

Abstract

Status of the Occupational Health and Safety Programs of Several Hospitals in Korea

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Objectives: As health care workers suffer from various hazards in hospital, an occupational safety and health program is very important to them. This study was conducted to investigate the status of the occupational safety and health programs of several hospitals in Korea.

Methods: We conducted a questionnaire survey on 941 hospitals in Korea. All questionnaires were posted to the department of general affairs at each hospital and responses were received from 108 hospitals (11.5%). Eight responses were excluded because of insufficient data and the remaining 100 questionnaires were analyzed. The collected data were evaluated using the SPSS 10.0 statistical package and the demands for occupational safety and health programs between two groups were analyzed by RIDIT analysis.

Results: The study subjects were 53 general hospitals and 47 hospitals. An occupational safety and health committee, infection control committee, safety manager, health manager, activities for vaccination, reports for needle stick injury and records related to occupational injury were more likely to be present in general hospitals than hospitals ($p<0.05$). Demands for occupational safety and health were higher in general hospitals than hospitals. Especially, demands for measurement of working environment, improvement of ventilatory system, management of chemical materials and supply of protective equipment were significantly higher in general hospitals than hospitals ($p<0.05$).

Conclusions: We concluded from the findings of our study that occupational safety and health programs are not yet sufficient in Korean hospitals. So, we expect that special management, policies and laws for health care workers will be promulgated.

Key Words: Hospital, Occupational health, Safety, Program

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Table 1. The distribution of organization or committee by Industrial Safety And Health Act* and Hospital Infection Control Regulation

Organizations or committee	Article	Applicable workplace of act
Safety manager	15	50 and over of workers
Health manager	16	50 and over of workers
Industrial safety and health committee	19	100 and over of workers
Safety and health education	31	All
Preparing and keeping of material safety data sheet	41	All
Monitoring, etc. of working environment	42	All
Health examination	43	All
Honorary inspector of industrial Safety	61~2	500 and over of workers
Hospital biosafety committee [†]	-	80 and over of beds

*by Industrial Safety And Health Act No. 6847, 2002

[†]by Hospital Infection Control Regulation, 1992

53 (53.0%), 47 (47.0%)
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 (, 1992) (21.0%), 100 499 가 57
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SPSS 10.0 for Windows .

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 Likert 5 (Likert, 1932) 65 (65.0%), 13 (13.0%),
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 , p<0.05 27 (57.4%), 10 (21.3%),
 6 (12.8%) (Table 3).

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Table 2. General characteristics of hospitals that responded according to kinds and magnitude

Characteristics	General hospital (N=53)		Hospital (N=47)		Total (N=100)	
	No.	%	No.	%	No.	%
Kinds of foundation						
private	7	13.2	24	51.1	31	31.0
medical corporation	17	32.1	13	27.7	30	30.0
educational foundation	10	18.9	2	4.3	12	12.0
regional public corporation	7	13.2	1	2.1	8	8.0
special corporation	5	9.4	2	4.3	7	7.0
juridical hospital	5	9.4	1	2.1	6	6.0
national hospital	2	3.8	2	4.3	4	4.0
public hospital	0	0.0	1	2.1	1	1.0
provincial hospital	0	0.0	1	2.1	1	1.0
Number of beds						
below and 99	0	0	21	44.7	21	21.0
100~499	33	62.3	24	51.1	57	57.0
500 and over	20	37.7	2	4.3	22	22.0
Number of workers						
below and 99	4	7.5	31	66.0	35	35.0
100~499	26	49.1	16	34.0	42	42.0
500~999	14	26.4	0	0.0	14	14.0
1,000 and over	9	17.0	0	0.0	9	9.0

Table 3. The distribution of departments having responsibilities of occupational safety and health in hospitals

Departments	General hospital (N=53)		Hospital (N=47)		Total (N=100)	
	No.	%	No.	%	No.	%
General affairs	38	71.7	27	57.4	65	65.0
Maintenance engineering	7	13.2	6	12.8	13	13.0
Hospital affairs	0	0.0	10	21.3	10	10.0
Safety	3	5.7	0	0.0	3	3.0
Occupational medicine	2	3.8	0	0.0	2	2.0
Nursing service	1	1.9	0	0.0	1	1.0
Radiology	1	1.9	0	0.0	1	1.0
Social work	0	0.0	1	2.1	1	1.0
Planning office	0	0.0	1	2.1	1	1.0
Unknown	1	1.9	2	4.3	3	3.0
Total	53	100.0	47	100.0	100	100.0

Table 4. The distribution of organization or committee for occupational safety and health according to kinds of hospitals

Organizations or committee	General hospital (N=53)		Hospital (N=47)		Total (N=100)		Cases held in 2001	
	No.	Positive rate* (%)	No.	Positive rate* (%)	No.	Positive rate* (%)	No.	Positive rate* (%)
Industrial safety and health committee	48	90.6 [†]	17	36.2	65	65.0	48	73.8
Infection control committee	51	96.2 [†]	27	57.4	78	78.0	63	80.8
Radiation control committee	37	69.8 [†]	15	31.9	52	52.0	42	80.8
Health manager	51	96.2 [†]	30	63.8	81	81.0	-	-
Safety manager	52	98.1 [†]	40	85.1	92	92.0	-	-
Honorary inspector of industrial safety	18	34.0	9	19.1	27	27.0	-	-

*proportion of general hospital or hospital with organization or committee among total general hospital or hospital

[†] p<0.05 by chi-square test, comparison between general hospital and hospital groups

(78.0%), 52 (52.0%) , (p<0.05, Table 5).
 2001 63 (80.8%), 42 (80.8%) , 3) 2001 39 (39.0%) , 가 9 (p<0.05, Table 4). (23.1%) . 52 2) (52.0%), 51 (51.0%) . 2001 67 (67.0%) 2 (1 , 50) . 50 94 (94.0%), 100 65 (65.0%), 500 23 (23.0%) . (p<0.05, Table 6). 65 56 (86.2%) 3. 56 43 (76.8%) 2001 . 70 (83.3%), 52 (52.0%) 2001 59 (84.3%), 42 (80.8%) , 가 , 가

Table 5. The distribution of organization or committee by Industrial Safety And Health Act and related regulations

Organizations or committee	General hospital (N=53)			Hospital (N=47)			Total (N=100)			Cases held in 2001		
	No.	No. of cases*	% [†]	No.	No. of cases*	% [†]	No.	No. of cases*	% [†]	No.	No. of cases*	% [†]
Industrial safety and health committee	49	44	89.8	16	12	75.0	65	56	86.2	56	43	76.8
Infection control committee	53	51	96.2 [‡]	31	19	61.3	84	70	83.3	70	59	84.3
Radiation control committee	53	37	69.8 [‡]	47	15	31.9	100	52	52.0	52	42	80.8
Health manager	53	51	96.2 [‡]	41	29	70.7	94	80	85.1	0	0	0
Safety manager	53	52	98.1	41	37	90.2	94	89	94.7	0	0	0
Honorary inspector of industrial Safety	23	12	52.2	0	0	0	23	12	52.2	0	0	0

*number of cases with organization or committee among total general hospital or hospitals

[†] proportion of general hospital or hospitals with organization or committee among total general hospital or hospitals

[‡] p<0.05 by chi-square test, comparison between general hospital and hospital groups

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Table 6. The distribution of activities for occupational safety and health according to types of hospitals

Activities	General hospital (N=53)		Hospital (N=47)		Total (N=100)	
	No.	Positive rate (%)*	No.	Positive rate (%)	No.	Positive rate (%)
Safety and health education	40	75.5	27	57.4	67	67.0
Periodic health examination	53	100.0	44	93.6	97	97.0
Special health examination	32	60.4	20	42.6	52	52.0
Measurement of working environment	27	50.9	24	51.1	51	51.0
Material Safety Data Sheet	31	58.5	19	40.4	50	50.0
Protective measures	45	84.9	33	70.2	78	78.0
Vaccination for workers	40	75.5 [†]	25	53.2	65	65.0
Reports for needle stick injury	38	71.7 [†]	20	42.6	58	58.0
Records for occupational injury and illness	42	79.2 [†]	28	59.6	70	70.0
Activities for prevention accidents	38	71.7	29	61.7	67	67.0
Health promotion	27	50.9	21	44.7	48	48.0

*proportion of general hospital or hospital with activities for occupational safety and health among total general hospital or hospital

[†] p<0.05 by chi-square test, comparison between general hospital and hospital groups

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Table 7. The distribution of demands for occupational safety and health programs (unit: number)

Demands	Class*	1	2	3	4	5	Average ridit (r)	p-value [†]
Measurement of working environment	GH	6	10	20	10	7	0.500	0.040
	H	12	12	12	8	3	0.384	
Periodic health examination	GH	0	3	17	15	18	0.500	0.660
	H	1	4	15	11	16	0.476	
Special health examination	GH	6	7	15	14	11	0.500	0.101
	H	8	8	17	8	6	0.407	
Education for emergency care	GH	4	7	21	10	11	0.500	0.032
	H	3	3	13	9	19	0.620	
Medical consultation	GH	3	5	22	17	6	0.500	0.857
	H	3	4	14	16	10	0.565	
Education for prevention occupational disease	GH	4	6	24	12	7	0.500	0.147
	H	6	12	15	8	6	0.419	
Education for chronic disease	GH	2	4	29	11	7	0.500	0.150
	H	4	11	17	10	5	0.421	
Mechanical development as like improvement of ventilatory system	GH	5	13	20	9	6	0.500	0.007
	H	15	12	13	3	4	0.348	
Management of chemical hazards	GH	4	9	21	11	8	0.500	0.000
	H	15	13	11	6	2	0.295	
Supply of protective equipment	GH	3	7	22	11	10	0.500	0.031
	H	10	8	16	8	5	0.379	
Bulletin board for occupational health and safety	GH	4	8	24	12	5	0.500	0.131
	H	6	12	18	7	4	0.416	
Presentation and counter-plan of results for measurement of working environment and medical examination	GH	7	5	24	10	7	0.500	0.070
	H	10	11	14	9	3	0.399	
Workplace inspection and guidances for development of workplace	GH	4	7	23	11	8	0.500	0.087
	H	5	15	13	10	4	0.404	
Health promotion program	GH	2	7	24	13	7	0.500	0.484
	H	2	8	22	10	5	0.462	
Supply of data for health education	GH	2	7	27	16	1	0.500	0.960
	H	2	8	23	7	7	0.497	
Supply of capitals for improvement of working environment	GH	9	10	23	8	3	0.500	0.535
	H	16	5	13	9	4	0.465	
Guidance of other occupational health facilities	GH	7	8	20	17	1	0.500	0.129
	H	11	9	16	9	2	0.415	

*Class 1; very low 2; low, 3; moderate, 4; high, 5; very high

[†] by RIDIT analysis, comparison between general hospital and hospital

GH; General Hospital, H; Hospital

Table 8. Comparison between responded group and non-responded group

Characteristics	Response		Non-response	
	No.	%	No.	%
Hospital*				
general hospital	53	53.0	225	26.8
hospital	47	47.0	616	73.2
No. of beds [†]				
under 100	21	21.0	401	47.7
100 ~ 499	57	57.0	355	42.2
500 and over	22	22.0	85	10.1
Kind of foundation*				
public	21	21.0	82	9.8
private	79	79.0	759	90.2
Total	100	100.0	841 [‡]	100.0

*p<0.05 by chi-square test, comparison between responded group and non-responded group

[†] p<0.05 by chi-square for trend ($\chi^2=29.51$), comparison among groups by number of beds

[‡] Twenty one of military hospitals were excluded because of insufficient information

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