

DEVELOPMENT OF PREVENTION AND CONTROL ON TUBERCULOSIS MODEL IN SAMUT PRAKAN PROVINCE

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Abstract

This research is qualitative research. The objective is to study and develop the model of tuberculosis prevention and control operation in Samut Prakan Province. Using the McKensy 7's Model concept. The research was conducted during July 21 – June 2022. Tools Used Parts 1 Documentary Research Study the context of Samut Prakan province and guidelines for tuberculosis prevention and control operations. Part 2 In-Depth Interview on tuberculosis prevention and control operations in Samut Prakan Province. 12 key contributors and 14 focus group discussions. The study found that 1) Samut Prasad province is a metropolitan area, an industrial city that drives the economy; it has a passive population that is about 1 time greater than the population, according to the Rat Register, affecting the responsibility of healthcare workers in public health care. This is especially true during the COVID-19 pandemic. TB prevention and control performance based on key indicators in 2018 – 2021 is likely to decline, not achieve the target. This is due to the COVID-19 pandemic. As a result, operations are difficult due to increased workload of health officials. However, the public's good health habits in wearing masks. All the time as a result, new TB infections are likely to decline. 2) Development of TB Prevention and Control Operations In Samut Prakan Province, according to McKensy 7's Model, the strategy is based on the national anti-TB action plan, upgrading the mechanisms of ASM/ASAT and moving the search operation for infected and patients in the community in collaboration with local government organizations, accelerating the annual health check-up policy. And 5S as a base for improving the environment in households and in communities. Structure focuses on defining the responsible person clearly. The facility is clear and works in a multidisciplinary manner. The system focuses on utilizing NTIP programs to the fullest efficiency and thoroughness, driving SMART Hospital HA standards along with hospital quality assessment standards for TB care. Style, Strategy Leadership and Decentralization of Management for Practitioners. Staff managed in a network/zone format. Learn lessons learned (AAR) every year, continuously improving academic knowledge. Skill accelerates the development of essential skills, including interpersonal and motivational skills, Information Technology, Communication and Coordination, Consulting and qualitative measurement and the share values that are in every practitioner's heart are committed to achieving their goals under "Search to find, end with lost, and zero deaths ". And 3) Policy recommendations, expedite the comprehensive search for TB infections and TB patients by screening in vulnerable groups. Establish sustainable strategic management mechanisms and support the development of mechanisms for the implementation of public-private partnerships. To provide care for tuberculosis patients in all benefits, effective care is provided by the infected person at the center.

Keywords: Tuberculosis / Prevention / Control

INTRODUCTION

In 2015, the World Health Organization grouped countries with high TB problems. Thailand is ranked as one of the 14 countries with severe global TB problems, including general tuberculosis, disease and AIDS, and drug-resistant tuberculosis. And it estimates 120,000 new TB cases per year, of which 120,000 are deaths. As well as having multiple doses of drug-resistant TUBERCULOSIS, it is estimated that approximately 2,200 cases per year, The United Nations and the World Health Organization have designated control and prevention as

sustainable development goals (SDGs) in the UN framework and end TB strategy. The goal is to reduce the rate of new TB cases to 20 and 10 per Lakh populations by 2030 and 2035, respectively (Division of Tuberculosis, Department of Disease Control, 2018).

Thailand has a higher rate of new TB cases than the global average. 1.3 times the number of cases detected and reported, accounting for only 59% of the estimated number of cases. This indicates that part of the patient's access to treatment is delayed or inaccessible, this causes the spread of infection in the community. As a result, the estimated sickness rate is only slowly declining, according to a multidisciplinary assessment of tuberculosis operations by experts from international organizations. In this region, it was found that Thailand is facing several significant challenges, such as the relatively high mortality rate of tuberculosis patients, delayed diagnosis, Redundancy in performance monitoring and evaluation systems inaccuracy in submitting TB reports in services outside the Ministry of Health, drug-resistant TB diagnosis rates that do not yet cover drug-resistant TB risk groups, barriers to access TB care of migrant populations, This includes the challenges of freedom of residence and occupation of people in the ASEAN region (Tuberculosis Division, Department of Disease Control, 2018).

Samut Prakan Province is in the 6th Health District, which is a metropolitan province, as the urban area is complex and difficult to implement. This is because Samut Prakan province has a large latent population. The population, according to the Rat Register as of July 1, 2020 was 1,348,876. The number is about 2.5 million people (Samut Prakan Province, 2020). This results in a high rate of movement in and out of the population. Gorp and Samut Prakan provinces have both public and private sector facilities, with public hospitals. 6 private hospitals 21 properties. There are 18 private hospitals that treat tuberculosis patients. For the successful outcome of TB treatment, the overview of Samut Prakan province. In 2019, the total number of registered cases was 1,892, Successful treatment 71.62 per cent, died. 3.91 percent, lack of medication. 7.45 percent, failed. 0.63 per cent and transfers out 3.17 per cent. The TB situation in Samut Prakan province also showed a relatively high rate of drug deficiency. For the performance of TB control indicators in 2020 1) The coverage rate of new and recurring TB treatment coverage was 100.9% and 2) the success rate for treating new pulmonary tuberculosis patients (success rate) is 85.5 percent (the Ministry of Health targets equal to or greater than 88 percent). Samut Prakan's TB prevention and control operation also has the opportunity to develop operations to achieve the goals set out within the context of Samut Prakan province with complex problems. The covid-19 pandemic, which began on December 30, 2019, has been staggering. In Thailand, when the first cases occurred in January 2020, the covid-19 situation resulted in a decrease in new patient search activities, as well as intermittent follow-up treatment of patients undergoing treatment.

Therefore, the researchers are interested in studying the development of tuberculosis prevention and control operations in Samut Prakan province in order to develop a model suitable for the area of TB operation to achieve the goals and meet the policy of the Ministry of Public Health in preventing and controlling TB disease. The problem is conditioned and context of Samut Prakan province continues.

RESEARCH OBJECTIVES

General Objectives

1. To study the situation of tuberculosis prevention and control operations in public and private hospitals. Samut Prakan Province

Specific Objectives

2. To study and develop the model of tuberculosis prevention and control operation, Samut Prakan Province.

3. To prepare proposals for the development of tuberculosis prevention and control operations in Samut Prakan Province.

LITERATURE REVIEW

McKinsey's 7-S Model concept

McKinsey's 7-S Model, or 7-S Model, is one of the executive theories developed in the early 1980s by Tom Peter and Robert Smith. Robert Waterman has a basic idea that the efficiency of a business organization is due to internal relationships of seven different factors. It's about being productive and successful for any organization. These 7 factors need to be consistent. This element includes corporate strategy. Structure, System, Personnel, Skills and Knowledge Skill, style and shared values as follows:

1. Corporate strategy is a plan to be used as a tool to build competitiveness that surpasses competitors. And in response to changes in the environment outside the organization, it is a way in which individuals within the organization know what direction to put their efforts in to succeed.

2. Structure is the way in which the organization is placed on the relationship between authority and responsibility in the form of an organization chart. The consolidation of power or the decentralization of the executive branch requires delegation. And authority to perform duties (Authority) to those responsible, including determining the order of reporting in the form of a line of command.

3. A system is a daily activity and a process in which the joint operator is responsible for achieving the success of the work. These processes and operational hierarchies will be continuous systems that are coordinated at all levels, such as procurement systems, Accounting System, Service System, Information Systems, financial system, budget system, control system, Risk management system and clear operational regulations should be established for personnel to follow in the same way.

4. Style is a management style which is unique to each organization. And it is related to the culture of the organization as a form of leadership that is accepted by the people in the organization. Command, control, Incentives, etc. These patterns reflect the corporate culture.

5. Staff, Human Resource Management; Human resources are a critical factor for success. This depends on human resource planning, characterization, and proper selection and placement of personnel. Human resource demand analysis process, Personnel decisions in various areas should be analyzed based on organizational strategies and information on various aspects of the organization.

6. The skills, the organization must be aware of the key skills of the organization. In the performance of human resources in an organization, skills can be separated into 2 main areas: professional skills, which are the basic skills that personnel in the organization must have and skills, Aptitude or special intelligence What the organization must do is to find the skills of its personnel and carry out support for personnel to receive training as necessary to increase the efficiency of personnel, which will directly affect the competitive performance of the organization.

7. Shared values are guidelines or norms that members of an organization adhere to together and practice continuously until they are routine, or they can be called corporate culture. The same shared values and goals of the organization will help the work of personnel to move towards the same aims as a team, having a strong culture and driving the organization to success.

The concept of 7's McKinsey deals with 7 factors of interdependence, divided into both "hard and heavy" and "humble" within the organization.

"Hard and heavy" elements include strategy, structure and system, "hard and heavy" elements are easier to define or identify how to directly manage and influence them. These strategies require organizational charts and chains of command, formal processes, and information systems to support them.

The "humble" elements include shared values, skills, style, and staff. The "humble" element is something that is difficult to explain and has little individuality, influencing the overall corporate culture. Humble elements are very important to the organization or the job they want to accomplish. The 7 factors are of paramount importance, as a mutual promoter, as a result, the organization is effective and leads to the achievement of its goals.

RESEARCH METHODOLOGY

It is a qualitative data collection and analysis consisting of Part 1 Document Research to study the context of Samut Prakan Province and guidelines for the prevention and control of tuberculosis disease in Samut Prakan Province. Part 2 In-Depth Interview on tuberculosis prevention and control operations in Samut Prakan Province. The population studied was 12 people. Representative of the Director of Public Hospitals, Representative of the Director of Private Hospitals, The person responsible for the tuberculosis work of government hospitals, Office of the Permanent Secretary of the Ministry of Health 6 hospitals (6 hospitals), Representatives responsible for the main tasks of private hospitals 2 locations, Representatives responsible for the main tasks of the District Health Office. 1 person and 1 representative responsible for the main work of the district health promoting hospital. And 14 Focus Group discussions. People include: Persons responsible for tuberculosis work of government hospitals

under the Office of the Permanent Secretary of the Ministry of Health 6 persons, Persons in charge of the work of private hospitals 2 persons, Person in charge of the work of the District Health Office. 2 persons, Person in charge of the work of the District Health Promotion Hospital (S.S.T.) 2 persons and persons responsible for tuberculosis work of Samut Prakan Provincial Public Health Office. 2 persons. McKensy 7's Model concept consists of: Strategy, Structure, System, Style, Staff, Skills and Share Values.

Verifying the reliability of data obtained from in-depth interviews with a data triangle. And checking the accuracy of the tool by bringing in questionnaires created for 3 experts. Consider giving the IOC (Index of Item Objective Congruence) score, there are individual IOC values between 0.08-1.00. Questionnaires can be used to ask any question. And this research ethics committee research in humans, The Samut Prakan Provincial Public Health Office has endorsed research projects in accordance with the Guidelines for Research Ethics in Humans, The Ministry of Public Health is already in place.

CONCLUSIONS

Tuberculosis prevention and control operations situation in public and private hospitals Samut Prakan Province

Results Samut Prasad province is found to be an industrial city, driving the economy with more than 6,000 industrial facilities, more than 400,000 workers, The population, according to the Rat Register as of July 1, 2021 was 1,355,249. But according to a survey conducted by the Samut Prakan Provincial Statistics Office. The Samut Prasad province was found to have another latent population. There are 758,179 people living in Samut Prakan province without moving their house registration to Samut Prakan Province. The number reached 623,707. There are also more than 200,000 migrant workers, both formal and informal. The large number of residents is the responsibility of agencies and public health facilities to take care of the health of the people in the area. The Samut Prakan Provincial Public Health Office has given priority to all life living in Samut Prakan province, whether Thai or non-Thai in Samut Prakan province, Samut Prakan Provincial Public Health Office. Agencies at all levels adhere to the policies of the government and the Ministry of Health in accordance with the 20-year National Strategic Plan. The situation in Samut Prakan province and the number of people responsible for actually affecting the surveillance and control of major communicable diseases in Samut Prakan province, such as the covid-19 situation, which is a high-risk province with an epidemic in the early provinces of the country. This includes the surveillance and control of major communicable diseases, particularly the tuberculosis surveillance and control operations of Samut Prakan Province. The United Nations has set 17 Sustainable Development Goals (SDGs) with a 15-year framework to be achieved by 2030. One of the goals is to control, prevent and end the spread of TB, which is in line with the World Health Organization's End TB Strategy, which aims to direct TB operations to member states aimed at reducing TB incidence and reducing the number of deaths. However, the context of Samut Prakan province affects disease prevention and control actions due to the frequent relocation of Samut Prakan province's

population. With a large passive population, it is quite difficult to keep track of healthcare operations for coverage in access to services.

Disease Prevention and Control Operations in Samut Prakan Province It was found that the performance of key indicators in 2018 - 2021 is likely to decrease. The performance is based on the rate of coverage of tuberculosis patients. Set performance goals > 88 percent. The performance is likely to decline. In 2021, the performance was 51.2 percent, compared to 2018' 90.2 percent performance. The company sets a performance target of > 88 percent, with 2021 performance falling to 75.1 percent. In 2018, the performance was 81.1 percent and the rate of drug deficiency was 8.1 percent in 2021. Performance according to key indicators has not yet achieved the targets. This is an important factor due to the context of Samut Prakan province being a metropolitan area, an industrial city. Large latent populations importantly, the covid-19 pandemic has resulted in some difficulties in tuberculosis operations, especially in recent times of crisis. Grope and healthcare workers at all levels have a significant burden on surveillance operations. Prevention and control of coronavirus disease 2019 (COVID-19).

The results of the study, operational data, prevention and control of tuberculosis, The Ministry of Health has established key operational indicators under the Service Plan, Service System Development Program, Emerging communicable diseases are recurrent communicable diseases. TB Prevention and Control Operations have identified key operational indicators: 1) The success rate of treatment of new pulmonary TB patients consists of indicators: the treatment success rate of pulmonary tuberculosis patients and the rate of registration of new and recurring TB patients; by defining the success of treatment. Refers to new patients with pulmonary tuberculosis who have recovered combined with the full treatment. Cured means a new pulmonary tuberculosis patient who has laboratory results, has found the infection before herpes treatment, and subsequently does not detect TB at least once before the end of treatment. And in the last month of treatment, complete treatment. Treatment Completed refers to new pulmonary tuberculosis patients whose treatment is due. There was no evidence that the treatment had failed, and the patient had no documentation showing the results of the sputum test in the last month of treatment. There is at least one reduction in sputum test results before the end of treatment, including patients who have not been tested or have not had a test result.

For new pulmonary TUBERCULOSIS patients, this refers to TB patients who have never treated TB before, and patients who have treated TB for less than 1 month and have never registered. The National Tuberculosis Program is divided into 2 groups: 1) Patients with bacteriologically confirmed (B+) results. It refers to tuberculosis patients who have tested positive for sputum, possibly by Smear Microscopy or Culture, or molecular or other methods approved by the World Health Organization 2) Patients diagnosed with clinical characteristics. (Clinically Diagnosis: B) refers to tuberculosis patients who have a negative or non-tested sputum test result. However, the diagnosis by means of chest radiography or abnormal biopsy results for tuberculosis, together with clinical characteristics compatible with tuberculosis, and doctors judged on TB drug formulations with targeted treatments. The success rate for new pulmonary tuberculosis patients (Success Rate) is 88 percent and the registration coverage rate of new TB patients, and recurrence (TB Treatment Coverage), 88 percent. It targets Thai and

non-Thai patients and prison patients treated in public hospitals both within and outside the Ministry of Public Health and private hospitals (Strategy and Planning Division, Office of the Permanent Secretary of the Ministry of Public Health, 2021).

The results of the study of performance data based on key operational indicators include:

1. The coverage rate for registration of tuberculosis patients is more than 88% in FY 2018 - 2021, representing 90.2%, 106.7, 100.9 and 51.2%, respectively. The performance is likely to decline.
2. The success rate of treatment for tuberculosis patients is more than 88% in the financial year 2018 - 2021, representing 81.1%, 83.7%, 77.1 and 75.1%, respectively. The performance is likely to decline.
3. The rate of drug deficiency was less than 5% in the fiscal year 2018 – 2021, representing 9.3%, 9.6%, 8.7% and 8.1%, respectively.

Performance based on key indicators has not yet achieved the targets set. This is due to the covid-19 pandemic, resulting in a decrease in new patient search activity and intermittent follow-up treatment of patients.

Results The TB operating procedures of public and private hospitals operating TB during both normal circumstances and the covid-19 pandemic have found that the procedures for the operation when a person is found to be infected with TUBERCULOSIS are in accordance with the procedures during normal circumstances. During the covid-19 pandemic, screening in ARI Clinic rooms in both public and private hospitals, increase before sending for further examination in internal medicine clinics or tuberculosis clinics. This includes adjusting the appointment process to fast lanes instead of the usual channels, and adjusting the home visiting model to home visiting phones in both public and private hospital operations. However, "in the crisis there is still an opportunity" during the coronavirus disease 2019 (COVID – 19) pandemic, people have significantly improved health habits. By wearing face masks at all times in accordance with government and ministry of health policies, new infections are reduced.

The results of the study on the development of tuberculosis prevention and control operations in Samut Prakan Province

Based on the results of focus group discussions and in-depth interviews using McKensey 7's model. The results of the study, based on various issues, showed that:

1. Strategy: The results of the study showed that Samut Prakan Province the Samut Prakan Provincial Public Health Office and its affiliated agencies set the policy. Clear and concrete operational guidelines in line with government policy, Ministry of Health and Department of Disease Control, Ministry of Health. Samut Prakan Province has set health development targets focused on "urban development and good quality of life" in accordance with the Samut Prakan Provincial Strategic Plan 2023 – 2027. In respect of the Samut Prakan Provincial Public Health Office, the departments affiliated with the District Public Health Office, Hospitals and health promoting hospitals (St. John's Hospital) in the network, tuberculosis organizations and operations were analyzed jointly under the participation of relevant agencies, especially private

hospitals. GAP Analysis to provide information on planning to solve and improve TB operations in hospitals in both public and private hospitals. "Search to find, finish with lost, zero death toll." This is in line with the National Action Plan against Tuberculosis B.E. 2560 - 2021 (Additional 2022) within the context of Samut Prakan Province. In an urban context, the likelihood of transmission is plausible. Therefore, the operating model of Samut Prakan province must be quickly sought. Mechanically. At the local level, help find infected people in the community, 5S operations, keeping homes and communities clean is also fundamental to controlling the spread of many communicable diseases. Such investments do not use the budget and are the basis of good health behaviors, Self-discipline in health care and have the right health habits, this includes keeping an eye on the environment both at home and in the community to make the home and city livable.

2. Structure: The results of the study showed that provincial health administration agencies, namely, Samut Prakan Provincial Public Health Office, District-level provincial health administrations include all district health offices, Government hospitals and sub-district health promoting hospitals Affiliations, clearly structured and defined roles and responsibilities, there will be problems on the part of private hospitals. And decision-making power also requires the involvement of the top management of private hospitals, where the agility to drive operations in the public sector is more streamlined than that of the private sector. However, overall, there is a team operation that can support both public and private sector operations in the same direction.

3. System: The study found that a clear and conducive system for job development is information technology systems, National Tuberculosis Information Program (NTIP). This can be used for operational benefits as well, which should include NTIP system planning. Let the relevant personnel make the most of their benefits. In addition to that, the study found that the supportive and empowering system (Synergy) TB operations in hospitals are smart hospital systems, which will be a mechanism to enhance TB operations, coupled with having a quality assessment system for TB care, to concretely reflect the truth. Assessments are ongoing. Develop assessment guidelines to suit the context of Samut Prakan Province.

4. Style: The study found that the management style of leaders in TB operations is the strength of the organization. Management has a clear operational drive, focuses on GAP analysis, plans to solve problems, and looks for development opportunities. It is considered to be strategic leadership, as well as having the appropriate management powers distributed to the person in charge of the work to be able to make decisions and solve problems to improve the work.

5. Staff: The results of the study showed that knowledge, Attitude, Operational capacity is at a good level. As for the weaknesses, the study found that Samut Prakan province lacks the rate of force in the profession, as well as the morale gained in some departments, remains unclear. In particular, advancement in the profession, in which case of insufficient power rate problems, has proposed to work as a zone, develop teamwork to be more potent.

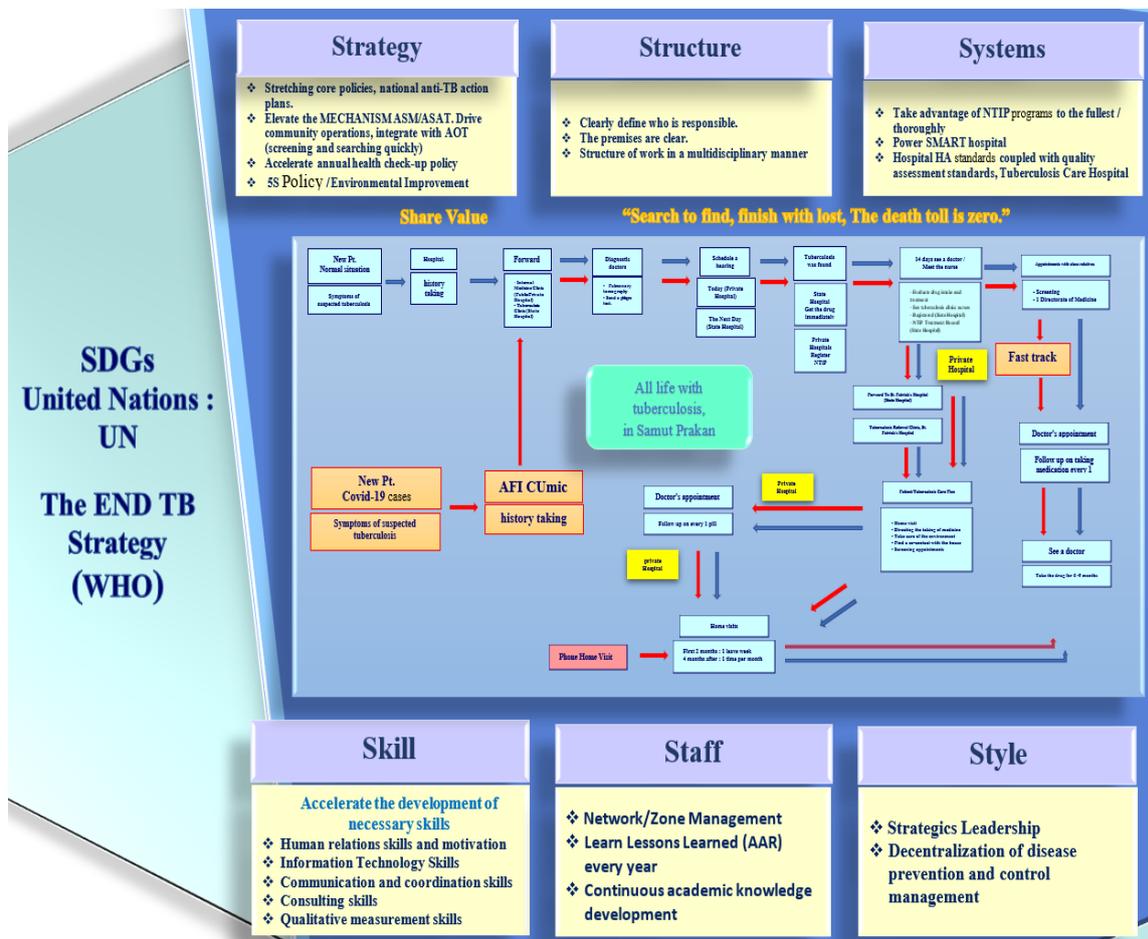
6. Skill: The results showed that personnel who perform TB tasks, consider that the skills that are necessary to perform TB tasks and should be developed include interpersonal skills and

motivation, Material Technology Skills, Communication and coordination skills, Consulting skills and qualitative performance measurement skills

7. Shared Value: The results of the study showed that corporate culture, The mindset of the people who will drive the work to achieve the goals that are in the hearts of every TB practitioner who wants it is to "find it, finish with it, lose it, the death toll is zero" This is like the common values of the organizations operating in Samut Prakan Province.

Based on the findings to contribute to the achievement of sustainable development goals (SDGs), the WHO's End TB strategy sets the goal of ending TB by 2035. Based on the results of the research study, the guidelines for the development of tuberculosis prevention and control models, Samut Prakan Province as shown in the diagram.

Diagram 1 Development of Prevention and Control of Tuberculosis Model in Samutprakan Province, McKensy 7's Model Concept



Proposals to guide the development of tuberculosis prevention and control operational models Samut Prakarn Province

According to research, in order to drive TB prevention and control policies to achieve the targets set. The researcher has the following policy recommendations:

Objective 1: Expedite the search for TB infections and TB patients by screening in vulnerable groups.

Operational Guidelines

1. In households and communities, provide a mechanism for public health volunteers (ASM). In search of chronic I risk groups, Weight loss to be screened for infection, to prevent the spread of infection, Work in partnership with local government organizations in the area.
2. In industrial facilities, push to have Asom in industrial facilities takes care of Thai workers and foreign health volunteers (ASAT) to take care of migrant workers, bring in vulnerable groups for screening. The central authority may push and encourage benefits similar to that of public health volunteers (ASM).
3. In public health facilities, a system of screening of patients in the facility should be put in place to find infected people in order to:

Objective 2: Create sustainable strategic management mechanisms

Operational Guidelines

Pushing policies to support livable urban operations, Community to look at, Good Environment, Livable Household Contest, Pleasant Village, to drive the operation of relevant ministries and local government organizations. A good environment can help solve the problem of many communicable diseases, whether it is tuberculosis, Dengue fever or cases of emerging infectious diseases that may occur in the future.

Objective 3: supports the development of a unified mechanism for the implementation of tuberculosis in the private sector so that the care of TB patients in all benefits is effectively cared for by the infected person.

Operational Guidelines

At both the central and provincial levels, written orders are given to drive the operation, there are policies and procedures in place to guide the assessment of service standards in both the public and private sectors.

SUGGESTIONS FOR FURTHER RESEARCH

This research has developed the Prevention and Control of Tuberculosis Model in Samut Prakan Province, so further studies should be conducted by applying the development of tuberculosis prevention and control model in Samut Prakan Province to hospitals within Samut Prakan Province. To study the satisfaction of such patterns.

This research specifically researched tuberculosis, which is a contagious disease. Without research into other communicable diseases, research should be conducted on the prevention and control of other communicable diseases.

In this research, only in Samut Prakan province, there should be a research study on the development of a holistic model of TB prevention and control operations.

Reference

Bureau of Tuberculosis, (2018). Guidelines for Tuberculosis Control Thailand B.E. 2018.

Department of Disease Control. (2020). The Guide assesses hospital standards for tuberculosis care. Graphic & Design Publishing.

Division of Epidemiology and Division of Non-Communicable Diseases, (2021). Report on the results of the covid-19 situation review and preventive control measures on a global scale and in Thailand.

Division of Tuberculosis, Department of Disease Control. (2018). TB Practitioner Capacity Development Training Guide. Graphic & Design Publishing.

Samut Prakan Provincial Health (2016). Master Report for 10 years (2016-2025).

Samut Prakan Provincial Public Health Office.2022, 4-5 July). Public Service & Communications Conference Normal cases around that 2 fiscal year 2022 [Minutes]. Government Inspection Meeting, Samut Prakan, Thailand.

Samut Prakan Provincial Statistical Office. (2021). Smart Prakan Provincial Statistical Report.

Strategy and Planning Division, Office of the Permanent Secretary of the Ministry of Public Health. (2021). 20-Year National Strategic Plan on Public Health (2017-2036). The Ministry of Public Health.

World Health Organization. (2017). Global tuberculosis report 2017. (n.p.)

World Health Organization. The global plan to stop TB 2011-2015: Transforming the fight toward elimination of tuberculosis. (n.p.)