Appropriate and necessary national health screening policy for the population

Definition

1. "Health screening" means to conduct screening for diseases or risk factors in those who do not have signs and symptoms of diseases or illnesses that are related to the screening tests, leading to health behavior modification and health promotion for those whom received health screening.

2. Health screening in this document does not include: (1) a medical examination for those who have signs, symptoms or abnormalities, and (2) a medical examination for those who already have diseases or chronic diseases (such as diabetes, hypertension, etc.) in order to find complications associated with the illness.

3. "Appropriate and necessary health screening" means reasonable health screening conducted by doctors or assigned medical and public health staff. The health screening focuses on examining medical history and physical examinations. Laboratory examinations will be conducted only when there is evidence indicating that it is cost-effective. Health screening is used to identify diseases and risk factors which can lead to personal health care and early treatment.

4. "General population" means individuals who have no symptoms of illness associated with the disease prior to the particular health screening.

Magnitude of problems, situation and trend

5. From the Thai National Health Examination Survey, it was found that some of the general population was not aware of the risk of disease or illness. More than one-third of people with diabetes did not know that they have diabetes and more than half of those with hypertension had not been diagnosed with it before. [1] It was found that during 2006-2007, 42.5% of women aged

15-59 years had been diagnosed with cervical cancer while 18.3% had been diagnosed with cervical cancer prior to 2006. Cervical cancer can be detected at an early stage using simple tests (Pap smear) and can be treated effectively.

6. Cervical cancer is the leading cause of death in Thai women. In 1998-2010, it was found that on average 5,000 women die from cervical cancer a year, or about 14 people a day [2]. The incidence of new cases was estimated to be 6,000 people a year. The cost of care for patients with cervical cancer was estimated to be 350,000,000 baht a year [3].

7. However, many agencies are trying to increase the coverage of cervical cancer screening by initiating a cervical cancer program in 76 provinces [4]. From a survey conducted during 2005-2009, it was found that 68% of women aged between 35-60 years old has had cervical cancer screening at least once, meaning that 32% of these women never received such screening [4].

8. Such examples suggest that if the general population received appropriate and necessary health screening, it will help find disease and risk factors leading to health behavior modification or prevention of complication in a timely manner. This can result in a reduction of economic and social losses.

9. Some groups of the general population did not realize the importance of health screening and did not receive necessary health screening, while another group of people, especially those in urban areas, tended to use services that are beyond necessary medical check-up requirements. This is partly due to the users' old habits and tendencies to use these services, and the lack of health agencies which determine the required standards for health screening. Additionally, there are also no agencies which aim to educate and advise the public about upcoming medical technology.

10. The general population group that had excessive health screenings usually underwent laboratory screening, of which many of them lack evidence of efficacy and effectiveness. As a result, a negative consequence called a false positive—whereby the result from testing is positive while in fact the disease is not present—causes waste and increases the risk of further diagnosis and unnecessary treatment along with anxiety from such a result [5,6]. In addition, when a disease is detected, it is necessary to advise the public about self-care in

order to improve their own health care since a lack of knowledge may harm the patients.

11. Those who were not found to have diseases may become negligent and ignore their health risk factors such as obesity, alcohol consumption, tobacco consumption, lack of physical activity, etc. [5]. The results may have been a true negative (no disease) or false negative (undetected disease), caused by inaccurate screening technology. The negative result can mislead people about their health and cause them to maintain risky behavior.

12. Therefore, it is important to educate the public and raise awareness regarding the consequences of false positives and false negatives.

13. Some people in urban areas tend to use services that are beyond the necessary medical check-up requirements. As a result, there is an excessive amount of advertisements for health screening, especially for general health checks. These commercial packages are beyond necessary and serve the purpose of generating revenue for the service providers, with prices ranging from the low thousands up to ten thousands [8,9]. This causes the public to assume that health screening requires laboratory testing [10] and focuses on diagnosing diseases, thereby overlooking the importance of maintaining well-being and self-care.

14. Advertisement is one of the factors that affect public interest. The health reforms network made it clear that they want to establish an annual health check as a right for the general population in the draft National Health Bill, B.E.… [11]. From a survey of residents in the Bangkok Metropolitan Area, it was shown that health screening is the first service that people would like government to provide [12]. Also, the public considered setting out a guideline for health screening in the general population as the main issue[13].

15. There is a disparity among health screenings for beneficiaries in Thailand's three public health insurance schemes, as follows:

15.1. For beneficiaries under the Civil Servant Medical Benefit Scheme (CSMBS), a list of 16 laboratory tests is included in the benefit package, depending on age and sex. These tests can be reimbursed based on clear reimbursement policy [14]. The total number of people under the Royal

Decree on Medical Benefit B.E. 2553 (2010) was 1,917,373 people [15]. In the case where all beneficiaries were to receive the screening test, it is estimated that the required budget will be 1,672,891,290 baht. However, this benefit package for health screening currently lacks data to support its efficacy and effectiveness. Also, there is no monitoring and evaluation, and therefore is not known whether such a package is useful and at what cost.

15.2. For beneficiaries under the Universal Health Coverage Scheme (UC), a budget of 15,197 million baht was allocated to provide a health promotion and prevention program for 65.404 million Thai people, stated in an announcement from the National Health Security Office based on the rules and regulations of operation and management of the National Health Insurance Fund in fiscal year 2013 [16]. For health screening, this scheme supports health care providers in offering screening programs for cervical cancer, depression, metabolic diseases and HIV infection [17, 18, 19].

15.3. For beneficiaries under the Social Security Scheme (SSS), there is no clear benefit package for health screening. It only mentioned that employers need to provide health screening according to risk factors and provide health books. This is in accordance with the Ministerial Regulation on the Prescribing of Criteria and Method of Conducting Health Check up of Employees and Forwarding the Results of Health Check up to Labour Inspector B.E. 2547 (2004) [20]. As a result, the beneficiaries must bear the cost of any potential health screening at their own discretion. Moreover, it also found that the current implementation of health screening in this scheme is not up to standard and lack of quality in order to screen for any underlying abnormalities.

16. At present, there is demand from the public sector and politicians to amend the Social Security Act B.E. 2533 (1990) [21] by adding more benefits on health promotion, disease prevention and annual health checks [22,23,24]. However, such demand may be problematic in practice due to a lack of information about necessary health screening. Therefore, the Social Security Office has initially only increased the budget for health promotion and disease prevention, without including annual health checks. Thus, the guidelines for necessary health screening are essential for this matter.

17. Apart from the beneficiaries in the three public health insurance schemes, people who use private health insurance, often done in conjunction with life insurance, require health screening. Moreover, many beneficiaries in the three public health insurance schemes pay out of pocket to receive additional health screening—apart from their benefit packages—from health facilities that advertise. From the survey of the National Statistics Office [25], it was found that the total population that received health screening was 821,319 and 545,017 people in 2009 and 2011, respectively.

18. The total cost of health screening in 2009 and 2011 were 1,510,314,257 million baht (1,838.88 baht/person on average) and 2,263,522,027 million baht (4,153.12 baht/person on average), respectively [25]. The burden of these costs falls on the public because it cannot be reimbursed. It is noteworthy that the percentage of people whom received health screening declined 33.64 percent, but the costs increased 49.87 percent, resulting in an increased average cost of 2,314.24 baht per person, or more than 125 percent.

19. Currently, governments in most developed countries use health screening programs as a key strategy for the prevention and control of health problems for public well-being, increasing efficiency of operations and reducing costs in some circumstances [25]. These countries tend to continually develop policies and set standards for their national health screening program [26,27,28] including: (1) selecting a term-based national committee according to predefined characteristics to consider health screening guidelines; (2) explicit involvement with institutions/agencies (multiple stakeholders) such as agencies that are responsible for reviewing and synthesizing evidence and agencies that have a role in the dissemination of information, including guidelines for each health screening; and (3) assigning an agency to monitor and evaluate the implementation closely. In the United Kingdom, health screening policies are reviewed every three years to reflect the change in knowledge [28]. As a result, the health screening program in UK is conducted in an equal and systematic way. Meanwhile, there is no agency that has the role of monitoring and controlling the standard of health screening in Thailand as well as to develop an appropriate health screening policy at the national level.

20. The health screening mentioned earlier will lead to behavior modification and health promotion, which will help achieve well-being in a holistic way according to "Build Health Before Repair", which corresponds to Section 4 in Health Promotion, the Statute on the National Health System B.E. 2552 (2009).

21. In Thailand, many organizations have tried to disseminate news and information about the appropriate and necessary health screening and published various type of information. In 1977, the Thai Medical Council published an article named "Health check: for doctors or for public?" in the Thai Medical Council Bulletin [29]. In 2000, they also published "Guidelines for health screening for Thai population" [30]. In the same year, the Folk Doctor Foundation published an article named "Time to rethink about health screening, No pain and no regrets unnecessarily" [31] and the Health System Research Institute published a Guideline for health screening and health promotion for Thai population [32]. In 2002, the Phramongkutklao College of Medicine organized an annual symposium under the name "Optimum Health Screening for Thai" [33]. The National Health System Reform Office published a book called "Annual health check: how and how many" and promoted social understanding about necessary health screening in 2003 [34]. Of all the efforts in the past, there has been no published data on the effectiveness of these attempts in making the general public aware, understand and informed about health screening. Additionally, there has been a lack of coordination in pushing this agenda at the policy level, and operations have not been unified and lack continuity, including mechanisms (primary institutes and their budgets for research and development) to develop knowledge continuity. There is also no system to monitor and evaluate health check policies at the national level. The policy needs to be recognized by the Health Professions Council to be implemented.

22. However, in 2009, there were efforts from various organizations to consider guidelines for health screening and health promotion in Thailand [35] such as the National Health Research Institutes, the National Health Security Office, the Thai Health Promotion Foundation and medical schools. Initially, issues for consideration about health promotion and health screening and their conclusions include: (1) the prevalence and severity of disease, by screening for diseases that have incidence or prevalence; (2) the effectiveness of the

screening test, by using tests that are safe and have high sensitivity and specificity in order to reduce the number of false positives and false negatives; and (3) the effectiveness of treatment when the disease is detected at an early stage, by screening for diseases where effective treatment exists.

23. In addition, Health Intervention and Technology Assessment Program (HITAP) [25], Ministry of Public Health conducted a research entitled "Development of population-based screening package in Thailand". This research topic was selected from a prioritization process conducted in 2011 and was proposed by the Civil Servant Medical Benefit Scheme Unit, the Comptroller General's Department. The study found that the total cost of the health screening package provided by the CSMBS was around 530 - 1,200 baht/person/year, while the proposed screening package was around 380-400 baht/person/year, depending on age and gender. The lower costs of the screening package were due to some types of health screening that were not recommended annually and some high-cost screening tests were not recommended because there was no evidence to support the benefit and some were not disease-specific.

24. Health Intervention and Technology Assessment Program (HITAP), therefore, proposed the following policy recommendations:

24.1. The results of this study should be used to develop a benefit package so that the public receives appropriate services.

24.2. Educate the public so they will not believe the commercials and not receive unnecessary health screening.

24.3. Support training to develop health professionals' skills to be able to provide health screening programs at the national level.

24.4. Provide support for research and development to continue to improve health screening policy, and ensure that policies are up-to-date and appropriate for Thai society.

25. The World Health Organization's guidelines for screening are defined [36] as: "(1) the condition sought should be an important health problem, (2) there should be an accepted treatment for patients with the recognized disease, (3) facilities for diagnosis and treatment should be available, (4) there should be a recognizable latent or early symptomatic stage, (5) there should be a suitable

test or examination, (6) the test should be acceptable to the population, (7) the natural history of the condition, including development from latent to declared disease, should be adequately understood, (8) there should be an agreed measure on whom to treat as patients, (9) the cost of case-finding (including diagnosis and treatment of patients diagnosed) should be economically balanced in relation to possible expenditure on medical care as a whole, and (10) case-finding should be a continuing process and not a once and for all project."

The role of key stakeholders and current situation in Thailand

26. In order to proceed with health screening, there are many stakeholders involved, such as:

26.1. The medical and professional association, academics, and the Ministry of Public Health should be involved in the research and development of knowledge about appropriate and necessary health screening.

26.2. The National Health Security Office, the Social Security Office and the Comptroller General's Department, Ministry of Finance have a role in determining policy for financing and lists of appropriate and necessary health screening for the general population. In order to determine such policy, evidence-based information is needed for the decision-making process.

26.3. Many organizations in the private sector that provide their employees and outsourced workers with health screening must bear the costs. In many cases, there may not be many benefits via the use of such screening to promote the health of employees. Moreover, some private sector organizations provide services and encourage the public to receive health screening, some of which are often unnecessary and expensive.

26.4. Many local governments have become interested and now spent a limited budget to provide health screening services to people in the community, although the services they provide may be low in terms of quality and standards.

26.5. The Thai Health Promotion Foundation, the Ministry of Public Health, public health facilities, the medical council, professional councils and associations and the consumer protection agency should disseminate information and raise awareness about appropriate and necessary health screening to the general population.

26.6. Mechanisms or agencies that are involved in the development of appropriate and necessary health screening policy at the national level includes

those that establish criteria/ guidelines for appropriate and necessary health screening, those that audit and control standards, those that educate or provide information to the public and those that monitor program implementation.

Issue for consideration by National Health Assembly

Requesting the National Health Assembly to consider Document National Health Assembly 6/Draft Resolution 4, appropriate and necessary national health screening policy for the Thai population

References

1. National Health Examination Survey Office. The 4th National Health Examination Survey B.E. 2551-2552. Nonthaburi: The Graphico Systems Co Ltd, B.E. 2552 (2009).
2. Health Information System Development Office. http://www.hiso.or.th. Health statistics.
3. Institute for Population and Social Research, Mahidol University. How to tackle the cervical cancer in the right track. Thai Health B.E. 2551 (2008). Bangkok: Amarin Printing & Publishing Public Company Limited.
4. National Cancer Institute. Cervical cancer screening program in 76 provinces. www.Cxscreening.net.
5. Sant Hathirat. Should we receive health check up. In Niracha Atsawateerakul, Annual health check: how and how many. National Health System Reform Office. Bangkok; B.E. 2546 (2003).
6. Sant Hathirat. Death from health screening. Folk Doctor Magazine. Issue 345. (January, B.E. 2555 (2012)): 30-33.
7. Sant Hathirat. Hypoglycemia. Folk Doctor Magazine. Issue 371. (March, B.E. 2556 (2013)): 30-33.
8. Nonthavej Hospital. http://www.nonthavej.co.th. Health check up program.
9. Bumrungrad Hospital. www.bumrungrad.com. Health Check-up Packages.
10. Sant Hathirat. Population and Health. Matichon (27 September B.E. 2544 (2001)): 6.
11. National Health System Reform Office. A proposal for the framework of national health system from multiple stakeholders (draft). B.E. 2544 (2001). (copy).
12. ABAC Poll, University of the Assumption. The results of field research: Explore the tax alcohol and cigarettes in public gaze: a case study of the Bangkok Metropolitan Area. B.E. 2544 (2001). (copy).
13. Folk doctor foundation. The result of a survey on key issues that should be published in Clinical Journal. B.E. 2544 (2001). (copy).
14. The Royal Decree on Medical Benefit B.E. 2553 (2010).
15. The Comptroller General's Department, Ministry of Finance. Government officer database. B.E. 2556 (2013).

16. The National Health Security Office. Announcement from the National Health Security Office on the rule and regulation of operation and management of Nation Health Insurance Fund in budget year B.E. 2556 (2013).
17. The National Health Security Office. National Health Insurance Fund Administration Guide in budget year B.E. 2556 (2013). Bangkok, 2012.
18. The National Health Security Office. National Health Insurance Fund Administration Guide in budget year B.E. 2556 (2013). Vol. 4 Financial management of chronic disease prevention, control and treatment services: diabetes and hypertension control. Bangkok.
19. The National Health Security Office. National Health Insurance Fund Administration Guide in budget year B.E. 2556 (2013). Vol. 2 Financial management of HIV, AIDs and tuberculosis services. Bangkok.
20. Ministry of Labour. Ministerial Regulation on the Prescribing of Criteria and Method of Conducting Health Check up of Employees and Forwarding The Results of Health Check up to Labour Inspector B.E. 2547 (2004)
21. Social Security Act B.E. 2533 (1990)
22. The Secretariat of the House of Representatives. Letter dated November 27, B.E. 2555 (2012). Received number 115/2555 dated November 23, B.E. 2555 (2012). Notified about the draft Social Security Act (No. ...) B.E. ..... commissioned by Mr. Raywat Areerob.
23. The Secretariat of the House of Representatives. Notified about the draft Social Security Act (No. ...) B.E. ..... commissioned by Miss Wilaiwan Saetia, *et al*.
24. The Secretariat of the House of Representatives. Letter dated April 4, B.E. 2555 (2012). Received number 21/2555 dated April 4, B.E. 2555 (2012). Notified about the draft Social Security Act (No. ...) B.E. ..... commissioned by Mr. Nakorn Machim.

25. Health Intervention and Technology Assessment Program (HITAP). Development of population-based screening package in Thailand.
26. http://www.uspreventiveservicestaskforce.org
27. http://canadiantaskforce.ca/
28. http://www.screening.nhs.uk
29. Sant Hathirat. Health check: for doctors or for public?. The Thai Medical Council Bulletin. Volume 6, Issue 7 (July, B.E. 2520 (1977)): 339-350.

30. The Medical Council of Thailand. Guidelines for health screening for Thai population. Supachai Kunaratanapruk, Vitaya Sridama, Verapol Chandeying, Srisupalak Singalavanija, editors. Bangkok; INS Limited. 1st publish, B.E. 2543 (2000).
31. Surajit Suntorntham. Time to rethink about health screening, No pain and no regrets unnecessarily. Folk Doctor Magazine B.E. 2543 (2000); 21: 18-23.
32. Health System Research Institute. Surajit Suntorntham, editor. Guidelines for health screening and health promotion for Thai population. Consortium of Thai Medical School. B.E. 2543 (2000).
33. Surajit Suntorntham. Phramongkutklao College of Medicine. Document for discussion. The 30th Annual Phramongkutklao Symposium B.E. 2545 entitled "Optimum Health Screening for Thai". Conference date: November 26, B.E. 2545 at conference hall, Mongkut Klao Vej Wittaya.
34. Amphon Jindawatthana. Annual health check: a Health pitfall? In Niracha Atsawateerakul, Annual health check: how and how many. National Health System Reform Office. Bangkok; 2003.
35. Health System Research Institute, Thai Health Promotion Foundation, The National Health Security Office. Guidelines for health screening and health promotion in B.E. 2552. (copy).
36. Raffle, Angela E., and J. A. Muir Gray. Screening - Evidence and practice. Oxford University Press, 2007.