027 – 2031
KPIs/Goals: The ratio of utilized organ to actual deceased donor is 3 : 1



Phase 2
2022 – 2026
KPIs/Goals: The ratio of actual deceased donor to hospital death is 1.5 : 100

Phase 4
2032 – 2036
KPIs/Goals: The ratio of utilized organ to actual deceased donor is 4 : 1

Responsible agency: Department of Medical Services (DMS)

Work Plan 6

Development of Healthcare System

Project 27 Development of substance abuse treatment system

Current situations

From 2011-2015 drug abuse problems were addressed by bringing drug addicts into treatment and rehabilitation program. It was found that an increasing number of individuals affected by drug addiction and substance abuse has been seeking treatment – the number had increased from 187,246 in 2011 to 303,509 in 2014 and there were 81,068 individuals participating in a mandatory treatment program (representing 48.1 percent), 71,227 taking part in a voluntary treatment program (accounting for 42.2 percent), and 16,382 being subjected to treatment under law enforcement program (representing 9.7 percent).

Objectives

1. To increase an early access to substance abuse treatment program
2. To reduce detrimental impacts from drug abuse and complications associated with substance abuse through more active engagement from family, society, and community
3. To develop efficient drug abuse treatment and care system that helps streamline the process, reduce waiting time and costs, while ensuring that patients receive quality, standard treatment with continued support
4. To prevent relapse of drug addiction by working collaboratively with the society and community

20-year goals

1. Drug abuse patients have access to efficient treatment program.
2. People affected by drug abuse and dependence can live in the society without causing significant impacts (reducing the severity of the problem and preventing relapse).

Key Measures

1. Fostering the right attitude and encouraging active public engagement regarding the prevention of and awareness about the threat from substance abuse and drug addiction
2. Implementing capacity building program for staff working on drug abuse treatment program
3. Developing health facilities/rehabilitation centers that are capable of providing quality services that meet established standards so that drug abuse problem is adequately addressed
4. Establishing program implementation system/measure and mechanism to ensure legal compliance
5. Establishing and maintaining collaboration on service delivery and technical assistance with regional partners in ASEAN and international organizations

Phase 1
2017 – 2021

KPIs/Goals

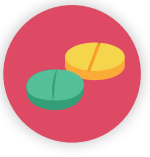
1. Seventy-six percent of drug abuse patients have received treatment and achieved consistent cessation.
2. Eighty percent of drug addicts and severe drug addicts have remained under the ongoing drug abuse treatment and care program for at least one more year.

Phase 2
2022– 2026

KPIs/Goals

1. Eighty percent of drug abuse patients have received treatment and achieved consistent cessation.
2. Eighty-five percent of drug addicts and severe drug addicts have remained under the ongoing drug abuse treatment and care program for at least one more year.

Phase 3
2027 – 2031



KPIs/Goals

1. Eighty-five percent of drug abuse patients have received treatment and achieved consistent cessation.
2. Ninety percent of drug addicts and severe drug addicts have remained under the ongoing drug abuse treatment and care program for at least one more year.

Phase 4
2032 – 2036

KPIs/Goals

1. Ninety percent of drug abuse patients have received treatment and achieved consistent cessation.
2. Ninety-five percent of drug addicts and severe drug addicts have remained under the ongoing drug abuse treatment and care program for at least one more year.

Responsible agency: Department of Medical Services (DMS)

Work Plan 6

Development of Healthcare System

Project 28 Development of healthcare system on intermediate care (IMC)

Current situations

Currently regional and general hospitals across the country are becoming increasingly overcrowded. Most patients visiting these health facilities are older people, which are considered a vulnerable group. Older patients are suffering from a decline in physical function and underlying medical conditions that are hard to control. Specific interventions and care are therefore needed for this older population post-critical period.Additionally, preparations are also necessary before they can be referred for continued care at the primary care unit or community levels.

Objectives

1. To address the problem of hospital overcrowding at regional hospitals or acute care settings resulting from bed block by enhancing the efficiency in hospital bed management
2. To implement rehabilitation program and reduce potential complications, e.g. intensive rehabilitation program
3. To reduce readmission rate with the same medical condition or complications as a result of the same medical conditions

20-year goals

1. The target patients have access to immediate care (IMC) services at the local health facilities and IMC is effectively linked with primary care cluster (PCC), communities, and other relevant organizations.
2. The problem of hospital overcrowding is adequately addressed.
3. M- and F-level hospitals can provide a variety of intermediate care and the scope of services is expanded to cover more complicated medical conditions and syndromes so as to respond to the patients' specific needs.

Key Measures

1. Developing/coming up with IMC approaches in a variety of settings for different target groups taking into account specific conditions based on evidence and context
2. Developing support components including personnel capacity building, funding, modern data system, and research study
3. Having in place a mechanism to ensure sustained operations of the system which contribute to addressing health issues at a national and entire healthcare system levels

Phase 1
2017 – 2021

KPIs/Goals

1. At least 50 percent of M- and F-level hospitals can provide a variety of intermediate care.
2. Unnecessary readmission rate is successfully reduced by at least 20 percent.
3. At least 30 percent of IMC units have in place a dedicated system for monitoring and ensuring linkage of treatment plan with the entire healthcare system at all levels.

Phase 2
2022– 2026

KPIs/Goals

1. At least 60 percent of M- and F-level hospitals can provide a variety of intermediate care.
2. At least 30 percent of health facilities providing IMC services are capable of expanding new types of target group based on the local context.
3. At least 30 percent of M- and F-level hospitals are capable of expanding intermediate care services to also cover step-up and step-down care.
4. Unnecessary readmission rate is successfully reduced by at least 30 percent.
5. At least 50 percent of IMC units have in place a dedicated system for monitoring and ensuring linkage of treatment plan with the entire healthcare system at all levels.

Phase 3
2027 – 2031

KPIs/Goals

1. At least 70 percent of M- and F-level hospitals can provide a variety of intermediate care.
2. At least 40 percent of health facilities providing IMC services are capable of expanding new types of target group based on the local context, including IMC services for dementia, psychiatric, and pediatric patients.
3. M- and F-level hospitals are capable of expanding intermediate care services to also cover step-up and step-down care.

Phase 4
2032 – 2036

KPIs/Goals

1. At least 80 percent of M- and F-level hospitals can provide a variety of intermediate care.
2. At least 50 percent of health facilities providing IMC services are capable of expanding new types of target group based on the local context, taking into account the assessment of economic value for public health.
3. At least 50 percent of M- and F-level hospitals are capable of expanding intermediate care services to also cover step-up and step-down care.

Responsible agency: Department of Medical Services (DMS)

Work Plan 6

Development of Healthcare System

Project 29 Development of one day surgery system

Current situations

1. One day surgery is internationally recognized as an important medical procedure as it enables the patients to be released early in one day and they can resume their daily life activities and work to support their family, thus significantly reducing socioeconomic burdens on both the families and the country's health system. Typically patients undergoing a medical procedure require an average of three days of hospitalization, with an associated expenses of THB 7,500 per day.
2. Thailand has some limitations that prevent its healthcare system from providing this important healthcare service. This is because of the difference in medical benefits between outpatient and inpatient care services.

Objectives

1. To reduce overcrowding at inpatient department and surgery waiting time
2. To reduce operating costs for health facilities and medical expenses for patients
3. To ensure that people have a convenient access to high quality services that meet the established standards

20-year goals

People have an access to comprehensive, highest quality services that meet the established standards within their respective health zone.

Key Measures

1. Developing a medical expense disbursement system dedicated to one day surgery services
2. Enhancing capacity in the diagnosis and treatment areas that meets the specific criteria
3. Improving the facilities/equipment to meet the specific criteria
4. Developing multidisciplinary health care workforce including research study and innovation to meet the specific criteria

Phase 1

2017– 2021

KPIs/Goals

Fifteen percent of patients undergo one day surgery covering 12 diseases/conditions (2018 only) and the number of procedure being performed has increased at least five percent annually.

Phase 2

2022 – 2026

KPIs/Goals

The percentage of patients undergoing one day surgery and the number of procedure being performed has increased at least five percent annually.

Phase 3

2027 – 2031

KPIs/Goals

The percentage of patients undergoing one day surgery and the number of procedure being performed has increased at least five percent annually.

Phase 4

2032 – 2036

KPIs/Goals

1. The percentage of patients undergoing one day surgery and the number of procedure being performed has increased at least five percent annually.
2. Each region of the country has at least one excellence center for one day surgery that meets international standards.

Responsible agency: Department of Medical Services (DMS)

Work Plan 6

Development of Healthcare System

Project 30 Development of minimally invasive surgery (MIS) system

Current situations

1. Nowadays minimally invasive surgery (MIS) is internationally recognized as one of the important medical procedures, of which effectiveness is comparable to or higher than conventional open surgery. The advantages of MIS include the patients experiencing less pain and hospitalization period is reduced by 2-5 days.
2. Patientsundergoing MIS has only 1-3 days of hospitalization. Typically on average as high as THB 7,500 per day is incurred on the hospital as a result of this medical procedure.

Objectives

1. To reduce overcrowding at inpatient department and surgery waiting time
2. To reduce operating costs for health facilities and medical expenses for patients
3. To ensure that people have a convenient access to high quality services that meet the established standards

20-year goals

The capacity to provide medical care services of health facilities within each health zone has been enhanced, while the number of case referral between health zones has dropped.

Key Measures

1. Developing a medical expense disbursement system dedicated to MIS services
2. Enhancing capacity in the diagnosis and treatment areas that meets the specific criteria
3. Improving the facilities/equipment to meet the specific criteria
4. Developing multidisciplinary health care workforce including research study and innovation to meet the specific criteria

Phase 1

2017 – 2021

KPIs/Goals

Twenty-five percent of patients undergo minimally invasive surgery covering 2 diseases/conditions (2018 only) and thenumber of procedure being performed has increased at least five percent annually.

Phase 2

2022 – 2026

KPIs/Goals

The percentage of patients undergoing minimally invasive surgeryand the number of procedure being performed has increased at least five percent annually.

Phase 3

2027 – 2031

KPIs/Goals

1. The percentage of patients undergoing minimally invasive surgery and the number of procedure being performed has increased at least five percent annually.
2. Robotic surgery service is made available in at least one health facility in each region of the country.

Phase 4

2032 – 2036

KPIs/Goals

1. The percentage of patients undergoing minimally invasive surgery and the number of procedure being performed has increased at least five percent annually.
2. Each region of the country has at least one excellence center for minimally invasive surgery that meets international standards.

Responsible agency: Department of Medical Services (DMS)

Work Plan 7

Development of emergency medical services and referral system

Project 31 Development of comprehensive emergency medical services and referral system

Current situations

In 2017

1. 24.46 percent of emergency patients were presented at hospital be emergency medical services (EMS).
2. Mortality rate of emergency critical patients within 24 hours was 14.7 percent.
3. Annually there were 35 million visits to emergency room (ER (>60 percent were emergency cases).
4. Emergency medical services were found to be significantly understaffed both in terms of emergency physicians (EP) (1,420 more needed) and emergency nurses (EN)/emergency nurse practitioners (ENP).

Objectives

1. To increase access to emergency medical services
2. To reduce mortality rate due to emergency medical conditions
3. To ensure availability of comprehensive, quality emergency medical services that meet the established standards

20-year goals

1. Quality emergency care system (ECS) is made available in >80 percent of F2-level hospitals.
2. Mortality rate of emergency critical patients within 24 hours is <6 percent.
3. EMS system is adequately staffed
   - EP 2.4 per 100,000 populations
   - Registered nurse (RN) 18 per 100,000 populations
   - EN/ENP 4.1 per 100,000 populations
   - Paramedic 4.1 per 100,000 populations
   - Emergency Medical Technician Intermediate (EMT-I) 3.1 per 100,000 populations
   - Emergency Medical Technician Basic (EMT-B) 3.1 per 100,000 populations

Phase 1

2017– 2021

Measures/KPIs/Goals

Measure 1 Quality emergency room (ER) /Smart ER
1) Quality ECS is made available in >70 percent of F2-level hospitals.
2) Mortality rate of emergency critical patients within 24 hours is <12 percent.
3) <40 percent of non-emergency patients visit emergency room (ER)

Measure 2: Community-based EMS
1) >30 percent of provinces have met the community-based EMS criteria.
2) >30 percent of emergency patients are presented at hospital by EMS

Measure 3 Value-Based ECS
1) Achievement rate of the development of ECS data and information is 3.
2) Achievement rate of ECS value-based payment is 2.
3) Achievement rate of the determination of ER facility standards is 3.

Phase 2

2022 – 2026

Measures/KPIs/Goals

Measure 1 Quality emergency room (ER) /Smart ER
1) Quality ECS is made available in >70 percent of F2-level hospitals.
2) Mortality rate of emergency critical patients within 24 hours is <10 percent.
3) <30 percent of non-emergency patients visit emergency room (ER)

Measure 2: Community-based EMS
1) >40 percent of provinces have met the community-based EMS criteria.
2) >40 percent of emergency patients are presented at hospital by EMS

Measure 3: Value-based EMS
1) Achievement rate of the development of ECS data and information is 5.
2) Achievement rate of ECS value-based payment is 4.
3) Achievement rate of the determination of ER facility standards is 4.

Phase 3

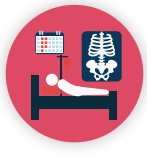
2027 – 2031

Measures/KPIs/Goals

Measure 1: Quality emergency room (ER) /Smart ER
1) Quality ECS is made available in >75 percent of F2-level hospitals.
2) Mortality rate of emergency critical patients within 24 hours is <8 percent.
3) <20 percent of non-emergency patients visit emergency room (ER)

Measure 2: Community-based EMS
1) >60 percent of provinces have met the community-based EMS criteria.
2) >60 percent of emergency patients are presented at hospital by EMS

Measure 3: Value-based EMS
1) Achievement rate of the development of ECS data and information is 5.
2) Achievement rate of ECS value-based payment is 5.
3) Achievement rate of the determination of ER facility standards is 5.



Phase 4

2032 – 2036

Measures/KPIs/Goals

Measure 1: Quality emergency room (ER) /Smart ER
1) Quality ECS is made available in >80 percent of F2-level hospitals.
2) Mortality rate of emergency critical patients with in 24 hours is <6 percent.
3) <15 percent of non-emergency patients visit emergency room (ER)

Measure 2: Community-based EMS
1) >80 percent of provinces have met the community-based EMS criteria.
2) >80 percent of emergency patients are presented at hospital by EMS

Measure 3: Value-based EMS
1) Achievement rate of the development of ECS data and information is 5.
2) Achievement rate of ECS value-based payment is 5.
3) Achievement rate of the determination of ER facility standards is 5.

Responsible agency: Department of Medical Services (DMS)

Work Plan 8

Development plan based on the project to honor His Majesty the King and designated special areas

Project 32 Project to honor His Majesty the King

Current situations

1. Thailand has an estimated 120,000 new cases of tuberculosis (TB), or equivalent to 172 per 100,000 populations. Over the past 15 years the incidence rate of TB has been decreasing at only 2.7 percent annually.
2. In FY2015 a total of 62,154 TB patients were registered to receive TB medications, representing only 55.3 percent of treatment coverage.
3. According to the World Health Organization (WHO), in 2015 there wereas many as 7,819 new and relapse cases of TB with HIV coinfection (HIV-positive), accounting for approximately 13 percent of registered TB patients. Of these, 5,389 received antiretroviral therapy (ART), representing 69 percent of TB cases with HIV coinfection.

Objectives

To step up the effort to provide treatment and care to TB patients based on the standard treatment strategy; to ensure that the patients complete a course of treatment and fully recover from the infection

20-year goals

The incidence rate of tuberculosis will have dropped to 10 per 100,000 populations by the end of 2036.

Key Measures

1. Developing TB surveillance, screening, prevention, diagnosis, treatment and care, case referral, and control strategies utilizing an integrated approach
2. Developing emergency preparedness and response system in all provinces
3. Developing laboratory network, technologies, and diagnostic tests used for diagnosis to meet international standards
4. Supporting the development of the structure and mechanism for risk communications as well as public relations
5. Developing database system for monitoring individual patients to ensure continued, effective treatment program
6. Integrating existing databases to ensure data linkage with relevant agencies at the national and provincial levels while ensuring the data is kept updated
7. Having in place a systemic, ongoing monitoring and evaluation (M&E) system
8. Having in place a mechanism for program implementation at the local level, e.g. committee/sub-committee on TB prevention and control under the Communicable Diseases Act B.E.2558 (2015) at the national, regional, provincial, and district levels

Phase 1
2017 – 2021

Phase 2
2022 – 2026

Phase 3
2027 – 2031

Phase 4
2032 – 2036

KPIs/Goals

1. TB incidence rate is reduced by 12.5 percent annually.
2. Achievement rate of TB treatment for new and recurrent TB cases is >90 percent.
3. Percentage of TB treatment coverage for new and recurrent TB cases is >90 percent of the projected number of TB cases (i.e. 172 per 100,000 populations).
4. Efforts are stepped up to ensure access to TB diagnosis by vulnerable populations and those at an increased risk for TB infection, e.g. among close contacts, HIV-positive individuals, diabetic patients, inmates, and migrant workers, with the aim to achieve TB screening and diagnosis coverage of 90 percent.

Responsible agency: Department of Disease Control (DDC)

Work Plan 8

Development plan based on the project to honor His Majesty the King and designated special areas

Project 33 Development of designated special areas

Current situations

The following 10 provinces -- namelyTak, Sa Kaeo, Trat, Mukdahan, Songkhla, Chiang Rai, NongKHai, Nakhon Phanom, Kanchanaburi, and Narathiwat-- have been designated by the government as special economic zones (SEZs).As a result, an influx of migrant workers is therefore expected in these provinces to work in the industrial sector and community enterprises. This in turn will potentially lead to the emergence of diseases and health threats, including infectious diseases and non-communicable diseases (NCDs). Environmental and occupational diseases in the industrial sector and environmental health issues in particular are the major cause of public health concern.

Objectives

To develop and establish preparedness for the implementation of occupational and environmental health program to minimize potential health impacts on the general public

20-year goals

1. Reduction in morbidity rates in high-risk populations, reduction in or prevention of major occupational and environmental diseases and health threats;
2. Health facilities have successfully passed the evaluation criteria for occupational health and environmental medicine management in the special development zones (i.e. Eastern Economic Corridor (EEC), Special Economic Zones (SEZs), Border Health, Sea & Island).

Key Performance Indicators (KPIs)

Percentage of health facilities that have successfully passed the evaluation criteria for occupational health and environmental medicine management in the designated special development zones.

Key Measures

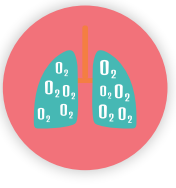
1. Developing health facilities at all levels, i.e.regional hospital, general hospital, community hospital, and health promotion center, to enable them to provide occupational and environmental health care services
2. Providing adequate staffing support
3. Developing both short- and long-term occupational health and environmental medicine courses intended for specific local areas
4. Implementing capacity building program for public health personnel
5. Developing and implementing data and information system for surveillance purposes such as Env,Occ Health Profile, Env.-Occ. 4.0
6. Developing and implementing preparedness and response system for chemical and radiological incidents
7. Enhancing laboratory capacity to meet the established standards
8. Having in place a mechanism for program implementation at the local level, e.g. committee and sub-committee on occupational and environmental health at the district and provincial levels

Phase 1
2017 – 2021
Goal: 95 percent

Phase 2
2022 – 2026
Goal: 97 percent

Phase 3
2027 – 2031
Goal: 99 percent

Phase 4
2032 – 2036
Goal: 100 percent



Responsible agency: Department of Disease Control (DDC)

Work Plan 9

Medical industry

Project 34 Development of health and medical tourism

Current situations

Currently the government is implementing the policy to promote the development of "medicinal plants"for use as herbal medicine and products so asto stimulate the local economy and strengthen health security for members of the public. Starting in 2016, the herbal city project was initiated in select pilot provinces including Chiang Rai, PrachinBuri, Sakon Nakhon, and Surat Thani -- which are located in four different regions and health zones.In 2018, the project will be expanded to cover nine more provinces, namely Phitsanulok, UthaiThani, Sara Buri, Nakhon Pathom, Chanthaburi, MahaSarakham, Surin, Amnat Charoen, and Songkhla. After this second phase of implementation, the project will include a total of 13 provinces in 12 health zones across the country.

Objectives

To promote and encourage the development of herbal products so that it is fully integrated into the health and economy system at the provincial level – right from the upstream, through midstream, and downstream.

20-year goals

Thailand has become the herbal hub with the total market value of herbal products reaching THB 1.21-2.95 trillion.

Key Performance Indicators (KPIs)

The total market value for herbal products has reached THB 1.21-2.95 trillion.

Key Measures

1. Developing the quality of raw materials for the production of herbal products to meet the Good Agricultural Practices (GAP), Good Agricultural and Collection Practices (GACP), and Organic Standards
2. Encouraging and promoting an investment in the herbal industry with respect to the production, development, and research of herbal products.
3. Improving the quality standards of manufacturing facilities of herbal medicine and products to meet Good Manufacturing Practice (GMP)
4. Expanding application channels, increasing the market value, and promoting the use of herbal products in the healthcare system
5. Strengthening the capacity of healthcare personnel and network working on the promotion of herbal products
6. Developing and maintaining the herbal database at the provincial level
7. Advocating for the drafting and enactment of legislation related to herbal products
8. Developing and implementing public relations campaign to create positive public attitude toward herbal products

Phase 1
2017- 2021

Goals

1. The total market value for herbal products has reached THB 2.90-3.62 billion.
2. The herbal city project is implemented in 13 provinces.

Phase 2
2022 - 2026

Goals

1. The total market value for herbal products has reached THB 4.67-7.28 billion.
2. Thailand has become a leading country in ASEAN when it comes to herbal products.

Phase 3
2027 - 2031

Goals

1. The total market value for herbal products has reached THB 7.52-14.64 billion.
2. Thailand has become one of the five leading herbal hubs in Asia.

Phase 4
2032 - 2036

Goals

1. The total market value for herbal products has reached THB 1.21-2.95 trillion.
2. Thailand has become the international hub for herbal products.

Responsible agency: Department of Thai Traditional and Alternative Medicine (DTAM)

Strategy No. 3

People Excellence

1 Work Plans

3 Projects

Phase 1 5 KPIs

Phase 2 5 KPIs

Phase 3 5 KPIs

Phase 4 5 KPIs

Chapter 5

Work Plan 10

Development of health workforce management system

Project 35 Development of health workforce to ensure professional healthcare services

Current situations

Shortage of health care workers (HCWs) has remained one of the major public health issues particularly at the regional level. Currently Thailand is in the process of undergoing healthcare reform to achieve the goal of health and well-being for all Thais in a sustainable manner. Given this the development of health workforce is considered a top priority that needs to be implemented. In 2017, it was found that 60 percent of healthcare personnel had participated in capacity building programs provided and successfully

Objectives

- To ensure each health zone has an effective health workforce management system
- To ensure health care workers (HCWs) are provided with capacity building programs to achieve expertise they need and professionalism so as to effectively respond to the national strategy

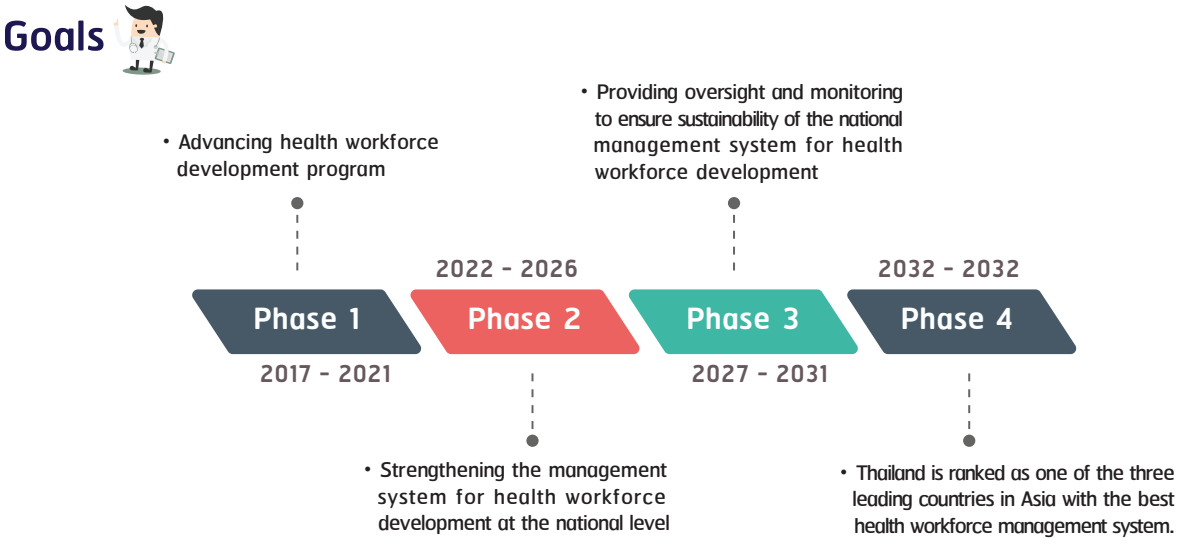
20-year goals

Thailand's healthcare system is adequately staffed with professional health personnel.

Key Performance Indicators (KPIs)

- Health zones have successfully developed and implemented its health workforce management system and met the level-4 criteria in all five components.
- Percentage of HCWs who have been provided with capacity building programs that meet the established criteria.

Goals



Key Measures

1. Creating understanding about how to come up with a plan for health force production and development at the regional level
2. Encouraging and fostering multi-sectoral engagement from both state and private organizations at all levels, from within and outside MOPH, for the purpose of production and development of health workforce
3. Developing and supporting the database system for health workforce development for the purpose of making informed decision
4. Producing and developing professional health workforce based on the MOPH shared values
5. Creating and strengthening organizational culture, managing knowledge and innovation on health workforce development
6. Creating and developing the mechanisms for management of health workforce development system
7. Strengthening partnership network for health workforce development both locally and internationally
8. Encouraging the communities and members of the public to access health information
9. Having in place a measure for consistent control and monitoring of the utilization of level and data and information on health workforce development

Responsible agency: Praboromarajchanok Institute for Health Workforce Development

Work Plan 10

Development of health workforce management system

Project 36 Happy MOPH

Current situations

- Currently it has been found that health care workers (HCWs) are largely concentrated in Bangkok, Greater Bangkok, and central region. The ratio of physician to population in these areas is 3.9 per 10,000. Additionally, it is found the loss of HCWs has decreased by 1.47 percent.
- As for happiness level of HCWs, based on a survey conducted using the Happinometer evaluation system during April 18 through June 30, 2017 there was a response rate of 78.84 percent. Average happiness score of MOPH staff was 62.60. Among different areas of happiness evaluated, the highest score was "happy soul" (70.47) and the lowest "happy money" (50.65).

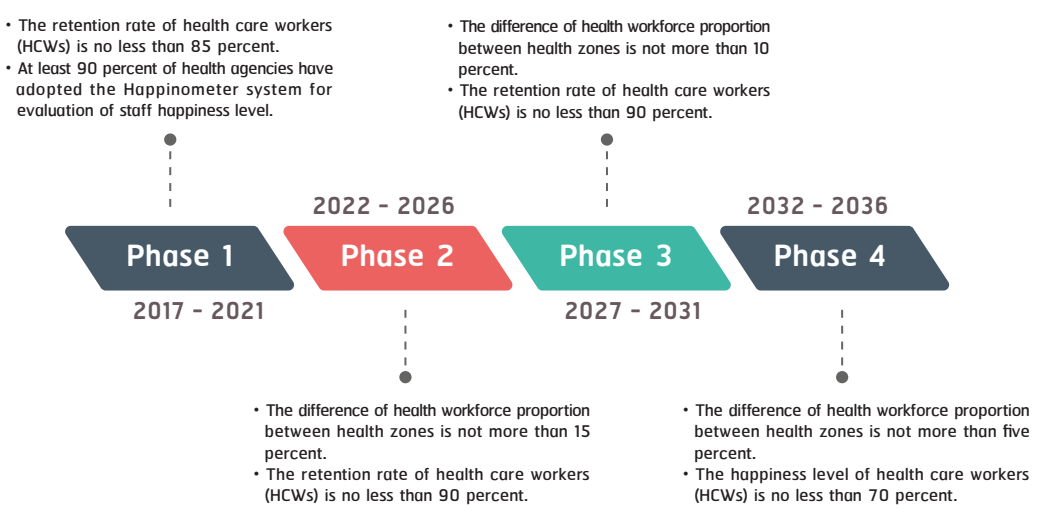
Objectives

To promote happiness in the workplace, increase staff performance and ultimately achieve the shared goals of the organization

20-year goals

- Average Happinometer score and average organizational happiness score is > 70.
- The difference of health workforce proportion between health zones is not more than five percent.
- The retention rate of health care workers (HCWs) is no less than 95 percent.

KPIs/Goals



Key Measures

1. HR Governance: Developing mechanisms for implementation and management of health workforce development to enhance staff performance and ensure unified efforts
2. HRH Information System: Developing human resources information system to ensure efficient HR management
3. HRP: Implementing workforce planning that is consistent with the stated mission of the organization and the public needs
4. Recruitment process: Improving staff recruitment and selection system to ensure transparency and impartiality
5. Performance Management System: Developing and implementing staff performance management system
6. Retention Strategy & Happy Worklife:Developing and implementing merit-based compensation and incentive scheme and career development opportunities

Responsible agency: Human Resources Management Division, Strategy and Planning Division (SPD)

Work Plan 10

Development of health workforce management system

Project 37 Development of health workforce network

Current situations

- In 2016 and 2017 a Family Healthcare Volunteers (FHVs) Project was implemented targeting the family of 553,401 patients with CKD, LTC, and NCDs.
- In 2017 a total of 216,298 families received an evaluation on their self-care ability based on the established criteria and 93.38 percent of them passed the evaluation criteria.

Objectives

To ensure families receive regular healthcare services and health knowledge.

To enable family members to take care of their own family health

To ensure at least one FHV is assigned to take care of each family and work closely with community health volunteers (CHVs).

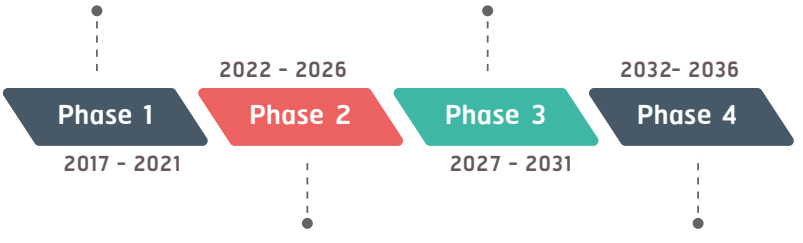
20-year goals

FHV is assigned to take care of every single household and each family has the ability to take care of their own family health based on the established criteria.

KPIs/Goals

- Family healthcare volunteers (FHVs) are equipped with appropriate health knowledge and play a leading role in taking care of family health (4,000,000).
- Seventy percent of families have the ability take care of their own family health.

- Family healthcare volunteers (FHVs) are equipped with appropriate health knowledge and play a leading role in taking care of family health (14,000,000).
- Ninety percent of families have the ability take care of their own family health.



- Family healthcare volunteers (FHVs) are equipped with appropriate health knowledge and play a leading role in taking care of family health (9,000,000).
- Eighty percent of families have the ability take care of their own family health.

- Family healthcare volunteers (FHVs) are equipped with appropriate health knowledge and play a leading role in taking care of family health (20,000,000).
- Ninety-five percent of families have the ability take care of their own family health.

Key Measures

1. Making preparations on providing knowledge and creating understanding among healthcare personnel at all levels, communication and educational materials, resources, and project management
2. Providing material support including course textbook, manual, guidelines for implementation of Family Healthcare Volunteers (FHVs) Project, and family ability evaluation form
3. Implementing capacity building program for FHVs
4. Developing FHV implementation model to serve as a platform for innovation-based economy
5. Developing model, communications channels, learning process, and educational materials that are suitable for program implementation
6. Developing software/mobile applications to support the FHV program implementation
7. Implementing monitoring and evaluation (M&E) of FHV project at provincial and regional levels

Responsible agency: Department of Health Service Support (DHSS)

Strategy No. 4

Governance Excellence

5 Work Plans

8 Projects

Phase 1 22 KPIs

Phase 2 20 KPIs

Phase 3 19 KPIs

Phase 4 19 KPIs

Work Plan 11

Development of a good governance system and quality organization

Project 38 Assessment of integrity, transparency, and risk management

Current situations

- Ministry of Public Health (MOPH) has implemented 3+1 measures (i.e. raising awareness against corruption, prevention of corruption, suppression of corruption, and establishing anti-corruption network) aimed at further strengthening anti-corruption efforts by utilizing an Integrity and Transparency Assessment (ITA) program, which is focused on self-assessment tool using evidence-based practices to improve transparency and ensure that its administration process is verifiable.
- Results of internal audit performed by MOPH Internal Audit Section and State Audit Office have indicated that certain MOPH administration procedures did not comply fully with the state administration procedures. This is because MOPH staff still lack knowledge and understanding about how to properly set up and implement the internal audit process, as well as lack of awareness about the importance of internal control.

Objectives

- To encourage the state agencies to improve integrity and transparency in its administration process
- To ensure that the procurement of pharmaceutical products and non-pharmaceutical supplies is carried out with efficiency and transparency
- To ensure that internal control system is established and efficiently and effectively implemented to cover all work clusters within the Ministry of Public Health (MOPH).

20-year goals

- Performance of all health agencies under the MOPH has met the ITA criteria.
- All health agencies under the MOPH have in place a consolidated procurement system for pharmaceutical products, non-pharmaceutical supplies, scientific and dental materials.
- One fifth of MOPH-affiliated agencies have in place an effective internal control system.

KPIs/Goals

2017 - 2021 — Phase 1

- Ninety percent of health agencies under the MOPH (1,665 out of 1,750) have successfully passed the Integrity and Transparency Assessment (ITA).
- Thirty percent of the procurement of pharmaceutical products, non-pharmaceutical supplies, scientific and dental materials are carried out using the consolidated procurement system.
- Twenty percent of health agencies under the MOPH have successfully passed the assessment of its internal control system.

2022- 2026 — Phase 2

- Ninety percent of health agencies under the MOPH (1,665 out of 1,750) have successfully passed the Integrity and Transparency Assessment (ITA).
- ... ... percent of the procurement of pharmaceutical products, non-pharmaceutical supplies, scientific and dental
- Forty percent of health agencies under the MOPH have successfully passed the assessment of its internal control system.

2027- 2031 — Phase 3

- Ninety percent of health agencies under the MOPH (1,665 out of 1,750) have successfully passed the Integrity and Transparency Assessment (ITA).
- ... ... percent of the procurement of pharmaceutical products, non-pharmaceutical supplies, scientific and dental materials are carried out using the consolidated procurement system.
- Sixty percent of health agencies under the MOPH have successfully passed the assessment of its internal control system.

2032- 2036 — Phase 4

- Ninety percent of health agencies under the MOPH (1,665 out of 1,750) have successfully passed the Integrity and Transparency Assessment (ITA).
- ... ... percent of the procurement of pharmaceutical products, non-pharmaceutical supplies, scientific and dental materials are carried out using the consolidated procurement system.
- Eighty percent of health agencies under the MOPH have successfully passed the assessment of its internal control system.

Key Measures

1. Disseminating the knowledge about how to set up an internal control system, to implement integrity and transparency assessment program with respect to state administration procedures
2. Implementing capacity building program for internal auditors and those responsible for carrying out internal control procedures within the Ministry of Public Health (MOPH)
3. Developing and implementing an assessment system to be carried out by provincial level auditors and internal auditors within state health agencies, as well as self-assessment program.

Responsible agencies: Division of Public Health Administration/Anti-Corruption Operations Center/MOPH Internal Audit Section

Work Plan 11

Development of a good governance system and quality organization

Project 39 Development of quality organization

Current situations

- Since 2007 the Permanent Secretary Office (PSO), Ministry of Public Health (MOPH) has introduced the Public Sector Management Quality Award (PMQA) to serve as a tool to improve the quality of organizational management to ensure that the state administration meets the international standards.
- Percentage of health facilities under the MOPH that have met level-III Hospital Accreditation (HA) standards are as follows: regional hospitals/general hospitals/ hospitals under Department of Medical Services (DMS)/hospitals under Department of Disease Control (DDC)/hospitals under Department of Mental Health (DMH) 97.58 percent, and community hospitals 73.85 percent (data as of June 30, 2017).
- The criteria for quality improvement of Primary Care Cluster (PCC) (also known as health promotion centers) is developed by the MOPH to ensure that PCC services meet the quality standards and are widely accepted, people receive high quality primary care services. Given this health promotion centers are also required to be subject to external assessment and accreditation.

Objectives

To improve the quality of healthcare facilities

20-year goals

- Administrative units under the Permanent Secretary Office (PSO), Ministry of Public Health (MOPH) are developed to meet PMQA standards and receive external accreditation.
- Health facilities under the MOPH have met level-III Hospital Accreditation (HA) standards.
- Primary Care Cluster (PCC) (i.e. health promotion centers) have met standard quality improvement criteria and received external accreditation.

KPIs/Goals

Phase 2

- Achievement rates of the improvement of management quality of state agencies under the Permanent Secretary Office (PSO), Ministry of Public Health (MOPH) are as follows: national level 100 percent, provincial health office level 100 percent, and district health office level 100 percent.
- One hundred percent of regional hospitals/general hospitals/ hospitals under Department of Medical Services (DMS)/ hospitals under Department of Disease Control (DDC)/ hospitals under Department of Mental Health (DMH) have received level-III Hospital Accreditation (HA) standards.
- One hundred percent of community hospitals have received level-III Hospital Accreditation (HA) standards.
- One hundred percent of health promotion centers have met the starred quality improvement criteria.

Phase 4

- One hundred percent of regional hospitals/general hospitals/hospitals under Department of Medical Services (DMS)/hospitals under Department of Disease Control (DDC)/hospitals under Department of Mental Health (DMH) have received level-III Hospital Accreditation (HA) standards.
- One hundred percent of community hospitals have received level-III Hospital Accreditation (HA) standards.
- One hundred percent of Primary Care Cluster (PCC) (i.e. health promotion centers) have met standard quality improvement criteria and received external accreditation.

2017 - 2021 | 2022- 2026 | 2027 - 2031 | 2032 - 2036

Phase 1

- Achievement rates of the improvement of management quality of state agencies under the Permanent Secretary Office (PSO), Ministry of Public Health (MOPH) are as follows: national level 90 percent, provincial health office level 90 percent, and district health office level 80 percent.
- One hundred percent of regional hospitals/general hospitals/ hospitals under Department of Medical Services (DMS)/ hospitals under Department of Disease Control (DDC)/ hospitals under Department of Mental Health (DMH) have received level-III Hospital Accreditation (HA) standards.
- 80-100 percent of community hospitals have received level-III Hospital Accreditation (HA) standards.
- One hundred percent of health promotion centers have met the starred quality improvement criteria.

Phase 3

- One hundred percent of regional hospitals/general hospitals/hospitals under Department of Medical Services (DMS)/hospitals under Department of Disease Control (DDC)/hospitals under Department of Mental Health (DMH) have received level-III Hospital Accreditation (HA) standards.
- One hundred percent of community hospitals have received level-III Hospital Accreditation (HA) standards.
- Fifty percent of Primary Care Cluster (PCC) (i.e. health promotion centers) have met standard quality improvement criteria and received external accreditation.

Key Measures

1. Developing database system, e.g. primary data system
2. Having in place a mechanism for internal quality assessment
3. Having in place a mechanism for program implementation at the local level
4. Communicating, clarifying, implementing public relations campaign to educate all parties concerned about the policy directions and planning for the development of quality organization
5. Advocating for the establishment of network at the provincial level
6. Implementing personnel capacity building program

Responsible agencies: Health Administration Division/Strategy and Policy Division /Administration Process Development Section

Work Plan 12

Development of health informatics system

Project 40 Development of national health informatics system

Current situations

In 2017 it was required that the data on deaths with an unknown cause should not exceed 25 percent of the total deaths at the provincial level. As for an overall picture of Thailand, it was found that there were 12 provinces that had managed to meet the criteria and only 39 percent of health facilities had successfully passed the quality criteria for the data on medical record and diagnosis.

Objectives

- To improve data quality on the causes of death to make it consistent with WHO requirements so that it can be utilized to analyze health situations and help inform the development of health policies of the Ministry of Public Health (MOPH)
- To improve the quality of health information (for outpatients) at health promotion centers

KPIs/Goals

Phase 1 — **2017 - 2021**

The data on deaths with an unknown cause is <40 percent.

Health information: >80 percent of OPD medical records and analyses are accurate and complete.

Key measures

- Developing a tool to assist the local registrar with the determination of causes of death
- Developing the data on causes of death and encouraging local health agencies to adopt the practice for their local setting
- Providing sufficient funding and material support to ensure successful implementation
- Incorporating into the medical and public health curricula the determination and documentation of causes of death that meet the established standard
- Having in place certification procedure to certify that the program used in health facilities has met the standard requirements.
- Integrating efforts relating to personnel capacity building and relevant supporting mechanisms at all levels
- Providing training/refresher courses on the determination and documentation of causes of death to all health and non-health officials concerned
- Ranking and awarding health agencies that implement data improvement program that successfully meet the established criteria

Responsible agency: Strategy and Policy Division (SPD)

Work Plan 12

Development of health informatics system

Project 41 Health development based digital economy

Current situations

Smart Health ID systemhas been developed and implemented so that a personal ID card can be used in place of patient ID card issued by hospital, thereby significantly streamlining data completion process and reducing waiting time. In addition, nRefer system has also been developed to accommodate health information exchange between multiple platforms.

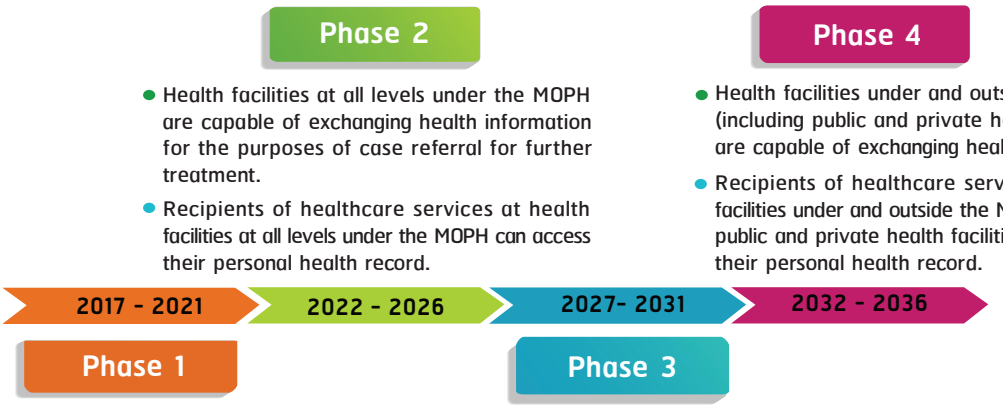
Objectives

- To ensure all patients have access to equal, modern, and continued medical services at all health facilities through digital technology system.
- To ensure that the same medical record of a patient is made available to treating clinicians to always help inform accurate disease diagnosis and treatment.

20-year goals

- All health facilities are capable of exchanging health information (via Health Information Exchange (HIE) platform).
- All recipients of healthcare services can access their personal health record.

KPIs/Goals



Key Measures

1. Improving the quality of existing health information systemand ensuring national health information linkage for the purposes of case referral for further treatment
2. Having in place a centralized health information linkage system to consolidate interagency information so that the information can be made available from a single database
3. Having in place a mechanism for program implementation, e.g. committee on the development of personal health record system, working group on determination of electronic health information record standards
4. Having in place an information security measure utilizing 1/3A access protocol comprising identification, authentication, authorization, and access control

Responsible agency: Information and Communication Technology Center

Work Plan 13

Health finance management

Project 42 Reducing disparity between three existing healthcare schemes

Current situations

- Currently Thailand's policy and management of health insurance system are handled separately based on three different healthcare schemes, resulting in a lack of continuity of mechanisms at the policy level of each healthcare scheme.
- 99.95 percent of Thai populations are covered by one of the three existing healthcare schemes.
- 15.28 percent of emergency patients in critical condition are presented at health facilities by emergency medical system.

Objectives

- To ensure consistency of the country's healthcare insurance system that is managed by three existing healthcare schemes, thus resulting in equality, quality, efficiency, and sustainability of the entire system.
- To ensure transparency of the implementation of healthcare insurance system with active, evidence-based engagement from all parties concerned.
- To reduce disparity in the quality of emergency medical services provided to patients covered by each healthcare scheme.

20-year goals

All state-run healthcare schemes provide services with efficiency, equality, and sustainability. People have access to quality, convenient, and equal healthcare services.

KPIs/Goals

2017- 2021 — Phase 1

- At least one main/central benefit entitlement is added annually for people covered by all state-run healthcare schemes.
- There are five standardized areas of management between three existing healthcare schemes.
- The same payment rates to be made to health facilities are adopted by each state-run healthcare schemefor all types and levels of healthcare services.

2022 - 2026 — Phase 2

- At least one main/central benefit entitlementis added annually for people covered by all state-run healthcare schemes.
- At least one standardized area of management between three existing healthcare schemes is added.
- The same payment rates to be made to health facilities are adopted by each state-run healthcare scheme for all types and levels of healthcare services.

2027 - 2031 — Phase 3

- At least one main/central benefit entitlementis added annually for people covered by all state-run healthcare schemes.
- At least one standardized area of management between three existing healthcare schemes is added.
- The same payment rates to be made to health facilities are adopted by each state-run healthcare scheme for all types and levels of healthcare services.

2032 - 2036 — Phase 4

- Percentage of difference in inpatient benefit utilization rates of the insured individuals under each healthcare scheme has decreased at least one third from 2017.
- Age-adjusted per capita expense of each state-run healthcare scheme on the condition that main/central benefit entitlements are provided for the ensured persons in the entire system is <10 percent different from the mean value.
- The same payment rates to be made to health facilities are adopted by each state-run healthcare scheme for all types and levels of healthcare services.

Key Measures

1. Improving financial management aspect of health insurance system to ensure equality, efficiency, and sustainability
2. Improving financial management aspect of health insurance system to ensure consistency in the management of all state-run healthcare schemes
3. Improving financial management aspect of health insurance system to ensure people have equal access to quality healthcare services.
4. Reducing disparity in payment rates to health facilities by different healthcare schemes

Responsible agencies: Division of Health Economics and Health Security (DHES)/ National Institute for Emergency Medicine (NIEM)/National Health Security Office (NHSO)

Work Plan 13

Health finance management

Project 43 Health finance management

Current situations

During the 3rd quarter of 2017 it was found that 3.23 percent of health facilities under Office of the Permanent Secretary (OPS), Ministry of Public Health (MOPH) were facing a financial crisis (up to the maximum level of 7).

Objectives

- To improve efficiency in financial management
- To minimize a financial risk of health facilities
- To encourage more active engagement from the partnership network and civil society to support health facilities

KPIs/Goals

Phase 1 **2017 - 2021**

No health facilities are facing a financial crisis.

Key measures

- Efficient management
- Sufficient allocation of funding
- Accounting management
- Network and capacity building
- Planfin management

Responsible agency: Division of Health Economics and Health Security

Work Plan 14

Development of health research study and innovation

Project 44 Development of research studies/innovations, health products, and medical technologies

Current situations

To date state health agencies affiliated with the Ministry of Public Health (MOPH) have had 1,518 research/R2R publications (out of 2,703 research papers) adopted for use in the actual work environments related to public health work, representing 48.48 percent of the publications.In Fiscal Year 2018, it is found that 75 percent of these health agencies have been providing funding support, which accounts for at least 1.5 percent of the total budget allocated to each agency, to its in-house researchers to conduct research studies. In addition, the national Thai traditional pharmacopoeia have also been listed in 12 issues of the Royal Gazette publications, comprising a total of 14,779 traditional drug formulations.In the meantime, there are 729 research topics contained in the research database.

Objectives

- To promote research and development activities that will lead to innovations, which in turn will ultimately be translated into mass production and modern services.
- To ensure that people have access to quality and affordable pharmaceutical drugs and vaccine products, thus reducing healthcare expenditures.
- To select, review, and analyze traditional drug formulations so that they are designated and incorporated into the national Thai traditional pharmacopoeia.

20-year goals

State health agencies under the Ministry of Public Health (MOPH) serve as a platform for creating new knowledge base, conducting research studies, encouraging innovations, and inventing technologies with the aim to respond to the development of medical/public health system of the country and those research findings, as well as innovations and technologies, can be applied for commercial purposes.

KPIs/Goals

Phase 1 (2017 - 2021)

- Forty percent of findings from research studies/R2R related to health issues have been adopted by different agencies and organizations for use in the actual work environments.
- At least 1.5 percent of the total budget allocated for each agency is spent on research and development activities.
- Domestically manufactured or imported target drugs to replace original drugs have increased by 80 percent.
- Thirty-eight percent of pharmaceutical drugs and medical devices have been registered (non-cumulative).
- Five hundred national traditional drug formulations have been approved by the Committee on the Protection and Promotion of Thai Traditional Medicine Wisdom.
- The number of health innovations, technologies, or further developments of healthcare services has increased by 25 percent.
- Sixty-two topics of research studies related to herbal plants, Thai traditional medicine, and alternative medicine have been adopted for medical or commercial purposes.

Phase 2 (2022 - 2026)

- Sixty-five percent of findings from research studies/R2R related to health issues have been adopted by different agencies and organizations for use in the actual work environments.
- At least 3 percent of the total budget allocated for each agency is spent on research and development activities.
- Domestically manufactured or imported target drugs to replace original drugs have increased by 85 percent.
- Fifty percent of pharmaceutical drugs and medical devices have been registered.
- National traditional drug formulations have been selected for incorporation into the National List of Essential Medicines.
- The number of health innovations, technologies, or further developments of healthcare services has increased by 50 percent.
- One hundred topics of research studies related to herbal plants, Thai traditional medicine, and alternative medicine have been adopted for medical or commercial purposes.

Phase 3 (2027 - 2031)

- Ninety percent of findings from research studies/R2R related to health issues have been adopted by different agencies and organizations for use in the actual work environments.
- At least 4.5 percent of the total budget allocated for each agency is spent on research and development activities.
- Domestically manufactured or imported target drugs to replace original drugs have increased by 90 percent.
- Sixty-five percent of pharmaceutical drugs and medical devices have been registered.
- Five percent of national traditional drug formulationshave been selected for the establishment of standard requirements for Thai traditional pharmacopoeia.
- The number of health innovations, technologies, or further developments of healthcare services has increased by 75 percent.
- One hundred and fifty topics of research studies related to herbal plants, Thai traditional medicine, and alternative medicine have been adopted for medical or commercial purposes.

Phase 4 (2032 - 2036)

- One hundred percent of findings from research studies/R2R related to health issues have been adopted by different agencies and organizations for use in the actual work environments.
- At least 6 percent of the total budget allocated for each agency is spent on research and development activities.
- Domestically manufactured or imported target drugs to replace original drugs have increased by 95 percent.
- Eighty percent of pharmaceutical drugs and medical devices have been registered.
- Ten percent of national traditional drug formulations have been selected for the establishment of standard requirements for Thai traditional pharmacopoeia.
- The number of health innovations, technologies, or further developments of healthcare services has increased by 100 percent.
- Two hundred topics of research studies related to herbal plants, Thai traditional medicine, and alternative medicine have been adopted for medical or commercial purposes.

Key Measures

1. Developing a new generation of researchers who are equipped with capacity to conduct research studies that meet international standards, as well as establishing strong research team at the local level
2. Creating different communications channels to transfer and publicize the policy and research findings
3. Fostering research collaboration with private organizations on matching health issues
4. Establishing linkage between and expanding research network that can be leveraged for use in the actual work environments
5. Ensuring that a mechanism is established to advance medical research, as well as research activities relating to Thai traditional medicine and herbal plants
6. Supporting and developing business operators engaged in the production or replacement of original drugs, as well as encouraging innovations related to pharmaceutical drugs and medical devices
7. Creating/developing national database system related to research studies/R2R/research patents/efficiently providing counseling on drug, medical device, and innovation registration

Responsible agencies: Department of Medical Services (DMS)/Department of Thai Traditional and Alternative Medicine (DTAM)/ Department of Medical Sciences (DMSc)/Food and Drug Administration (Thai FDA)/Health Technical Office (HTO)

Work Plan 15

Restructuring and development of health legislations

Project 45 Restructuring and development of health legislations

Current situations

There is an urgent need for the Ministry of Public Health (MOPH) to push for the drafting and enactment of at least five health-related legislations that are consistent with current circumstances and help ensure health and well-being of the public.

Objectives

- To revise and update health-related legislations to ensure efficiency and relevance for public health
- To step up the enforcement of the laws under the execution of the Ministry of Public Health (MOPH) to ensure more efficiency

20-year goals

Thailand has effectively enforced health-related laws that are efficient and relevant for public health.

KPIs/Goals

Phase 1 (2017 - 2021)

Eighty percent of legislations that need revision have been revised and vigorously enforced.

Phase 2 (2022 - 2026)

Eighty percent of legislations that need revision have been revised and vigorously enforced.

Phase 3 (2027 - 2031)

Eighty percent of legislations that need revision have been revised and vigorously enforced.

Phase 4 (2032 - 2036)

Eighty percent of legislations that need revision have been revised and vigorously enforced.

Key Measures

1. Advocating and pushing for the revision and development of legislations related to the Ministry of Public Health
2. Improving and implementing measures to ensure strict enforcement of health legislations
3. Developing personnel specialized in legal affairs to accommodate legal change and enforcement

Responsible agency: Legal Affairs Division

Chapter 6

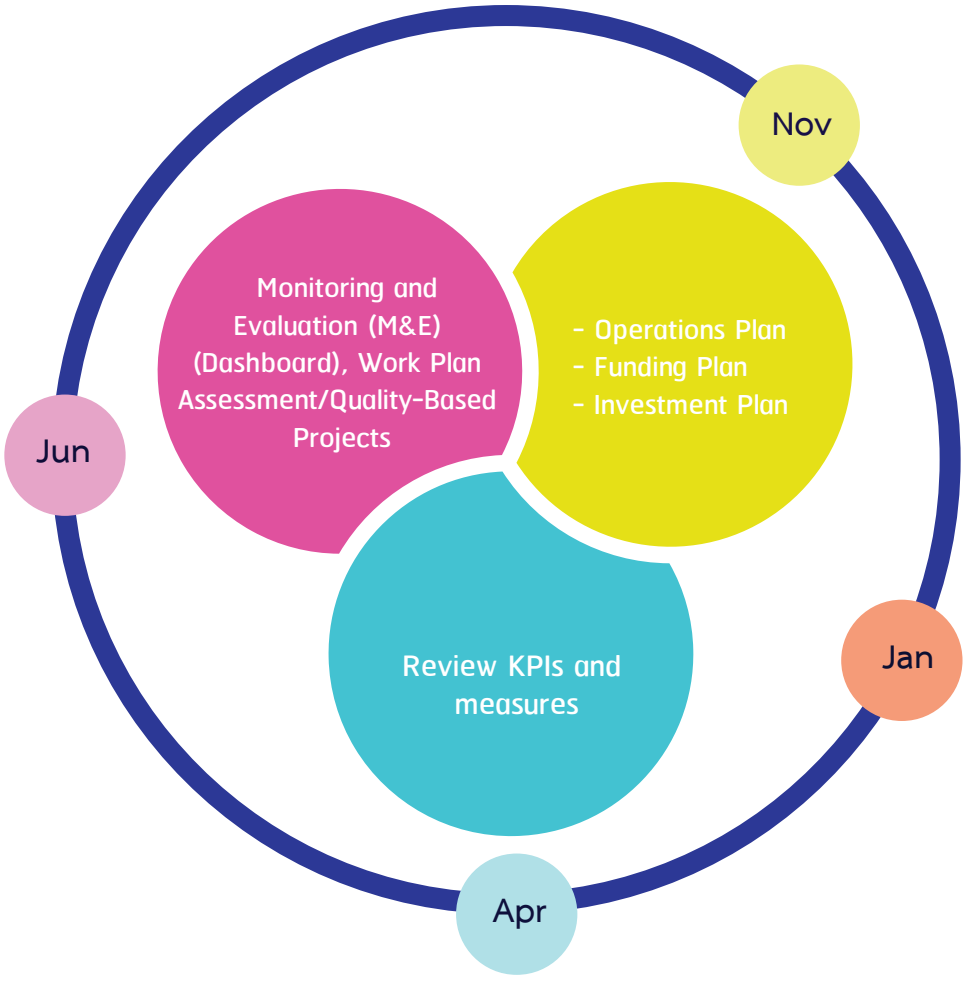
Project Implementation and Monitoring and Evaluation

Chapter 6

Project Implementation and Monitoring and Evaluation

Translating this 20-Year National Strategic Plan for Public Health 2017-2036 into practice will focus primarily on a transfer of the plan to the health zone level. To achieve this, MOPH senior administrators will by themselves conduct several informational meetings in different health zones across the country so as to transfer all the details of the plan to health officials and to create an understanding with the aim to ensure concerted efforts in the implementation of this public health strategic plan to achieve the ultimate goal of **"Healthier People. Happier Health Care Workers. Sustainable Health System."**

Flow chart for translating the 20-Year National Strategic Plan for Public Health 2017-2036 into practice

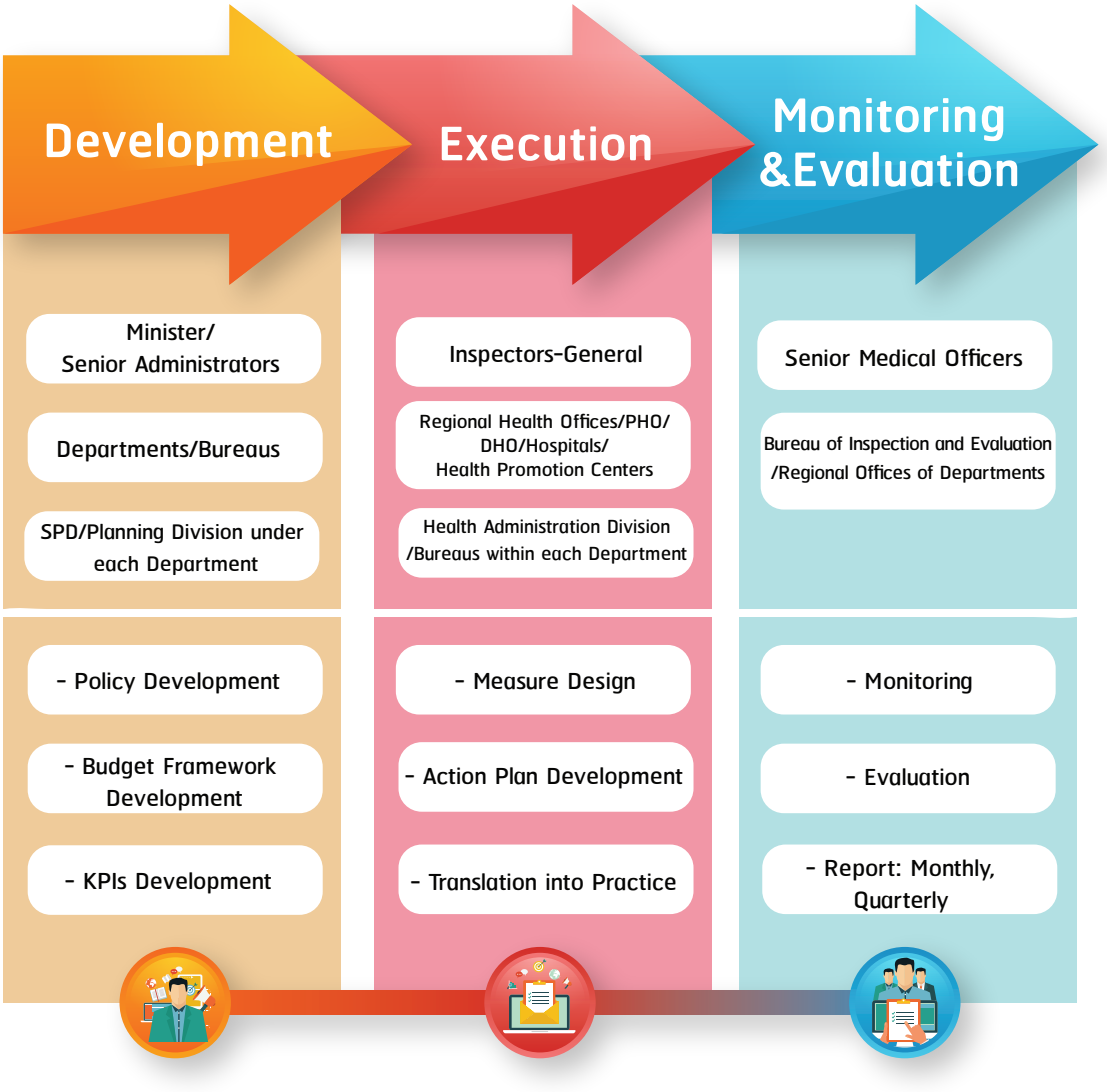


Source: Strategy and Planning Division (SPD), Office of the Permanent Secretary (OPS)

Chapter 6

Project Implementation and Monitoring and Evaluation

Roles and responsibilities of health agencies involved in translating the MOPH-drafted national strategic plan for public health into practice and in implementing monitoring and evaluation (M&E) program



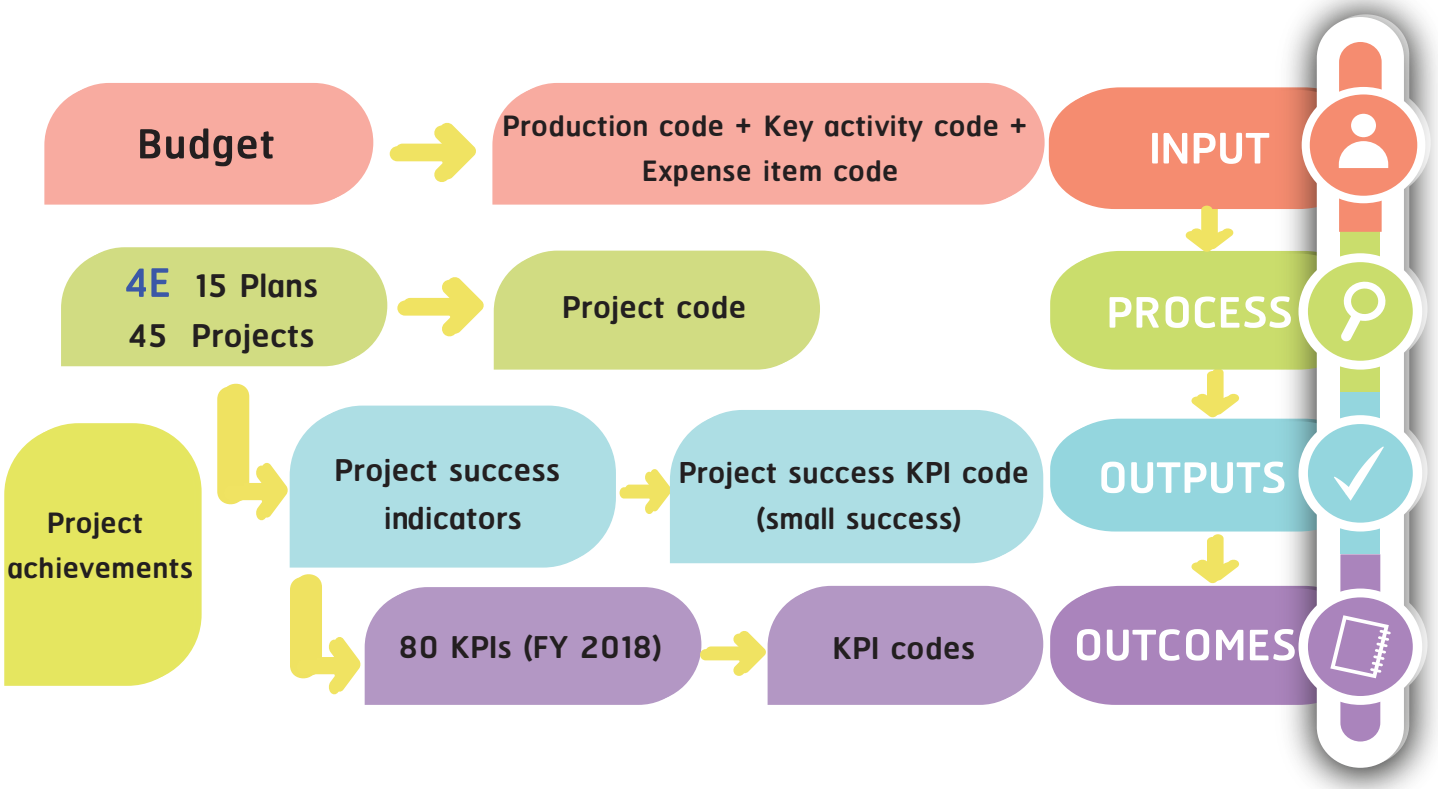
Source: Strategy and Planning Division (SPD), Office of the Permanent Secretary (OPS)

Chapter 6

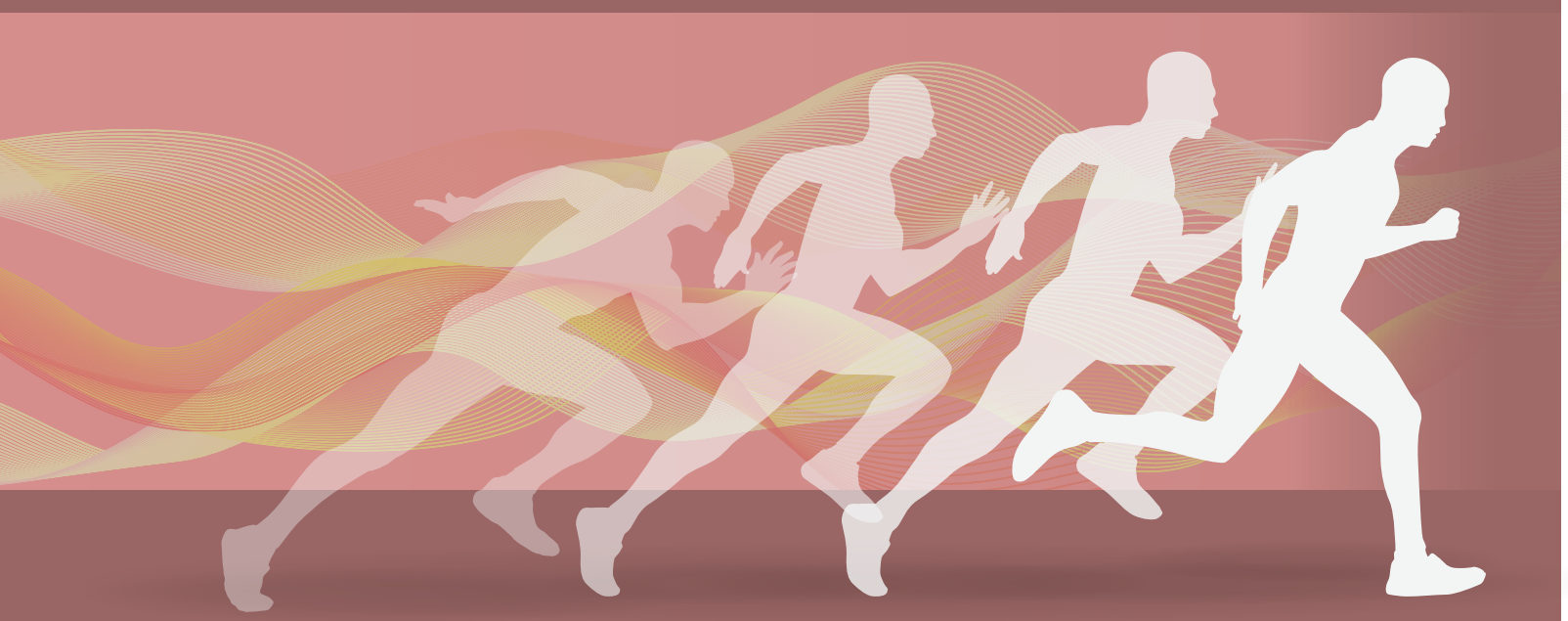
Project Implementation and Monitoring and Evaluation

To ensure an effective monitoring and Evaluation (M&E) program, the Ministry of Public Health (MOPH) has introduced a sophisticated and innovative M&E system known as Strategic Management System (SMS) for use in different health zones and provinces across the country based on the Four-Excellence Strategic Framework.

Development and Implementation of Strategic Management System (SMS)



Source: Strategy and Planning Division (SPD), Office of the Permanent Secretary (OPS)



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Published by
Strategy and Planning Division (SPD),
Office of the Permanent Secretary (OPS),
Ministry of Public Health (MOPH)
Website : http://bps.moph.go.th

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