

การพัฒนามาตรการควบคุมกำกับการดำเนินการห้องพยาบาลในสถานประกอบการ จังหวัดระยอง Development of Control Measure for Medical Care Unit in Enterprises in Rayong Province

นิพนธ์ต้นฉบับ

Original Article

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วารสารไทยเภสัชศาสตร์และวิทยาการสุขภาพ 2566;18(3):303-311.

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บทคัดย่อ

วัตถุประสงค์: เพื่อสำรวจสถานการณ์การดำเนินการห้องพยาบาลของสถานประกอบการในจังหวัดระยอง และสังเคราะห์มาตรการควบคุมกำกับระดับนโยบายต่อการดำเนินการห้องพยาบาลของสถานประกอบการระหว่างหน่วยงานที่เกี่ยวข้อง **วิธีการศึกษา:** ใช้การวิจัยแบบผสมวิธี เริ่มด้วยแบบสำรวจการดำเนินการห้องพยาบาล ในห้องพยาบาลของสถานประกอบการ 189 แห่ง วิเคราะห์ข้อมูลด้วยสถิติเชิงพรรณนา ตามด้วยการอภิปรายกลุ่มผู้เชี่ยวชาญ 9 คน ที่มีประสบการณ์เกี่ยวข้องกับห้องพยาบาลจากหลายภาคส่วน โดยใช้ร่างมาตรการควบคุมกำกับห้องพยาบาลที่สังเคราะห์จากผลการสำรวจและกรอบประเด็นสนทนาเป็นเครื่องมือ วิเคราะห์ข้อมูลแบบอุปนัยเพื่อสร้างมาตรการควบคุมกำกับระดับนโยบายจากข้อมูลที่ปรากฏบนพื้นฐานของการวิเคราะห์สถานการณ์ **ผลการศึกษา:** มีห้องพยาบาลที่มีรายการเวชภัณฑ์ครบถ้วนเพียง 6 แห่ง (ร้อยละ 3.2) ขณะที่ไม่ครบ 135 แห่ง (ร้อยละ 71.4) มี 125 แห่ง (ร้อยละ 66.1) ที่มีรายการเวชภัณฑ์เกินกว่าที่กำหนด และ 131 แห่ง (ร้อยละ 69.3) มีการจัดการด้านเวชภัณฑ์ไม่เหมาะสม ผลการอภิปรายกลุ่มสังเคราะห์ได้มาตรการควบคุมกำกับการระดับนโยบายต่อการดำเนินการห้องพยาบาลของสถานประกอบการ คือ 1) ให้นำหน่วยงานภายนอกหรือตัวแทนแรงงานตรวจสอบห้องพยาบาลได้ตลอดเวลาที่มีลูกจ้างอยู่ทำงาน 2) ผู้มีหน้าที่ควบคุมกำกับจากภาครัฐประสานงานร่วมกันเพื่อส่งเสริมสนับสนุนการยกระดับมาตรฐานห้องพยาบาล และ 3) องค์กรหรือตัวแทนของลูกจ้างต้องสนับสนุนการดำเนินการของนายจ้างและผู้ควบคุมกำกับห้องพยาบาลให้จัดบริการสุขภาพที่เหมาะสม **สรุป:** การดำเนินการห้องพยาบาลในสถานประกอบการในจังหวัดระยองส่วนใหญ่ยังไม่เป็นไปตามกฎกระทรวงแรงงาน จึงควรมีการนำมาตรการควบคุมกำกับฯ ที่พัฒนาขึ้น ไปทดลองใช้เพื่อให้เกิดผลสัมฤทธิ์ในการคุ้มครองสุขภาพของลูกจ้างอย่างยั่งยืน

คำสำคัญ: ห้องพยาบาล, สถานประกอบการ, การควบคุมกำกับ, มาตรฐาน, จังหวัดระยอง

Editorial note

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Abstract

Objective: To investigate the operational work situation of Medical Care Units in enterprises in Rayong province and synthesize control measures to direct the implementation of Medical Care Units in enterprises. **Methods:** Mixed methods using explanatory sequential design were employed. Initially, a survey using the data collection form for examining Medical Care Units operation was undertaken in a sample of 189 Medical Care Units in enterprises and descriptive statistics was used for data analysis. Later, a focus group discussion of 9 experts with experiences in the operation of Medical Care Units was performed using a draft control measure synthesized from the survey data and the dialogue framework as tools. Analytic induction was applied for interpretation and conclusion of the final control measure. **Results:** Only 6 Medical Care Units had all items of medical supplies (3.2%) in the list; 48 units had completed lists but insufficient amounts of medical supplies (25.4%); 135 units had incomplete lists of medical supplies (71.4%); and 125 units (66.1%) had items of medication supplies exceeding the standard list. 131 Medical Care Units (69.3%) had improper management of pharmaceuticals. Based on the focus group discussion, 3 control measures for supervising the operation was synthesized, namely 1) providing access for outside agencies or worker representatives to audit the units, 2) providing regulators from the government agencies cooperate to promote and support the upgrading of units, and 3) representatives of employees must support the actions of employers and unit regulators for the best health services in the enterprises. **Conclusion:** The operation of Medical Care Units in enterprises in Rayong province mostly did not meet the standard. The control measures for supervising the unit operation were synthesized for a sustainable protection of the workers' health.

Keywords: Medical Care Unit, Enterprises, Control Measure, Standard, Rayong Province

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Introduction

The announcement of the Ministry of Public Health regarding other health facilities which are exempt from Health Facility Act, B.E. 2565¹, states that employers under Labour Protection Act who provide a medical room in an enterprise must be notified to the Ministry of Public Health if there is a licensed medical professional or a medical practitioner

working in their establishment, and must provide necessary tools, equipment, medicines and general medical supplies in a reasonable and sufficient amount. Additionally, the Ministerial Regulation on Labour Welfare at Workplace B.E.2548² decree that in the enterprise with 10 or more employees working at the same time, the employer must

provide medical care with a sufficient number of medical supplies and medicine. The enterprise with 200 – 999 employees must provide Medical Care Units, technical nurse those with higher qualification, and conventional medical doctors. As for the enterprise with 1,000 employees or more, there must be more licensed medical professional, and procedure to deliver employees to external health facilities when necessary. Nevertheless, by the end of 2022 (2565 B.E.), Rayong province has 590 enterprises with more than 200 employees,³ but there were only 187 enterprises (31.69 percent) reporting that they operated Medical Care Units.⁴ However, the competent authorities under Health Facility Act, B.E. 2541 have no authority to inspect or supervise the operation of Medical Care Units in normal circumstances due to the exemption from the Health Facility Act unless there are petitions to the Public Health Office to proceed as regulation. There is also no rule to mandate the enterprises to report regularly such as the annual report in any way.

Ever since 2017 (2560 B.E.) until now, there have been complaints and reports about the risk of treatment from Medical Care Units. For example, there were 5 cases of fraudulent doctors or nurse giving treatment in the Medical Care Units. There have been prosecutions against 2 people pretending to be doctors and 3 people pretending to be nurses. Moreover, it has been found that there was a non-standard of medical examination and expired medicines dispenses. Therefore, these are risks that affect both health and life of the employees. There is no guideline for responsible officers to perform their duties in order to reduce or control the risks. However, before such guidelines could be established, there must be control measures and supervision at the policy level that are mutually agreed upon the relevant agencies. There should be 1) the Regulators which are the Ministry of Labour, the Ministry of Public Health, and National Health Security Office (NHSO), 2) Employers' Confederation, and 3) Employees' Confederation. With a concern on this necessity, the researcher therefore aimed to define the control measures and supervision at the policy level.

To establish control measures and supervision of the procedure of Medical Care Units of the enterprises between relevant agencies, (draft) visions, missions, targets, objective key results (OKR), and strategy were to be derived based on the result-based management (RBM) principle by analyzing internal and external factors using Strength-Weakness-

Opportunities-Threats analysis (SWOT). According to the principle of establishing the measure to solve the mentioned problems, it was proposed that the government of many countries in Europe, North America and Australia had reformed the bureaucracy by applying RBM principle to solve the problems of government supervision.⁵ The application of RBM principle could influence performance results in the hospital ward and the organization's service excellency.⁶ In addition, the RBM could yield the successful results in the implementation of educational institutions' goals.⁷ RBM focuses on the work outcomes with concrete measures. It gives priority to the stakeholders who participated, analyzes internal and external factors (SWOT), determines the visions, sets the targets, objectives, key performance indicators (KPIs) and strategy.⁸ Nowadays, the principle of targets and objective key result (OKR) is used to set goals and determine the outcome.⁹ For example, OKR was used in the well-being encouragement project.¹⁰ OKR was applied to demonstrate setting targets and quarterly evaluation in schools¹¹, and applied to develop potentials of Thung Song Police Station, Nakhon Sri Thammarat.¹² In this present study, both the RBM and OKR principles were therefore applied in determining control measures and supervision towards the procedure of Medical Care Units of the enterprises. Specifically, this study aimed to 1) assess the situation of Medical Care Units management of enterprises in Rayong province compared with the Medical Care Units standard as stated in the Ministerial Regulation on Labour Welfare at Workplace, B.E. 2548, and 2) synthesize the control measures and management of Medical Care Units in the enterprises.

Methods

This explanatory sequential design research¹³ started with a descriptive cross-sectional study and a descriptive qualitative study. A descriptive cross-sectional study was to study the situation of Medical Care Units procedure in enterprises in Rayong province. These 590 places usually had 200 employees working in each shift.

To estimate the sample size, the Krejcie & Morgan method was used. With a sampling error of 5% and a proportion of the enterprise that complied with the labor law's standard of having first aids available of 0.176¹⁴, a sample size of 171 enterprises was needed. To compensate for a 10%

incomplete data, a total of 189 enterprises were required. Participating enterprises were selected using the simple random sampling¹⁵ from the enterprises listed in Rayong province using computer-generated numbers.

Research instruments

Data were collected using the data collection form consisting of 1) general information about the enterprises, 2) information on medical care service components, practitioners, and patient referrals compared to the Ministry of Labour regulations², and 3) opinions on the development of Medical Care Units standards. The test for content validity was done by 3 experts, resulting in an index of consistency (IOC) of 0.96. After adjusting the questions and communication steps, it was tested for internal consistency reliability with 30 individual Medical Care Units of enterprises in Chonburi province. The questions had a good internal consistency reliability⁶ with a Cronbach's alpha coefficient 0.982.

Ethical considerations

This research was approved by the Ethics Committee of Rayong Provincial Public Health Office (approval number: COA No.14/2566 for the research project number REC-RY No.18/2566).

Data collection procedure and data analysis

The data were collected by 18 research assistants who were trained for data collection and interview with employees at the Medical Care Unit of the studied enterprise. The data were analyzed with descriptive statistics using the SPSS software program version 25.

Situational data obtained from the survey were used to synthesize content according to the RBM principles by analyzing internal and external factors using SWOT analysis, then drafting visions, missions, targets, OKR and strategies to be used as a topic for a focus group discussion in the qualitative research.

Descriptive qualitative study was done by focus group discussion of 9 stakeholders who had experiences about Medical Care Units for at least 5 years, specifically, 2 persons from the Federation of Thai Industries, 1 person from Provincial Labour and Social Welfare Department, 1 person from Provincial Social Security Office, 1 person from Region 6 of National Security Health Office, 1 person from Eastern

Consumer Rights Protection Association, 2 representatives of Labour Union of the enterprises located in Muang Rayong district and Pluak Daeng district where the highest number of enterprises was identified, and lastly 1 person from Rayong Provincial Public Health Office. The stakeholders reviewed the investigated situation and discussed according to the framework of group discussion, namely, (drafts) visions, missions, targets, objective key results and strategies. The research team was the notetaker, in which the conversation was recorded with a voice recorder. As for concluding opinions on the issues in the group discussion, any opinions that had supporters more than half of the meeting attendees was considered as the conclusion of the participants in this discussion. Inductive analysis was used to make conclusions from the information obtained in the group discussion.

Results

Quantitative survey results of business enterprises

From the survey of 189 enterprises with 200 employees or more, it was found that most enterprises were located in Pluak Daeng district and Muang Rayong district which were 46.7% and 31.2%, respectively. There were 112 enterprises (59.3%) located in the industrial estate or the industrial zone, and others that were located outside these areas. 165 enterprises (87.3%) employed 200 – 999 employees, and 24 enterprises employed more than 1,000 employees (12.7%). Of 79 enterprises belonging to parent companies of enterprises, 41.8% were of Asian nationality, 61.0% had parent companies of enterprises that were of Thai nationality. There were companies of European, American and other nationalities (16.4%, 6.9% and 2.6%, respectively). There were 66 enterprises (34.9%) that had reported about Medical Care Units management; however, there were 123 enterprises (65.1%) that had not reported (Table 1).

Information of medical care service components, practitioners, and patient referrals compared with the Ministry of Labour regulations.

There were 135 enterprises (71.4%) that provided incomplete medical care service components. The Medical Care Unit should provide 16 medicines. There were 137 enterprises (72.5%) that provided an incomplete list of medicines. The medicine that were missing included eye

ointments, eye drops, and aromatic ammonia spirit. They should have 13 medical supplies for service. There were 27 enterprises (14.3%) with an incomplete list. The most missed ones were medical sticks, triangular bandages, and medicine droppers.

Moreover, there were only 58 enterprises (30.7%) stored medical supplies in medical care units in good and appropriate condition; while 131 enterprises (69.3%) stored medical supplies in an inappropriate condition. The inappropriate condition we found were not controlling storage temperature, and not organizing medical supplies into category and sterilizing the reused supplies (Table 2).

Table 1 General characteristics of enterprises in Rayong. (N = 189).

Medical Care Units information	N	%
District location		
Pluak Daeng	90	47.6
Mueang Rayong	59	31.2
Nikhom Phatthana	16	8.5
Ban Khai	13	6.9
Ban Chang	6	3.2
Klaeng	3	1.6
Wang Chan	2	1.0
Number of Employees		
200 - 999 Employees	16	87.3
1,000 - 1,999 Employees	24	12.7
The type of enterprises		
Located inside the industrial estate or the industrial zone	112	59.3
Located outside the industrial estate or the industrial zone	77	40.7
Notifying of Medical Care Units operation to Rayong Provincial Public Health Office		
Notified	66	34.9
Have not notified yet	123	65.1

Table 2 Medical care service components in Medical Care Units (N = 189).

Medical care service components	All listed items were available		All listed items were available but insufficient		Not all items were available	
	N	%	N	%	N	%
16 medicines	6	3.2	46	24.3	137	72.5
13 medical supplies	155	82.0	7	3.7	27	14.3
All components	6	3.2	48	25.4	135	71.4

The additional medical service components in the enterprises with 200 – 999 employees

There were 165 enterprises with 200 – 999 employees that provided Medical Care Units, patient beds, and personnel as required by the Ministry of Labour Regulations, and additional medical supplies and devices that were necessary such as sphygmomanometers, antigen test kit (ATK),

antibiotics, cough syrup and tablets, many types of painkiller and contraceptive pills as shown in Table 3.

Table 3 Medical care service components and personnel in enterprises with 200 – 999 employees (N = 165).

Medical care service components	Availability					
	Present		Present but insufficient		None	
	N	%	N	%	N	%
(1) Medical Care Units with at least 1 bed	165	100	0	0	0	0
(2) Medical supplies and medicine other than the ones stated in (1)*	103	62.4	0	0	62	37.6
(3) At least 1 nurse with technical nurse or above throughout the working time.	165	100	0	0	0	0
(4) At least 1 medical doctor working twice a week and at least 6 hours	165	100	0	0	0	0

* Medical supplies and medicine other than the ones stated in (1) refers to medical care service components that are not listed in 16 medicine and 13 medical supplies that must be provided in the Medical Care Units.

The additional medical service components in the enterprises with 1,000 employees or more

The enterprises with more than 1,000 employees must provide Medical Care Units, patient bed, personnel, and transportation that are ready to refer the patient as required by the Ministry of Labour regulations, and additional medical supplies that the employers deem necessary, such as sphygmomanometers, antigen test kit (ATK), antibiotics, both cough syrup and tablets, many types of painkiller and combined pills as shown in Table 4.

Table 4 Medical care service components, personnel and referrals in enterprises with 1,000 employees or more (N = 24).

Medical care service components	Availability					
	Present		Present but insufficient		None	
	N	%	N	%	N	%
(1) Medical Care Units with at least 2 hospital beds	24	100	0	0	0	0
(2) Medical supplies and medicine other than the ones stated in (1)*	22	91.7	0	0	2	8.3
(3) At least 2 nurses with technical nurse level or above throughout the working time.	24	100	0	0	0	0
(4) At least 1 medical doctor working 3 times a week and at least 12 hours	24	100	0	0	0	0
(5) Transportations that are ready to refer employees to external health facilities immediately.	24	100	0	0	0	0

* Medical supplies and medicine other than the ones stated in (1) refers to medical care service components that are not listed in 16 medicine and 13 medical supplies that must be provided in the Medical Care Units.

Opinions of the Medical Care Units attendants regarding developing the Medical Care Units up to the standards

To gather the information for group discussion, 189 Medical Care Units attendants were interviewed. Most of the attendants (165 people; 87.30 percent) were graduated in bachelor degree. Around 91 people (48.1 percent) commented that there should be more medicine added to the list for more

comprehensive treatment, 48 people (25.4 percent) commented that there should allow the enterprises in vicinity to share the external health facilities. Other 39 people (20.6 percent) commented that there should be procedure for inspecting medical license of both nurses and doctors that simple and swiftly, and many other comments as shown in Table 5.

Table 5 Opinions of the Medical Care Units attendants about developing the Medical Care Units to meet the standards. (N = 189).

Opinions	N	%
The lists of medicine should be added for a more comprehensive treatment of diseases	91	48.1
Enterprises in vicinity should be allowed to share external health facilities.	48	25.4
There should be a procedure for inspecting medical licenses of both nurses and doctors that is simple and swiftly.	39	20.6
The standard of Medical Care Units in the enterprises should be reviewed.	37	19.6
The standard of Medical Care Units should be inspected regularly by external agencies or employee representatives.	28	14.8
Adequate occupational health nurses or doctors should be provided.	24	12.7

Qualitative results

The group discussion was conducted on June 27, 2023 at the meeting room of Rayong Provincial Public Health Office led by Deputy Public Health Officer, using the draft of the

internal and external factors analysis (SWOT). This is the tools for group discussion which led to the conclusion from analytic induction (Table 6 and Figure 1).

Discussions and Conclusion

Most Medical Care Units did not reach the standard according to the Ministry of Labour regulations. As many as 71.4% of Medical Care Units had incomplete lists or insufficient medical supplies. On the other hand, there are some medicines that exceeded the limit stated in the regulation, such as antibiotics, cough syrup and tablets, and many types of painkillers. Prescribing medicines at the Medical Care Units without any doctors or pharmacists on duty regularly may pose irrational use of medicines. For example, this may cause prescribing wrong drugs, dosage too low or dosage too high. It may also violate the professional standard of the ones prescribing medication which normally is done by technical nurse or registered professional nurse. There are 69.3 percent of Medical Care Units that had improper medical supplies management, namely: expired or deteriorated medicines, medical supplies storage was too hot and not on

Table 6 Internal and external factors (SWOT), visions, missions, targets, objective key results, and strategies from group discussion.

Topic of Conversation	Situation data, concrete information, opinions from group discussion and conclusions
1. Internal and external factors analysis (SWOT analysis)	<p>Situation: The factories in the survey had Medical Care Units, personnel factors, and patient referrals transportation available. However, medicine and medical supplies storage were stored in an unorganized state; no the signs nor temperature control. The list of medicine and medical supplies was incomplete and some beyond the prescribed limit, and should be prescribed by doctors or pharmacists. There were also expired or deteriorated medicine and divided medicine packaging as well.</p> <p>Concrete information and synthesized (draft) analysis of internal and external factors: Out of all enterprises with Medical Care Units, only 31.69 percent of enterprises notified the operation of Medical Care Units</p> <p>Opinions from group discussion:</p> <ul style="list-style-type: none"> - The representatives of the Federation of Thai Industries suggested that "The information of fully active personnel of Medical Care Units is probably not accurate due to an appointment made before the data collection. According to the fact that there are many factories in Rayong, thus the management of doctors and nurses to be working fulltime is impossible. <p>Resolution: Everyone in the meeting agreed.</p> <ul style="list-style-type: none"> - Representative of Labour and Social welfare suggested that "The Ministry of Labour regulations that used as the guidelines for the survey have been used for nearly 20 years. Thus, the lists of medical supplies should be reviewed such as adding more sphygmomanometers, or antigen test kit. What activities that shouldn't be perform such as, divide medicine packaging, and how to store medicine should be specified in the ministerial regulations." <p>Resolution: Everyone in the meeting agreed.</p> <ul style="list-style-type: none"> - Representative of Region 6 of the National Health Security Office, provided information "Nowadays, the NHSO has guidelines for the Medical Care Units in the factories that are registered and have the right personnel join as health service network. They can reimburse employee health expenses." <p>Resolution: Everyone in the meeting acknowledge and agreed that this is the opportunity to develop the standard of Medical Care Units.</p> <ul style="list-style-type: none"> - Representative of Provincial Public Health Office provided information "Nowadays, there are many private hospitals and clinics, especially in the area vicinity to the industrial estates or factories." <p>Resolution: Everyone in the meeting agreed that this is an opportunity for the factory to refer patient or allow the employees to use the services when the illness exceeds the capacity of Medical Care Units.</p> <ul style="list-style-type: none"> - Representatives of the Eastern Consumer Rights Protection Association suggested that "Surveying or developing the standard of Medical Care Units has its own limit due to the difficulty in inspecting as the permission from the authority of each factory must be permitted first, with this, it is difficult to determine the actual Medical Care units managements. <p>Resolution: Everyone in the meeting agreed.</p> <p>Conclusion:</p> <ul style="list-style-type: none"> - Strengths include having Medical Care Units supplies and patients' referrals. - Weaknesses include the incomplete and insufficient lists of medicine and medical supplies, as well as the improper management of medicine storage and handlings. - Opportunities include there are external health facilities that are ready to receive referred patients. The National Health Security Office has a procedure to support healthcare management in factories. - Threats include insufficient number of doctors and nurses compared to the total amount of factories.

Contd.

Table 6 Internal and external factors (SWOT), visions, missions, targets, objective key results, and strategies from group discussion (contd.).

Topic of Conversation	Situation data, concrete information, opinions from group discussion and conclusions
2. Vision, Missions, Targets, and Objective Key Results	<p>Situation: All factories in Rayong have Medical Care Units provided.</p> <p>Concrete information and synthesized to (draft) visions, missions, targets and objective key results :</p> <ul style="list-style-type: none"> - Rayong is a province in the Eastern Special Development Zone or Eastern Economic Corridor (EEC) which has a large number of enterprises and has the highest income per population, one of the top of country. Most population work in enterprises, therefore there is an increased demand of healthcare services. - The medical staff do not have the authority to inspect or supervise the Medical Care Units management unless there are complaints reported. - Ever since 2017, there have been 5 prosecutions of fake doctors and nurses, and many complaints about Medical Care Units' examination or diagnosis not up to the standard, or even dispensed expired medicine. <p>Opinions from group discussion:</p> <ul style="list-style-type: none"> - Representative of the Federation of Thai Industries suggested that <i>"The industrial entrepreneurs in Rayong are very prepared in providing welfare and benefits to their employees. This readiness might be the highest of Thailand with approximately 70 percent of all enterprises that are ready for improvement."</i> <p>Resolution: For this topic, everyone in the meeting didn't have any comments.</p> <ul style="list-style-type: none"> - Representative of the Labour Union of the enterprise commented that <i>"Rayong actually gain many income for the country from the industrial business or enterprises, all of these are driven by the workers in those factories. Therefore, health services should be improving better than other provinces, or even the best in Thailand, but there is still no standard to measure whether it is good enough or not that used across the country. In this case, I propose that we measure by the employees' satisfaction towards the healthcare benefits in factories, which should be over 60 percent."</i> <p>Resolution: There were 7 out of 9 people in this conversation topic that agreed.</p> <ul style="list-style-type: none"> - Representative of the Eastern Consumer Rights Protection suggested that <i>"The improvement to get the Medical Care Units in Rayong to provide the best services to the employees should set the appropriate time period that we could make it possible. I suggest 5 years, which mean this must be done in 2027. As fr the assessment, this should be done together with the external agencies and the employees' representatives."</i> <p>Resolution: Everyone in the meeting agreed with this suggestion.</p> <ul style="list-style-type: none"> - Representative of Labour and Social Welfare added that <i>"If there are any measures regulated, all of the enterprises must be in the same standard or at least 80 percent of them must comply."</i> <p>Resolution: For this topic, everyone in the meeting were all agreed.</p> <ul style="list-style-type: none"> - Representative of the Provincial Public Health Office added <i>"Medical Care Units in the factories should have the potential in term of promoting healthcare such as participate in activities against drugs, creating campaign to reduce or quit smoking and alcohol, consulting about weight-loss, distributing the combined pills, giving basic antenatal care and referrals, disease prevention such as vaccination, condom distribution, basic medical treatment, patient referrals, and including help promoting medical knowledge by publicize or educate the employees."</i> <p>Resolution: On this topic, the representative of the Provincial Special Security Office and the National Health Security Office, Region 6 added <i>"We also have the same expectation with the Public Health representative."</i> In which everyone in the meeting agreed.</p> <ul style="list-style-type: none"> - Representative of Labour and Social Welfare added that <i>"If there are any measures regulated, all of the enterprises must be in the same standard or at least 80 percent of them must comply."</i> <p>Resolution: For this topic, everyone in the meeting were all agreed.</p> <ul style="list-style-type: none"> - Representative of the Provincial Public Health Office added <i>"Medical Care Units in the factories should have the potential in term of promoting healthcare such as participate in activities against drugs, creating campaign to reduce or quit smoking and alcohol, consulting about weight-loss, distributing the combined pills, giving basic antenatal care and referrals, disease prevention such as vaccination, condom distribution, basic medical treatment, patient referrals, and including help promoting medical knowledge by publicize or educate the employees."</i> <p>Resolution: On this topic, the representative of the Provincial Special Security Office and the National Health Security Office, Region 6 added <i>"We also have the same expectation with the Public Health representative."</i> In which everyone in the meeting agreed.</p> <ul style="list-style-type: none"> - Representative of Labour and Social Welfare added that <i>"If there are any measures regulated, all of the enterprises must be in the same standard or at least 80 percent of them must comply."</i> <p>Resolution: For this topic, everyone in the meeting were all agreed.</p> <ul style="list-style-type: none"> - Representative of the Provincial Public Health Office added <i>"Medical Care Units in the factories should have the potential in term of promoting healthcare such as participate in activities against drugs, creating campaign to reduce or quit smoking and alcohol, consulting about weight-loss, distributing the combined pills, giving basic antenatal care and referrals, disease prevention such as vaccination, condom distribution, basic medical treatment, patient referrals, and including help promoting medical knowledge by publicize or educate the employees."</i> <p>Resolution: On this topic, the representative of the Provincial Special Security Office and the National Health Security Office, Region 6 added <i>"We also have the same expectation with the Public Health representative."</i> In which everyone in the meeting agreed.</p> <p>Conclusion:</p> <p>Vision is the factories in Rayong provide the best medical care services for the employees in Thailand with 2027.</p> <p>Missions are improving the standard in healthcare services within the factories. From healthcare promoting, disease prevention, medical treatment, patient referrals, and promoting medical and healthcare knowledge among employees, by the network of employers, employees and supervisors.</p> <p>Target include the enterprises in Rayong are able to provide the best medical care services for the employees in Thailand.</p> <p>Objective Key Results are</p> <p>KR 1) 80 percent of the employees are satisfied with the medical care services in their enterprises.</p> <p>KR 2) 80 percent of Medical Care Units are ready to receive the inspection and recommendation from the external agencies or from the Labour Union.</p> <p>KR 3) 70 percent of employers believe in their Medical Care Units welfare provision are of good standard.</p>
3. Medical Care Units management of the enterprises	<p>Situation: Medical Care Units have all personnel and patient referral factors. However, the medical treatments factors namely, medicine and medical supplies are not up to the standard.</p> <p>Concrete information and synthesized (draft) control measures:</p> <ul style="list-style-type: none"> - Ever since 2017, there were 5 cases of fake doctors and nurses prosecution, all of them informed that they usually work as the Medical Care Units practitioners. - The supervisions of the Medical Care Units standard according to the Ministry of Labour's officers have yet to be found in any reports. - People responsible for inspecting the Medical Care Units management are only the Ministry of Labour's staff. As for the employees in the factories are the ones who witness the facts of Medical Care Units services. While those who has knowledge and expertise in medical treatment or standard of various health facilities are the public health regulator. <p>Resolution: Everyone in the meeting agreed on this topic.</p> <ul style="list-style-type: none"> - Representative of the Labour and Social Welfare commented that <i>"The labour's staff are still lack experiences of Medical Care Units standard, therefore the public health's staff should be involve every time in the inspection."</i> <p>Resolution: Everyone in the meeting agreed on this topic.</p> <ul style="list-style-type: none"> - Representative of the Labour Union suggested that <i>"The people who would know the real fact of the Medical Care Units in the factories are the employees receiving the services. If the factory's employees would like to provide or contribute any information regarding the Medical Care Units standard, it will make the control and supervision even more absolute. Otherwise, the employees could send their needs and satisfaction in Medical Care Units to their employes for improving the Medical Care Units' standard at any time."</i> <p>Resolution: Everyone in the meeting agreed on this topic.</p> <p>Conclusion:</p> <p>The control measures and supervisions are stated in the following:</p> <ol style="list-style-type: none"> 1) Allow the external agencies or labour representatives to inspect the Medical Care Units all the time whenever the employees are working. 2) Regulators from the government work together to promote and support the improvement of the Medical Care Units' standard. 3) Organization or employee representatives must support the actions of employers and Medical Care Units attendants to provide the appropriate healthcare services.



Figure 6 Inductive conclusions from group discussion

temperature control which risk the degeneration of medicine, dividing the package of liquid and cream medicine that risk the degeneration or contamination of medicine, the unorganized of medical supplies which may lead to the risk of mishandling or medicine remained in stock for too long that may lead to its expiration (with no First expire first out).

The problems and opinions on development of Medical Care Units management up to the standard include increasing more lists of medicine, permitting the other enterprises in vicinity to share the external health facilities together, having a procedure that could examine the professional licenses of medical doctors and nurses in a simple and swiftly way, as well as other opinions in the same direction as Panuchot Thongyang's proposal (2556) that was proposed in the context of developing the infirmary at schools, which provide first aid or basic treatment services, the same as welfare in the organization. The recommendations that consistent with each other including regulating pharmaceutical systems that do not pose any risk (such as antibiotics, expired medicine, improper storage of medicine), store medicine and medical supplies in

order, having clear labels indicate the name or the group of medicine, do not let the medicine overheated or exposed directly to the sunlight, do not store in high humidity, must checking on the expiration date and deterioration of medicine periodically. There should be a surveillance system in the Medical Care Units from 2 parties: internal team and external team of the organization. The person in charge of Medical Care Units should be consistent with the work such as nurses, and also provide the quick referrals system to other health facilities.¹⁷

The control measure of Medical Care Units management of the enterprise that was synthesized this time include: 1) Allow the authorized external agencies or labour representatives inspect the Medical Care Units regularly as long as there are employees still working 2) Those with supervision duties from government shall working together to support and promote the development of Medical Care Units standard, and 3) Organization or employee representatives must support the actions of employers and Medical Care units attendants in order to provide appropriate health services in

all 3 measures. The conclusion summarized from empirical data and opinions of those who involved according to the guidelines from Canadian International Development Agency; (CIDA) 1999¹⁸ and the principles of determine targets and key results called “OKR” (Objective Key Result) are the guidelines as suggested by Nopadol Rompho (2559).⁹

The situation of Medical Care Units management that do not provide incomplete or insufficient medical supplies may affect the efficiency in healthcare and satisfaction of towards the benefits provided directly by the employers. According to the research of Peerawan Wattanametavong and Kraichit Sutamuang (2556) who mentioned that medical personnel factors, equipment, tools, medicine and medical supplies affect the satisfaction of the factory employees⁽¹⁹⁾ and when considering about this together with the opinions received in the group discussion, may be proposing to any relevant agencies for legal development, guidelines or systems, for example, providing medical welfare that allow employees to receive the medical services from pharmacies outside of the establishment, Allow the other enterprises to use the external health facilities together, and having a procedure that could inspect the medical license of doctors and nurses in swiftly and simple way.

For the problems of shortage of nursing or medical personnel who would work in the factories, reflected by the needs of using the same external health facilities from many enterprises, or the need of quickly and simply system to check the medical licenses of doctors or nurse, showing that the respondents have encountered people pretending to be professionals (such as fake nurses or fake doctors) which relevant to the data of investigation and many prosecution of nurses and doctors who were not licensed in the area by Rayong Provincial Public Health Office.

Because this study is the first prototype study in Thailand about the survey of Medical Care Units in enterprises, therefore, the opinion on development is: before applying the measures to real situation, it is advisable to perform hearings from a wider range of the stakeholders of this established measure to reduce barriers for implementing this measure. For future research, data collection for those who involved such as entrepreneurs, employees, and supervisors separately in order to cross-check the information and reduce pressure of the real situation data, and there should be research to evaluate and develop the measures in the future.

Research limitations

The advantages of having the research team to collect data about Medical Care Units that have public health personnel active are the understanding of healthcare systems, knowing the detailed of medicine, medical supplies, place arrangement and patient referrals well. However, the weakness of this study lies in of the data collection regarding illegal actions for example, about the details of doctors and nurses that actively in Medical Care Units. However, research team was required to notify to the enterprises before data collection, the information they provided might not be true. As for group panelists, we could not define the representatives from various employee representative groups as the union was established separately for each factory, they do not have provincial representative as in the employers whose representative is the Provincial Federation of Industries.

The Medical Care Units management situation in Rayong, most enterprises still do not meet up the standard according to the standard of the Ministry of Labour such as not having all of the medical supplies required, improper medical supplies management, for example, expired medicine were found. The area used to store medical supplies overheated, spate medicine packaging and unarranged medical supplies into category or no labels provided, The suggestions for developing Medical Care Units, for example, allowing the employees to pick up the medicine from pharmacies outside of the enterprises, allow other enterprises to share the external health facilities instead of using Medical Care Units, and providing the procedure that could swiftly and simply check the medical license of doctors and nurses. As for the control measure of Medical Care Units management that was synthesized this time, namely; (1) Allowing external agencies of labour representative to inspect the Medical Care Units regularly whenever there are employees working (2) Regulatory authorities from government work together to promote and support the improvement of Medical Care Units, and (3) Organization or employee representative must support the actions of employers and Medical Care Units attendants in providing appropriate healthcare services.

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