(Draft) Thailand Healthy Lifestyle
Strategic Plan Phase II
5-Year Non-Communicable Diseases
Prevention and Control Plan
(2017-2021)
Background

Formulation of Thailand Healthy Lifestyle Strategic Plan Phase II: 5-Year National Plan for Prevention and Control of Non-Communicable Diseases was based on the preceding master plan for the period between 2011 and 2020. Its objectives and implementation strategies were, re-defined and refined to ensure clarity and alignment with the Global Heath Action Plan of the World Health Organization. Moreover, the Plan referred to the draft Integrated National Plan for Prevention and Control of Non-Communicable Diseases formulated by the Integrated National Plan for Prevention and Control of Non-Communicable Diseases Committee assembled in accordance with the National Health Commission Order, and chaired by the Director-General of the Department of Disease Control. Certain gaps of the National Plan for Prevention and Control of Non-Communicable Diseases were identified i.e. the lack of focal point and clear direction. Addressing these issues, the Bureau of Non-Communicable Diseases and the Thai Healthy Lifestyle Strategic Management Office were assigned the Plan Manager.

The plan was developed in response to implementation of disease prevention and control aiming to achieve nine global targets, which were adjusted to fit the context of Thailand and in line with the National Economic and Social Development Plan No. 12 and the 20-Year National Health Strategic Plan. The plan focuses on promoting participation of citizens, communities, local administrations, and all sectors where citizens will be encouraged to take better care of their health. In addition, operating efficiency will be enhanced based on data and evidence and the plan will be rolled out in an integrated manner with other national strategic plans and without redundancy. At the same time, a situation analysis of current environment of non-communicable disease and relevant operations in the past five years will be conducted. The Committee, via the delegated core team, formulated the action plan which was divided into three phases i.e. 2017, 2018, and 2019-2021.

Development overview and recommendations

The summary and recommendations based on the evaluation of the NCDs plan (2010 – 2014)¹ are as appeared below.

¹ Evaluation Report of the NCDs plan, fiscal year 2010 - 2014
Mechanism, roles, and execution plan and measures

1. On national level: clear and undisrupted mechanism is required to follow up and to set direction for implementation in line with the national policy. The existing mechanism mainly emphasized health-related services rather than risk factors and citizen's awareness building.

2. On activity level: execution measures of the Ministry of Public Health were mostly project-based which lacked continuity, since campaigns were launched on a periodical basis. The strategic thinking needed to be clearer and more specific.

3. On implementation level: there was a lack of assessment on result, impact; thus, no lessons learned were further developed as clear operating measures.

4. On action level: project-based works were carried out as individual operations based on roles and responsibilities of different agencies. As a result, integrated success as per the established goals and measures was barely seen. Notwithstanding the success in age group-based integration achieved by functions under the Ministry of Public Health, these activities remained fragmented as neither clear nor integrated standard operating procedures were formulated on internal and cross-functional platforms. This was mostly due to limitations in respect of budgets, management, objective setting, and policies of the central governing agencies, which tended to be activity-based rather than having overall steering measures to enable integrated operations with related entities such as schools, communities, and corporations. Additionally, there is no clear plan or mutual agreement on collaboration with organizations, namely Thai Health Promotion Foundation, National Health Security Office, and other professional associations.

5. On strategy level: there is no clear mechanism to ensure effective strategies and measures which are goal-oriented and in line with the context of Thailand.

6. On lesson level: there are lessons learned from operations of Thai Health Promotion Foundation in collaboration with alliances, civil society organizations, and community leaders to promote wellness and disease prevention in various forms as well as those of National Health Security Office for its facilitation provided to agencies responsible for health management and services in order to enhance their potential and coverage in different aspects. However, such knowledge has yet to be shared with other agencies of the Ministry of Public Health, resulting in limited efficiency and suboptimal results.

Recommendations for improvement in NCDs prevention and control

Based on the current status, risks, and service systems discovered during the evaluation, our recommendations are as follows:

1. The target populations in focus for the current and next phases are youth and working age population exposed to risks in all aspects, including smoking, drinking, inadequate vegetable
intake, lack of exercise, unhealthy and inactive lifestyle trends, and the increasing mortality rate of population in their 30s (30-39 years of age).

2. Working-age male population is considered at risk due to less access to health and wellness services relating to medical screening and treatment. As such, these services and communications thereof should be improved for this demographic.

3. Obesity is considered key risk and should be focused as a flagship campaign. A systematic approach should be put in place to ensure monitoring and awareness building.

4. Standard operating procedures are to be established to communicate, create common understanding, and raise awareness about NCDs risk conditions on a regular basis, especially those relating to food.

5. Measures to integrate policies for prevention and control of diseases in other sectors are to be elevated. To further elaborate, specific agencies should be assigned to oversee the educational sector, business sector, food advertisement and production in order to ensure undisrupted surveillance as well as goal-oriented activities and measures.

6. Continual as well as effective measures to educate citizens about basic self-care for prevention and control of diseases remain vital.

7. Targeting approach should be adopted for medical services for specific demographic where tailor-made treatments are to be made available. Behavioral and social care should be underlined in parallel with medical treatment so as to enhance effectiveness and efficiency (treatment data is to be reviewed along with the quality enhancement of new NCD clinical services.)

Recommendations for operating mechanism and system management

1. **NCDs management data system:** electronic database is in the limelight and major investments have been made. However, current results remain confusing and there are issues regarding accuracy and coherence of data from various sources. In addition, the use of information for forecasting, planning, and measuring the service quality was limited as the database was mainly managed for reporting along the chain of command rather than for case management. The researcher thus would like to propose the following recommendations.

1.1. Alternative database management should be developed i.e. database management for sentinel surveillance so as to ensure correctness and completeness of the information in certain areas to reflect different context.
1.2. Certain demographics should be monitored, especially those with change tendency or those of significance; for example, 40-50 years of age, working age, and youth population, since they are more susceptible to changes in diseases and risks compared to other demographics.

1.3. An analysis system should be developed to produce suitable data for related users in order to enhance efficiency of the data management on a local level. Moreover, data should be utilized to define the right operating targets and to highlight key concerns for national and regional development.

1.4. An agency should be founded and developed to coordinate and manage data from various sources and to effectively monitor and follow up on the disease assessment as well as risks associated with the NCDs on a national and regional levels in a clear and continuous manner.

2. Service management and related operations on medical screening and medical care: Based on the evaluation, it was found that most health service facilities under the Ministry of Public Health carried an increasingly large workload due to additional medical screening services and medical care for more diseases. It was because the prevalence of NCDs increased by over 50 percent, which outgrew the mortality rate; and the fact that more citizens were provided with access to health services. Consequently, the number of patients accumulated, albeit at a relatively slower rate than the increase. Also, it was found that the quality of service will not increase in five years without any new service management approach; therefore, the following recommendations for NCDs-related health service improvement were proposed.

2.1. In areas where risk and medical screening has been comprehensively carried out for a long period of time, the health screening process should be modified to change the role of officers to maximize the potential of citizens to conduct self-screening. The focus should be shifted to extend service access to demographics such as mobile and working-age populations; and the screening formats may be modified accordingly.

2.2. In areas containing mobile labors working at factories, corporations, or any locations away from their residential zone, integration should be enabled for data system as well as medical check-up results maintained by all agencies related to such population.

2.3. NCDs clinical services should focus on primary service network, which should be strengthened to ensure its readiness and collaboration.

2.4. Service recipients of clinical services should be reviewed and analyzed to identify gap and room for improvement of services to any target group, in particular in order to avoid ‘one solution fits all’ trap.

2.5. Persons or agencies should be assigned to provide consultancy relating to behavioral changes and social-psychological care along with the medical care provided at clinics in a clear and complete manner.
3. **Prevention and risk mitigation of NCDs which are not primary prevention:** The study revealed that related operations of the Ministry of Public Health were neither extensive nor continuous due to restrictions in terms of policies and budget. Meanwhile, operations of Thai Health Promotion Foundation were rather specific to certain patterns and certain areas without any collaboration with agencies of the Ministry of Public Health in a systematic manner. Our recommendations are as follows:

3.1. Regarding risk mitigation policies and measures, the Ministry of Public Health should coordinate with key related authorities such as Thai Health Promotion Foundation, local administrative organizations, corporations, and educational institutions, to put in place a risk mitigation plan with long-term continual coverage.

3.2. Agencies responsible for national and provincial works of the Ministry of Public Health i.e. those responsible for health promotion and consumer protection should be assigned to serve as coordinator for operations relating to NCDs prevention and risk mitigation.

3.3. Systematic management of NCDs risk mitigation in specific settings should be put in place i.e. coordination to ensure management of NCDs and risk mitigation at corporations, workplaces, and educational institutions of all levels. The Ministry of Public Health should adjust their role as stipulated by polices and laws to enhance efficiency.

3.4. Communication to create public understanding as regards NCDs: Rebranding and social marketing should be adopted to enhance efficiency of communications.

3.5. Service provision and related measures should be developed to enable effective dissemination of knowledge and understanding as well as risk mitigation consultancy to the general public and not only to risk-prone target groups.

3.6. Budget integration should be enabled for social security scheme and civil servant medical benefit scheme in order to increase investment to prevent and control NCDs.

4. **Overview and budget management:** The following recommendations are proposed to ensure that operations to prevent and control NCDs and management thereof are carried out in an integrated and complimentary manner, delivering optimal results.

4.1. A national agency of the Ministry of Public Health should be assigned to coordinate for mutually agreed directions and guidelines for integrated operations among relevant functions as well as non-Ministry of Public Health organizations.

4.2. Integration could begin with determining mutually-agreed key demographics and desired results. Next, the roles of each agency will be defined to ensure joint delivery.
4.3. The following data i.e. disease status, system status, experience, lessons learned, and 360-degree operations should be taken into consideration to determine the guidelines for national implementation.

4.4. Determination of directions and action plan should take into account different nature of each local administration in respect of civic society, physical conditions, potential, and concept of related personnel on executive and operational levels.

4.5. Budget allocated to local administrations should be flexible and open for each to manage and adjust service approach to fit its context.

4.6. Management should be put in place to monitor and evaluate measures and projects executed in each year in a systematic and continual manner in order to create lessons learned that enhance the effectiveness and efficiency of the implementation.

5. **Research and development:** No NCDs overall management and long-term plan had been established in the past, resulting in a lack of information for planning to develop the system to prevent, control, and treat NCDs. Thus, it is recommended as follows:

5.1. Study and research development plan should be developed to advance both short-term and long-term NCDs-based operations in a continuous manner, since the issue is complicated and requires a certain period of time to understand and identify solution.

5.2. An economics-based study as well as a study of impact from NCDs management should be conducted in addition to clinical research, namely:

5.2.1. Study on estimated percentage of demographic prone to develop NCDs

5.2.2. Study on budget for secondary and tertiary operations when compared to expenses to prevent and control as well as study of cost for caring and treatment of each NCD.
Vision: A country free of the avoidable burden of non-communicable diseases

Goal:
To relieve the avoidable burden of morbidity, mortality, and disability due to non-communicable diseases by means of collaboration between various entities and sectors as well as coordination on a national, regional, and global levels to promote wellbeing of people and maximize productivity of all age groups and to prevent these diseases from obstructing the quality of life and economic development by the year 2021

Key indicators (alignment is to be ensured by 2021)

1. Decrease of premature mortality rate from NCDs by 20 percent when compared to 2010
2. Decrease of harmful alcohol use in youth under 15 years of age to under 6.7 liter per person per year
3. Decrease of prevalence of physical inactivity by 8 percent when compared to that of 2010
4. Decrease of average salt/sodium intake in the population by 24 percent when compared to 2010
5. Decrease of prevalence of tobacco use in youth under 15 years of age to under 15.7 percent
6. Decrease of prevalence of raised blood pressure condition by 20 percent
7. Stable prevalence of diabetes and obesity when compared to 2010
8. Not less than 50 percent of all population over the age of 40 discovered to have indicative conditions of heart disease and cerebrovascular disease are provided with consultation for behavioral changes and preventive drug therapy (including glyceamic control drug)
9. Availability of necessary drugs and basic technology for treatment/service for key NCDs patients at 80 percent of all public and private medical service facilities

Objectives

1. To elevate priority of NCDs prevention and control among national development agenda by means of strengthening international collaboration and joint policy advocacy;
2. To strengthen the potential of the country, leadership under good governance, and multi-sectoral collaboration among various entities, sectors, and alliances to expedite responses to NCDs prevention and control;
3. To minimize risk factors and social factors impacting NCDs risks;
4. To strengthen and improve the health service system to take into account and correspond to NCDs prevention and control, including related basic social factors by referring to the primary health care principle reflected in people-centric primary services, which are accessible by all population
5. To encourage and support research and development competency to prevent and control NCDs
6. To monitor trends and factors impacting NCDs prevention and control as well as assess progress thereof

Six strategies are as follows:

Strategy 1: Development of public policies and legislations which facilitate NCDs prevention and control

1.1. To expedite national policy underlining NCDs prevention and control
1.2. To develop measures relating to finance, treasury, tax, production, marketing, and consumption relevant to decrease of NCDs
1.3. To promote public policies for institutions and organizations to create an environment that encourages behavioral changes of the target group in an adequate manner
1.4. To develop laws and to strengthen legal enforcement measures for NCDs prevention and control
1.5. To promote extensive legal enforcement

Strategy 2: Expedition of social mobilization and risk communication and public relations on a continuous basis

2.1 To develop continuous public relation management relating to wellbeing and decrease of NCDs risk factors
2.2 To develop a network to transfer knowledge on risk communication, health and wellbeing promotion, and decrease of NCDs risks
2.3 To develop communication content and increase communication channels to match demands of target groups
2.4 To monitor and respond to information with negative impact toward NCDs

Strategy 3: Capacity building for community / local administration, and networks

3.1 To develop mechanism for allied community / local administrations, and networks to participate in investigation and expedition of operations to prevent and control NCDs on different levels
3.2 To build capacity of public health volunteers and family volunteers to manage NCDs in the community with an emphasis on health literacy

Strategy 4: Development of surveillance and data management systems

4.1 To develop information linkage on district, provincial, regional, and national levels
4.2 To strengthen capacity on information management and analysis for the purpose of NCDs surveillance on district, provincial and national levels
4.3 To develop a surveillance system for NCDs and risk factors related to organizations and specific demographics

Strategy 5: Reform of services to reduce NCDs and risk factors in line with the disease status and context in each area

5.1 To reform the service formats to enable screening and reduction of risks for the general public in alignment with nature of various risk-prone target groups
5.2 To reform the process of service provided to patients suffering from chronic diseases (with or without complications) at medical facilities to enhance efficiency and promote self-care among patients

Strategy 6: Development of support system for integrated operations

6.1 To develop mechanism that effectively drives operations in line with strategies mutually implemented by allied partners
6.2 To develop the tracking system to assess the result of NCDs prevention and control on provincial, regional, and national levels
6.3 To develop personnel of all related alliances to drive operations in line with the strategies
6.4 To integrate research and management of knowledge and innovation to facilitate NCDs prevention and control system
Details of strategies, sub-strategies and indicators

Strategy 1: Development of public policies and legislations which facilitate NCDs prevention and control

<table>
<thead>
<tr>
<th>Strategy / Key Performance Indicators (KPIs)</th>
<th>Strategy</th>
<th>Indicators</th>
<th>Action owner</th>
</tr>
</thead>
</table>
| **Strategic goal**                          | **Strategy 1.1:** To expedite national policy underlining NCDs prevention and control | **Strategy 1.1 indicators** | - Bureau of Policy and Strategy, Office of Permanent Secretary, Ministry of Public Health  
- Thai Healthy Lifestyle Strategic Management Office  
- Bureau of Non-Communicable Diseases  
- Health System Research Institute (HSRI)  
- Bureau of International Health (BIH)  
- International Health Policy Program (IHPP)  
- The Health Intervention and Technology Assessment Program (HitAP)  
- National Health Commission Office of Thailand  
- Thai Health Promotion Foundation  
- National Health Security Office (NHSO)  
- Law Center Department of Disease Control  
- Office of Alcohol Control Committee  
- Bureau of Tobacco Control  
- Department of Health  
- Health Service Support Department |

Type your answer here

- Behavioral risk of population decreases due to laws and policies and enforcement thereof which encourage decline of NCDs risks

**KPIs**
- Percentage of population with decreasing behavioral risk for NCDs in four aspects (food, physical activity, tobacco, and alcohol)

Output 1.1.1: Appointment of Committee on National Public Policy for NCDs Management

Output 1.1.2: Launch of public policy focusing on NCDs management

Output 1.1.3: Collaborative framework for international trade and health in...
Definition
National policy is defined as policies on international collaboration with impact toward health

Strategy 1.2: To develop measures relating to finance, fiscal, tax, production, marketing, and consumption relevant to decrease of NCDs
- Output 1.2.1: Proposals in respect of financial and fiscal measures which encourage health-related agencies to promote well-being and disease prevention and control
- Output 1.2.2: Proposals in respect of tax and others which encourage access to health-promoting products and control of products, which induces health-related risks
- Output 1.2.3: Guidelines to encourage health-promoting food choices

Strategy 1.2 indicators
- Percentage of financial and fiscal measures, which are developed as determined.

Strategy 1.3: To promote public policies for institutions and organizations to create an environment that encourages behavioral changes of the target group in an adequate manner

Strategy 1.3 indicators
- FDA Thailand
- Office of the National Economics and Social Development Board
- Ministry of Commerce
- Fiscal Policy Office, Ministry of Finance
- Ministry of Foreign Affairs
- Excise Department
- Ministry of Education
- Ministry of Industry
- Department of Local Administration, Ministry of Interior
- Department of Labour Protection and Welfare
- Ministry of Labour
- Office of The National Broadcasting and Telecommunications Commission
- Ministry of Science and Technology
- Ministry of Industry
- Ministry of Agriculture and Cooperatives
- Thailand Research Fund (TRF)
- National Research Council of Thailand (NRCT)
- Department of Religious Affairs
Output 1.3.1: Local administrative organizations, educational institutions, corporations, workplaces, and religious institutions determine policies to create an atmosphere which encourages risk decrease.

Output 1.3.2: Guidelines / standard criteria are proposed for development of public policies on organizational level.

**Strategy 1.4:** To develop laws and to strengthen legal enforcement measures for NCDs prevention and control.

Output 1.4.1: New draft laws are imposed to prevent and control NCDs.

- Percentage of organizations having organizational policies and measures to create an environment which adequately encourages behavioral changes on institutional and organizational levels.

**Strategy 1.4 indicators**

- 70 percent of laws and requirements about risk factors are reviewed, amended, and considered by the parliament (new laws on risk factors such as food ingredients, food labels, food tax).

Output 1.4.2: Proposals are made to review related laws.

**Strategy 1.5:** To promote extensive legal enforcement.

**Strategy 1.5 indicators**
| Output 1.5.1: Manuals and public relations materials on legal enforcement are available. | • Percentage of legal enforcement, which extends to decline of risk factors (extensive and effective legal enforcement)  
• Percentage of complaints about neglected legal enforcement, which are resolved, and conclusion thereof is reached |

Output 1.5.2: Citizens acknowledge and understand the laws.  
Output 1.5.3: Personnel of related agencies acknowledge and understand legal enforcement practice.  
Output 1.5.4: Reporting of monitoring and assessment result of legal enforcement is made.
**Strategy 2**: Expedition of social mobilization and risk communication and public relations on a continuous basis

<table>
<thead>
<tr>
<th>Strategy / Key Performance Indicators (KPIs)</th>
<th>Strategy</th>
<th>Indicators</th>
<th>Action owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic goal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population is health literate.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KPIs</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| Population's health literacy is 30 percent higher each year from 2017 onwards. | Strategy 2.1: To develop continuous public relation management relating to wellbeing and decrease of NCDs risk factors  
Output 2.1.1: Appointment of working group on reduction of risks and NCDs  
Output 2.1.2: Proactive action plan on reduction of risk factors is formulated. | Strategy 2.1 indicators  
- Percentage of implemented proactive action plan for communications | - Bureau of Risk Communication and Health Behavior Development, Department of Disease Control  
- Center for Public Communication, Department of Health  
- Bureau of Information, Office of Permanent Secretary, Ministry of Public Health  
- Department of Mental Health  
- Department of Medical Service, MOPH  
- Health Education Division, Health Service Support Department  
- FDA Thailand  
- Department for Development of Thai Traditional and Alternative Medicine  
- Ministry of Social Development and Human Security  
- Department of Public Relations |
|                                             |          |            |              |
|                                             | Strategy 2.2: To develop a network to transfer knowledge on risk communication, health and wellbeing promotion, and decrease of NCDs risks  
Output 2.2.1: A series of knowledge for risk communication to reduce NCDs risks are produced. | Strategy 2.2 indicators  
- Percentage of allied network (public, private, and civil society sectors) which can disseminate knowledge to reduce NCDs risks in a correct manner |
<table>
<thead>
<tr>
<th>Output 2.2.2: Key network or entities communicating reduction of risks and NCDs</th>
<th>Strategy 2.3: To develop communication content and increase communication channels to match demands of the target group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output 2.2.3: Public health personnel and network have the right knowledge to promote health and reduce NCDs risk factors.</td>
<td>Strategy 2.3 indicators</td>
</tr>
<tr>
<td>Output 2.3.1: A series of information for communication to target group is available.</td>
<td>● Percentage of awareness of target groups to reduce behavioral risk of NCDs</td>
</tr>
<tr>
<td>Output 2.3.2: NCDs communication channels for different target groups</td>
<td>Strategy 2.4: To monitor and respond to information with negative impact toward NCDs</td>
</tr>
<tr>
<td>Output 2.4.1: Linkage of information on surveillance of network, both internally and across functions between all entities responsible for monitoring and</td>
<td>Strategy 2.4 indicators</td>
</tr>
<tr>
<td></td>
<td>● Decreasing percentage of public media with negative impact on health</td>
</tr>
<tr>
<td></td>
<td>● Percentage of response to public</td>
</tr>
</tbody>
</table>

- Ministry of Digital Economy and Society
- Department of Local Administration
- Thai NCD Alliance
- Network of Fatless Belly Thais Health Risk Control I Section, Thai Health Promotion Foundation
- Office of The National Broadcasting and Telecommunications Commission
- Press Network, Thai Broadcast Journalists Association
- Information Consumer Services, National Health Security Office
| Output 2.4.2: Screening system to grant permission for advertisement broadcast (taking into account the channels, content, and possible negative impact without any conflict of interest) | media made by surveillance network |
**Strategy 3**: Capacity building for community / local administration, and networks

<table>
<thead>
<tr>
<th>Strategic goal</th>
<th>Strategy</th>
<th>Indicators</th>
<th>Action owner</th>
</tr>
</thead>
</table>
| Population, community, local administrations, and allied partners engage in management of health promotion as well as NCDs prevention and control | **Strategy 3.1**: To develop mechanism for allied community / local administrations, and networks to participate in investigation and expedition of operations to prevent and control NCDs on different levels | - 70 percent of sub-districts is considered equipped with well integrated health management (100 percent is expected in 5 years)  
- A minimum of 1 community in an urban district is self-dependent | - Department for Development of Thai Traditional and Alternative Medicine  
- Primary Health Care Division, Health Service Support Department  
- Department of Local Administration  
- Ministry of Social Development and Human Security  
- Thai Chamber of Commerce and Board of Trade of Thailand  
- Federation of Thai Industries  
- Foundation for Consumers  
- National Health Foundation  
- Provincial Administration Organization Council of Thailand  
- National Municipal League of Thailand  
- Village Health Volunteer Club of Thailand |
| KPIs | **Strategy 3.1 indicators** |  | |
| 70 percent of sub-districts, local administrations/ communities are self-dependent and engage in health promotion as well as NCDs prevention and control by 2021 | |  |
**Definition**
Self-dependency and engagement in sub-district’s integrated health management process

The term is defined as sub-district /communities having a process to promote health underlining development of people, local administrations, and all sectors of the local administrations in an integrated manner where all members contribute, identify, and determine health problems and its future; and roll out activities as well as social measures, and innovations to improve health. All actions are made voluntarily with public mind; and focus on engagement and joint learning process. Community

<table>
<thead>
<tr>
<th>Output 3.1.3: Network covering various areas engaging in health promotion as well as NCDs prevention and control in collaboration with local administrative organizations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategy 3.2:</strong> To build capacity of public health volunteers and family volunteers to manage NCDs in the community with an emphasis on health literacy</td>
</tr>
<tr>
<td><strong>Output 3.2.1:</strong> Key persons to manage NCDs among health volunteers and family volunteers</td>
</tr>
<tr>
<td><strong>Strategy 3.2 indicators</strong></td>
</tr>
<tr>
<td>- A minimum of 1.0 million of health volunteers and 4.0 million of family volunteers with such capacity by 5 years (0.5 million of family volunteers in the first year and 1.0 million each of the following years)</td>
</tr>
</tbody>
</table>

- Health Assembly
- National Health Commission of Thailand
- National Health Security Office (NHSO)
- Thai Health Promotion Foundation
- Department of Physical Education, Ministry of Tourism and Sports
Business activities are encouraged to reduce expenses while increasing income to enable self-reliance while reducing problems and risk factors regarding child development, accidents, NCDs, elderlies, and health-related issues, which vary in each area, in order to help citizens maintain good health in a sustainable manner.

<table>
<thead>
<tr>
<th>Community health innovation is defined as ideas, practice, or inventions relating to health, which are newly invented or introduced; or those recently modified for modern day use and enhanced effectiveness. Innovation can promote improved health of patients or efficiency and effectiveness of personnel while saving time, cost, and manpower.</th>
<th>Output 3.2.2: A series of information, kits, and manuals are available for citizens, community, and local administrations to enable self-care to reduce NCDs in the community.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output 3.2.3: Strong integrated network collaborating to promote NCDs prevention and control.</td>
<td></td>
</tr>
<tr>
<td>Output 3.2.4: Prototype</td>
<td></td>
</tr>
<tr>
<td>community/local administrations for self-reliance and engagement in NCDs prevention and control</td>
<td></td>
</tr>
</tbody>
</table>
**Strategy 4**: Development of surveillance and data management systems

<table>
<thead>
<tr>
<th>Strategy / Key Performance Indicators (KPIs)</th>
<th>Strategy</th>
<th>Indicators</th>
<th>Action owner</th>
</tr>
</thead>
</table>
| **Strategic goal**                        | Strategy 4.1: To develop information linkage on district, provincial, regional, and national levels | Strategy 4.1 indicators | - Bureau of Non-Communicable Diseases, Department of Disease Control  
- Bureau of Epidemiology, Department of Disease Control  
- Bureau of Policy and Strategy, Office of Permanent Secretary, Ministry of Public Health  
- ICT Center, Office of Permanent Secretary, Ministry of Public Health  
- National Statistical Office  
- Health Information System Development Office  
- National Health Security Office (NHSO)  
- Bureau of Registration Administration, Ministry of Interior  
- Bureau of Occupational and Health Administration |
| Related agencies can identify population in risk-prone group, sickness group as well as red zones and risk-prone environment in an accurate and timely manner leading to timely support needed for launching measures to effectively prevent and control NCDs | Output 4.1.1: Mechanism to develop and monitor information integration for NCDs surveillance purposes is available. | • Percentage of agencies on district, provincial, and national levels which can perform NCDs surveillance in accordance with the required standards | |
| **KPIs** | Output 4.1.2: Information on illness and behavioral risks at health service facilities stemming from existing reporting and information system is available in a correct, complete, and timely manner. | | |
| Percentage of agencies which can identify risk issues to determine measures to prevent and control NCDs in a correct, complete, and timely manner | Output 4.1.3: Sentinel surveillance system for result of medical care given | | |
to patients with type II diabetes and high blood pressure by hospitals under supervision of the Ministry of Public Health and medical facilities in Bangkok.

Output 4.1.4: Accurate information system to record NCDs-related mortality.

Output 4.1.5: Integration of information on NCDs surveillance, behavioural risks, health intelligence from population surveys to enable continuous updates on provincial level.

Output 4.1.6: Linkage of relevant information (environment, behavioural risks, morbidity, mortality, and abnormalities (5 dimensions)) to create integrated surveillance system for NCDs and risk factors on district and national levels.

Output 4.1.7: Assessment of information system for NCDs service available at public medical facilities to...
track the quality of reporting and ensure systematic development

Output 4.1.8: Correct and complete database of population having cancer on national level is available.

**Strategy 4.2:** To strengthen capacity on information management and analysis for the purpose of NCDs surveillance on district’s and national levels

Output 4.2.1: Personnel working in medical statistics and information relating to NCDs surveillance, whom are provided with NCDs information management training

Output 4.2.2: Personnel assigned to manage a specific disease or regional NCDs System Manager on sub-district, district, and provincial levels whom are provided with training relating to management, analysis, and interpretation of NCDs information as per the 5-dimension surveillance framework

<table>
<thead>
<tr>
<th>Strategy 4.2 indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>● Percentage of personnel of relevant agencies mastering NCDs surveillance information management and analysis</td>
</tr>
</tbody>
</table>

- National Electronics and Computer Technology Center
- Department of Labour Protection and Welfare, Ministry of Labour
- Social Security Office, Ministry of Labour
<table>
<thead>
<tr>
<th>Strategy 4.3: To develop a surveillance system for NCDs and risk factors related to organizations and specific demographics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output 4.3.1: Surveillance system for NCDs risk factors at educational institutions</td>
</tr>
<tr>
<td>Output 4.3.2: Surveillance system for NCDs risk factors at business premises</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategy 4.3 indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Percentage of educational institutions mastering timely surveillance of NCDs risks among students and university students</td>
</tr>
<tr>
<td>• Percentage of corporations mastering timely surveillance of NCDs risks among employees</td>
</tr>
</tbody>
</table>
**Strategy 5**: Reform of services to reduce NCDs and risk factors in line with the disease status and context in each area

<table>
<thead>
<tr>
<th>Strategy / Key Performance Indicators (KPIs)</th>
<th>Strategy</th>
<th>Indicators</th>
<th>Action owner</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strategic goal</strong></td>
<td><strong>Strategy 5.1</strong>: To reform the service formats to enable screening and reduction of risks for the general public in alignment with nature of various risk-prone target groups</td>
<td><strong>Strategy 5.1 indicators</strong></td>
<td>- Bureau of Non-Communicable Diseases, Department of Disease Control</td>
</tr>
<tr>
<td>Risk-prone population and NCDs patients can reduce risk conditions and obtain sound control of disease while an extensive coverage is provided in terms of delaying complications.</td>
<td>Output 5.1.1: Integrated options are available for screening of NCD risks as a part of health service and connected to risk mitigation system to enhance effectiveness of disease mitigation.</td>
<td>- Percentage of agencies and service units mastering screening and reducing NCDs risks of target group in line with the required quality and standards</td>
<td>- Bureau of Nutrition, Department of Health</td>
</tr>
<tr>
<td><strong>KPIs</strong></td>
<td></td>
<td></td>
<td>- Bureau of Medical Technical and Academic Affairs, Department of Medical Services</td>
</tr>
<tr>
<td>• Decreasing percentage of population prone to NCDs (obesity, high blood pressure, cholesterol, diabetes, smoking, excessive alcohol consumption)</td>
<td>Output 5.1.2: Guidelines for provision of service and modified, integrated communication media to reduce risks in communities, schools, workplaces, business premises, and healthcare stations</td>
<td></td>
<td>- Office of Alcohol Control Committee</td>
</tr>
<tr>
<td>• Percentage of NCDs patients (coronary artery disease, stroke, diabetes, cancer, and Emphysema) accessing services</td>
<td>Output 5.1.3: Availability of health agency/consultant to reduce NCDs risk on individual level</td>
<td></td>
<td>- Bureau of Tobacco Control</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bureau of Occupational and Environmental Disease, Department of Disease Control</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bureau of Mental Health Promotion and Development</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Bureau of Dental Health, Department of Health</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>- Department of Physical Activity and Health, Department of Health</td>
</tr>
</tbody>
</table>
and health care treatments in line with required standard

<table>
<thead>
<tr>
<th>Output 5.1.4: Availability of health agency/consultant to reduce NCDs risk on organizational level</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output 5.1.5: Effective risk reduction service model</td>
</tr>
<tr>
<td><strong>Strategy 5.2</strong>: To reform the process of service provided to patients suffering from chronic diseases (with or without complications) at medical facilities to enhance efficiency and promote self-care among patients</td>
</tr>
<tr>
<td><strong>Output 5.2.1</strong>: Expanding chronic disease services to ensure extensive and effective services at primary care units</td>
</tr>
</tbody>
</table>

**Strategy 5.2 indicators**

- Percentage of service units deploying improved chronic disease management which are more effective and facilitate self-care of patients with chronic disease and complications on a continual basis in line with required quality and standard

| Output 5.2.2: Develop chronic disease clinics as well as behavioral change/ |

- Bureau of Health Promotion, Department of Health
- Bureau of Environmental Health, Department of Health
- Institute of Thai Traditional Medicine
- Department for Development of Thai Traditional and Alternative Medicine
- FDA Thailand
- National Health Security Office (NHSO)
- Ministry of Labour
- Ministry of Education
- Department of Local Administration, Ministry of Interior
- Social Security Office, Ministry of Labour
- Sweet Enough Network, Thailand
- Low Salt Thailand Network
- Network of Fatless Belly Thais
- Chairman of Thai NCD Alliance
<table>
<thead>
<tr>
<th>Output 5.2.3: The multi-disciplinary team is equipped with knowledge and skills to provide services relating to prevention of chronic diseases and complications by facilitating self-care and encouraging mitigation of behavioural risks of service recipients.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output 5.2.4: Information system to provide undisrupted care for patients, which is connected to the network of various health service units.</td>
</tr>
</tbody>
</table>
**Strategy 6:** Development of support system for integrated operations

<table>
<thead>
<tr>
<th>Strategy / Key Performance Indicators (KPIs)</th>
<th>Strategy</th>
<th>Indicators</th>
<th>Action owner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strategic goal</td>
<td>Strategy 6.1: To develop mechanism that effectively drives operations in line with strategies mutually implemented by allied partners</td>
<td>Strategy 6.1 indicators</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Output 6.1.1: Mechanism to facilitate undisrupted operations as per strategies on district, provincial, and national levels, which are carried out by all participating allied entities</td>
<td>Percentage of projects implemented in an integrated manner</td>
<td></td>
</tr>
</tbody>
</table>
|                                            | Output 6.1.2: Integrated action plan of all sectors and implementation thereof | - Thai Healthy Lifestyle Strategic Management Office  
- Bureau of Non-Communicable Diseases  
- Office of the National Economics and Social Development Board  
- Bureau of Policy and Strategy, Office of Permanent Secretary, Ministry of Public Health  
- National Health Security Office (NHSO)  
- Thai Health Promotion Foundation  
- Health System Research Institute (HSRI)  
- Social Security Office, Ministry of Labour  
- Department of Medical Services  
- Department of Health |
| **KPIs**                                   | Strategy 6.2: To develop the tracking system to assess the result of NCDs prevention and control on provincial, regional, and national levels | Strategy 6.2 indicators |
|                                            | Output 6.2.1: Plan and mechanism to track and assess the result of strategic plan and action plan thereof | Percentage of projects on chronic NCDs prevention and control tracked and assessed on each |
|                                            |                                                      |                          |
|                                            |                                                      |                          |
Output 6.2.2: Management system for a series of information to enable inclusive tracking and assessment that connects to all sectors in line with the strategies.

**Strategy 6.3: To develop personnel of all related alliances to drive operations in line with the strategies**

Output 6.3.1: Effective manager team undertaking chronic disease on sub-district, district, provincial, regional, and national levels.

Output 6.3.2: Public health team and multi-disciplinary team equipped with knowledge and skills to provide advice, induce behavioral change, and care for patients with chronic diseases in an inclusive manner.

Output 6.3.3: Personnel in organizations and network such as educational institutions, business premises, local administrative organizations, and civil society sector.

**Strategy 6.3 indicators**

- Percentage of key personnel on different levels delivering operations in line with required standards.

- Health Service Support Department
- Department for Development of Thai Traditional and Alternative Medicine
- FDA Thailand
- Department of Mental Health
- Department of Local Administration, Ministry of Interior
- Office of Permanent Secretary, Ministry of Education
- Office of the National Primary Education Commission
- Office of the Basic Education Commission
- Office of the Higher Education Commission
- International Health Policy Program (IHPP)
- Institute of Nutrition, Mahidol University
- Institute of Research, Knowledge Management, and Standards for Disease Control (IReM)
<table>
<thead>
<tr>
<th>Strategy 6.4: To integrate research and management of knowledge and innovation to facilitate NCDs prevention and control system</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output 6.4.1: Development of research network and plans, knowledge management, and innovations for the purpose of proper application</td>
</tr>
<tr>
<td>Output 6.4.2: Long-term research plan to develop a chronic disease management system</td>
</tr>
<tr>
<td>Output 6.4.3: Further development of researches and innovations, which pave way for policies or support for commercial production</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Strategy 6.4 indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Percentage of NCDs research plan and knowledge management implemented as planned</td>
</tr>
<tr>
<td>• Percentage of research, knowledge, and innovation disseminated and applied</td>
</tr>
</tbody>
</table>

- Primary Health Care Division (Primary Health Care Region)
- Bureau of the Budget
- Bureau of Inspection and Evaluation, MOPH
- Regional Health Office
- Office of Disease Prevention and Control
- Provincial Health Office
- District Health Office
- District and provincial hospitals, sub-district health service stations
- District Health Coordinating Committee (DHCC)
- PCC, DHS, DHB
- Local administrative organizations