นิพนธ์ต้นฉบับ

Comparison of current practice and expectations in occupational health services between corporate physicians' and managers' perspectives in large-scale enterprises in Thailand

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Objective : *To compare current practice and expectations in occupational health services between corporate physicians' and managers' perspectives in large-scale enterprises in Thailand*

Setting : *Department of Preventive and Social Medicine, Faculty of Medicine, Chulalongkorn University*

Design : *Cross-sectional descriptive study*

Methodology : *The study was conducted by mailing questionnaires to 294 large - scale-enterprise physicians and their direct superiors. Marginal Chi-square test was used to explore discrepancy between the two groups.*

Results : *We obtained 183 questionnaires from the managers, 131 from the physicians, and 104 manager-physician pairs of questionnaires for analysis. We found that the physicians were significantly older than their direct superiors. Regarding the current practice, physicians and managers differed on 8 out of 11 items (contributing to health promotion program, immunizing employees*

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against some diseases, pre-placement examination, periodic examination, return-to-work examination, collecting and analyzing illness statistics, giving health advice to employees, and keeping medical records confidential). Regarding the future expectations, physicians and managers differed on 10 out of 31 items (giving medical advice before retirement, promoting immunization against work-related diseases, walk-through survey, membership in occupational safety and health committee, promoting immunization against general diseases, return-to-work examination, analyzing health hazards from raw materials, analyzing health hazards from work processes, analyzing health hazards from wastes, and investigating work-related diseases).

Conclusions : *This study has shown that occupational health service perspectives and understanding of physicians' functions and roles in large-scale enterprises in Thailand differ significantly between physicians and their direct superiors, especially immunizing employees against some diseases and return - to - work examination. Similar studies should be performed on medium - to - small scale enterprises.*

Key words : *Corporate physician, Manager, Occupational health practice, Expectation.*

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พรชัย สิทธิศรัณย์กุล, สุรีรัตน์ งามเกียรติไพศาล, บัญชา พร้อมดิษฐ์, มานิตย์ ประพันธ์ศิลป์. เปรียบเทียบบทบาทหน้าที่และความคาดหวังของแพทย์ประจำสถานประกอบการขนาดใหญ่ต่องานบริการอาชีวอนามัยในประเทศไทยจากมุมมองของแพทย์กับของผู้บริหาร. จุฬาลงกรณ์เวชสาร 2542 ก.ย; 43(9): 655-64

วัตถุประสงค์ : *เพื่อศึกษาเปรียบเทียบบทบาทหน้าที่ และความคาดหวังของแพทย์ประจำสถานประกอบการต่องานบริการอาชีวอนามัย จากมุมมองของแพทย์กับของผู้บริหาร*

สถานที่ที่ทำการศึกษา : *ภาควิชาเวชศาสตร์ป้องกันและสังคม คณะแพทยศาสตร์ จุฬาลงกรณ์มหาวิทยาลัย*

รูปแบบการวิจัย : *การสำรวจแบบตัดขวาง ณ เวลาหนึ่ง*

วิธีการ : *ส่งแบบสอบถามทางไปรษณีย์ให้ แพทย์ประจำสถานประกอบการขนาดใหญ่ทุกแห่งในประเทศไทย และผู้บริหารที่เป็นผู้บังคับบัญชาโดยตรงของแพทย์นั้น จำนวน 294 แห่ง เปรียบเทียบความแตกต่างโดย Marginal Chi-square test*

ผลการศึกษา : *ผู้บริหารตอบแบบสอบถามจำนวน 183 แห่ง แพทย์ตอบแบบสอบถามจำนวน 131 แห่ง ทั้งแพทย์และผู้บริหารตอบมามี 104 แห่ง ซึ่งเป็นแบบสอบถามที่นำมาวิเคราะห์ต่อไป พบว่า แพทย์มีอายุเฉลี่ยมากกว่าผู้บริหารอย่างมีนัยสำคัญ ในส่วนของบทบาทหน้าที่และการปฏิบัติงาน ผู้บริหารและแพทย์มีความเห็นต่างกันเป็นส่วนใหญ่ (8 จาก 11 หัวข้อ) ได้แก่ การร่วมโครงการส่งเสริมสุขภาพ การให้คำปรึกษาด้านสุขภาพอนามัยแก่ลูกจ้าง การให้ภูมิคุ้มกันโรคแก่ลูกจ้าง การตรวจสุขภาพก่อนเข้าทำงาน การตรวจสุขภาพเป็นระยะ ๆ การตรวจสุขภาพก่อนกลับเข้าทำงานหลังการเจ็บป่วย การเก็บรักษาความลับข้อมูลการเจ็บป่วยของลูกจ้าง และการรวบรวมและวิเคราะห์ข้อมูลสถิติการเจ็บป่วย ในส่วนของความคาดหวังในงานอาชีวเวชศาสตร์ในอนาคตนั้น ผู้บริหารและแพทย์ก็ให้ความเห็นต่างกันถึง 10 จาก 31 หัวข้อ ได้แก่ การให้คำปรึกษาก่อนออกจากงาน การส่งเสริมการให้ภูมิคุ้มกันโรคทั่วไป การส่งเสริมการให้ภูมิคุ้มกันโรคจากการประกอบอาชีพ การตรวจร่างกายก่อนกลับเข้าทำงานหลังการเจ็บป่วย การสำรวจสถานประกอบการ การวิเคราะห์อันตรายจากวัตถุดิบ การวิเคราะห์อันตรายจาก*

กระบวนการผลิต การวิเคราะห์อันตรายจากของเสียจากการผลิต การสอบสวนโรคจากการทำงานและการเป็นคณะกรรมการความปลอดภัย

วิจารณ์และสรุป : *การศึกษาครั้งนี้แสดงให้เห็นว่าความคิดเห็นเกี่ยวกับงานบริการอาชีวอนามัยและความเข้าใจเกี่ยวกับบทบาทหน้าที่ของแพทย์ประจำสถานประกอบการขนาดใหญ่ในประเทศไทยยังแตกต่างกันมากระหว่างแพทย์กับผู้บริหาร โดยเฉพาะการให้ภูมิคุ้มกันโรคแก่ลูกจ้าง และการตรวจร่างกายก่อนกลับเข้าทำงานหลังการเจ็บป่วย ในอนาคตควรมีการศึกษาในลักษณะคล้ายกันนี้ในสถานประกอบการขนาดกลางและเล็กต่อไป*

คำสำคัญ : *แพทย์ประจำสถานประกอบการ, ผู้บริหาร, บทบาทหน้าที่, ความคาดหวัง*

Occupational health services are health services provided for workers and are aimed at preventing and treating illness, injuries, and occupational and work-related diseases. The services may be classified into 3 categories: regulatory services provided by regulatory agencies, academic services provided by universities, and services provided by health professionals. These services may be viewed as 3 different subcategories: on-site health services provided by the company as a benefit or in order to comply with the law, occupational medicine clinics provided by occupational medicine physicians, and other clinics including emergency-room services provided by professionals other than occupational medicine specialists. On-site occupational health services are in-house, therefore close to the problems and more likely to obtain useful information than the other subcategories of services. Theoretically, occupational health services should comprise health promotion, disease prevention, early diagnosis and prompt treatment, and rehabilitation [1].

The majority of the adult population spend one-third of their lives at the workplace, where they may be put at risk of getting ill due to health hazards. On the other hand, work contributes positively to their lives economically and socially.[2] Hence, occupational health services provided to workers at the workplace are essential for sustaining national economic and social development.[3] Workers have limited access to health services: 20-50 % in developed countries and only 5-10 % in developing countries.[4] The World Health Organization stated in 1995 that most developing countries hardly realized work-related illness. [3] Good occupational health services require competent personnel working as a team. Physicians are usually assumed to be the leaders of the health teams, and the same applies to occupational health services. The current trend proposed by OSHA (The Occupational Safety and Health Administration) and NIOSH (The National Institute for Occupational Safety and Health) was for the physicians to be at the forefront of the health-related aspects of the safety, health, and environment components (i.e., be the Chief Health Officer). [5] Therefore, occupational health physicians should be competent in occupational health services, properly informed, and entertain the vision to continuously improve such services. [6,7]

Thailand's direction of health service improvement has adopted the global trend by putting health promotion and disease prevention policies into The Eighth National Economic and Social Developmental Plan (1997-2001) emphasizing health and environment in community and workplace.[8] Currently, the law requires any large workplace (more than 1000 employees), to have a physician provide medical services for at least 2 hours.[9] Currently, most physicians working in the enterprises are genera practitioners or specialists in fields other than occupational medicine.[10] Therefore, most services provided emphasize treatment and first aid. Improving occupational health services requires some basic information and thorough understanding of various aspects, some of which are the current prac-tice of corporate physicians and their expectations regarding these services compared to their direct superiors' perspectives. This was anticipated, that by observing and understanding the discrepancies between the physicians and the managers, the weaknesses could be determined and thus provide opportunities for

further improvement. However, this study was to be limited to large-scale enterprises (with more than 1,000 employees) since they were required by law to have a physician providing health care to their employees.

Materials and Methods

This was a cross-sectional descriptive study. Questionnaires were mailed to the corporate physicians and their direct superiors of 294 large-scale enterprises (more than 1,000 employees) as previously reported. [11, 12] The questionnaire for physicians had 3 parts: general information, current practice in occupational health services (practiced regularly, occasionally, or not practiced), and their expectations regarding those services (requirement). The questionnaire for managers also had 3 parts: general information about the manager and the enterprise (17 questions), current practice in occupational health services management (45 questions, 21 about safety, 18 about health, 6 about environment, each asked if practiced or not), and their expectations regarding the physician's role (40 questions, 21 major roles and 19 minor roles, each asked if should be practiced or not). The corresponding 42 questions were paired (11 about current practice and 31 about expectations). For the sake of simplicity's and with the intention to reduce cells with zero value, "practice regularly" and "practice occasionally" were considered as "practice". Data were analyzed by Marginal Chi-square tests.

Results

Of the 294 managers, 183 replied to the questionnaires (62.2 %). A total of 219 (74.5%) of the large-scale enterprises hired at least one physician, and 131 of these (59.8%) replied to the questionnaires. We obtained 104 pairs of datasets for analysis. The descriptions of physicians and managers have previously been reported. [11, 12]

Table 1 shows that the physicians were significantly older than their direct superiors (p-value < 0.001 by t-test, $t = 3.38$, modified degree of freedom [df'] = 184).

Eighty-seven out of 104 (83.7 %) physicians were hired part-time. Table 2 shows the current practice from the physicians' and managers' perspectives. Table 3 shows the expectations of future occupational health services from the physicians' and managers' perspectives.

Table 1. Comparison of age between corporate physicians and their direct superiors.

	N	Mean	Standard deviation	p-value (t-test)
Physicians'age (year)	100	47.39	12.79	< 0.001
Managers' age (year)	103	42.05	9.42	

Table 2. Current practice in occupational health services of physicians from the physicians' and managers' perspectives (n = 104 pairs, df = 1 for every item).

Functions and roles	Marginal Chi-square test	
	Chi-square	p-value
Contributing to health promotion program	17.80	< *0.005****
Giving health advice to employees	5.82	< *0.05**
Immunizing employees against some diseases	8.82	< *0.005****
Pre-placement examinations	30.63	< *0.005****
Periodic examinations	54.02	< *0.005****
Return-to-work examinations	45.31	< *0.005****
Keeping medical records confidential	6.26	< *0.05**
In-house medical treatment	NA	NA
Recording the employee's medical record	0.00	> 0.95
Referring the ill employee to the hospital	0.17	> 0.50
Collecting and analyzing illness statistics	16.68	< *0.005****

NA = Not applied since statistics cannot be computed when the number of non-empty rows or columns is one.

* p-value < 0.05

** p-value < 0.01

*** p-value < 0.005

Table 3. Expectations of future occupational health services from the physicians' and managers' perspectives (n = 104 pairs, df = 1 for every item).

Functions and roles	Marginal Chi-square test	
	Chi-square	p-value
Giving medical advice during work	NA	NA
Giving medical advice before retirement	19.18	< *0.005****
Promoting immunization against general diseases	5.06	< *0.05**
Promoting immunization against work-related diseases	9.60	< *0.005****
Contributing to workplace health promotion	0.25	> 0.50
Conducting or contributing to research	NA	NA
Contributing to occupational health policy making	2.29	> 0.10
Pre-placement examinations	0.31	> 0.50
Periodic examinations	0.44	> 0.50
Return-to-work examinations	4.35	< *0.05**

Table 3. Continued.

Functions and roles	Marginal Chi-square test	
	Chi-square	p-value
Keeping medical records confidential	0.80	> 0.10
Giving advice on disease control	0.57	> 0.10
Walk-through survey	9.03	< *0.005***
Analyzing health hazards from raw materials	6.04	< *0.05**
Analyzing health hazards from work processes	6.32	< *0.05**
Analyzing health hazards from wastes	4.65	< *0.05**
Using data to investigate the disease	0.27	> 0.05
General and occupational history taking	NA	NA
Physical examination and diagnoses	NA	NA
In-house medical treatment	NA	NA
Recording the illness/injuries	NA	NA
Referring to the hospital for specific treatment	NA	NA
Investigating work-related diseases	4.00	< *0.05**
Reporting the diseases	0.00	> 0.95
Follow-up after treatment	NA	NA
Analyzing illness/injuries statistics to prevent the problems	0.31	> 0.50
Membership in occupational safety and health committee	6.72	< *0.01***
Knowing labor protection laws	0.00	> 0.95
Knowing laws regarding work-related diseases	0.00	> 0.95
Knowing laws regarding health related welfare	0.00	> 0.95
Membership in an occupational health professional organization	2.78	> 0.05

NA = Not applied since statistics cannot be computed when the number of non-empty rows or columns is one.

* p-value < 0.05 ** p-value < 0.01 *** p-value < 0.005

Discussion

Most corporate physicians were on average, 5.34 years older than their superiors and 83.7 % were hired part-time. This is in agreement with a study by Teraoka and Chavalitnitikul performed in 1990 and showing that two-thirds of the physicians in Thailand were hired part-time.[13] This obviously differs from the Canadian situation where the full-time: part-time ratio was 55 : 45. [14]

Regarding current practice, significant discrepancies were found regarding contributing to health promotion program, immunizing employees against some diseases, pre-placement examinations, periodic examinations, return-to-work examinations, and collecting and analyzing illness statistics (p-value < 0.005), and giving health advice to employees and

keeping medical records confidential (p-value < 0.05).

Regarding pre-placement examinations, fifty-seven out of 104 physicians performed pre-placement examinations, whereas 93 out of 104 managers replied that they had pre-placement examinations. Regarding periodic examinations, forty-six out of 104 physicians performed periodic examinations, whereas 102 out of 104 managers replied that they had periodic examinations. This might be due to the fact that some enterprises had these services provided by some private hospitals, not by their corporate physicians.

Regarding the expectations, significant discrepancies were found regarding giving medical advice before retirement, promoting immunization against work-related diseases, and walk-through survey (p-value < 0.005), membership in occupational safety and health committee (p-value < 0.01), promoting immunization against general diseases, return-to-work examinations, analyzing health hazards from raw materials, analyzing health hazards from work processes, analyzing health hazards from wastes, and investigating work-related diseases (p-value < 0.05).

In summary, corporate physicians' and their direct superiors' perspectives differed on 8 out of 11 items of current occupational health services, and on 10 out of 31 items expected from future occupational health services. This shows that physicians and managers in large-scale enterprises in Thailand had significantly different perspectives on several items regarding in-house occupational health services. Of note, some items (contributing to health promotion program, pre-placement examinations, periodic examinations, analyzing illness statistics, and keeping medical records confidential) showed good trends since they were different in current practice but not in expectation implying that physicians' and managers' perspectives are getting alike. However, immunizing employees against some diseases and return-to-work examinations were two items that physicians' and managers' perspectives did differ both in current practice and future expectation implying that they need to be focussed and corrected.

Nevertheless, this study was limited to only large-scale enterprises in Thailand, and hence,it remains to be seen if this holds true among small-to-medium scale enterprises (SMEs). It is generally known that large-scale enterprises spend more money on their employees health than SMEs, but all SMEs combined hire more employees than the large ones.

Functions such as health data analyses, prevention program planning, and participation in occupational health policy making, might be viewed as administrative aspects of occupational health services expected to be performed with increasing importance in the future. [15] Hence, to increase the physicians' administrative functions might require a change in the enterprise's policy towards full-time employment of the physician. Regarding expectations about the physicians' practice, most physicians expected to perform most of the appropriate activities, however, this might have resulted from using closed-end questions, which was a bias in this study. The fact that a given activity should, must, or could be performed might not have been thoroughly considered. This study could, however, at least solicit the physicians' opinion on a theoretical basis.

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