

Purpose

➤Korea became an aged society in 2018 and is predicted to become a super-aged society by 2026. Korea’s Ministry of Health and Welfare (MOHW) is implementing a support program to improve the quality of long-term care hospitals to ensure the quality and adequacy of medical services for the elderly. The purpose of this study is to investigate the impact of the quality improvement support program implemented by the MOHW for long-term care hospitals on the nursing outcomes of inpatients.

Methods

➤ This secondary data analysis study utilized the adequacy evaluation data of long-term care hospitals in 2015 and 2018, and reported data on the current status of long-term care institutions in 2015 from the Health Insurance Review and Assessment Service (HIRA). The subjects of the analysis were 823 long-term care hospitals that received adequacy evaluations of inpatient benefits in both 2015 and 2018. The intervention group comprised 194 long-term care hospitals that received a low grade in the 2015 evaluation and participated in the quality improvement support program from May 30 to August 31, 2017. The non-intervention group comprised 629 long-term care hospitals that received a high grade in the 2015 evaluation and did not participate in the quality improvement support program. The impact of the quality improvement support program on the nursing outcomes was analyzed with the difference-in-difference (DID) method using the STATA 15.0 program.

Results

➤ As a result of DID analysis of the impact of the quality improvement support program on nursing outcomes, all nursing outcomes showed statistically significant improvement.

Conclusions

➤ To improve the quality of care in long-term care hospitals, the implementation of various quality improvement support programs for long-term care hospitals and the monitoring of nursing outcomes are necessary, and measures to efficiently utilize medical resources should be continuously pursued in this era of the growing elderly population.

Table1. General characteristics of study institutions

Variables	Categories	Total (N=823)	Intervention group (N=194)	Non-intervention group (N=629)
		N (%)	N (%)	N (%)
Hospital size	100 beds or less	116(14.1)	64(33.0)	52(8.3)
	Above 100 beds	707(85.9)	130(67.0)	577(91.7)
Founding capital	Public hospital	63(7.7)	15(7.7)	48(7.6)
	Private hospital	760(92.3)	179(92.3)	581(92.4)
Location	Big city	342(41.6)	47(24.2)	295(46.9)
	Small city	481(58.4)	147(75.8)	334(53.1)
Operating period	10 years or less	714(86.8)	179(92.3)	535(85.1)
	Above 10 years	109(13.2)	15(7.7)	94(14.9)
Number of participations in the evaluation	3 times or less	489(59.4)	125(64.4)	364(57.9)
	Above 3 times	334(40.6)	69(35.6)	265(42.1)
Number of patients per nurse	11 or less	373(45.3)	61(31.4)	312(49.6)
	Above 11	450(54.7)	133(68.6)	317(50.4)
Number of patients per physician	31 or less	343(41.7)	93(47.9)	250(39.7)
	Above 31	480(58.3)	101(52.1)	379(60.3)

Table2. Impact of quality improvement support program

Variables	Patients with indwelling catheters in HRG		Patients with indwelling catheters in LRG		Patients with reduced daily living performance in DPG		Patients with reduced daily living performance in N-DPG		Patients with new bedsores in HRG		Patients with new bedsores in LRG		Patients with aggravated bed sore condition in HRG		Patients with improved bed sore condition in HRG	
	Model I	Model II	Model I	Model II	Model I	Model II	Model I	Model II	Model I	Model II	Model I	Model II	Model I	Model II	Model I	Model II
Constant (β ₀)	8.328 (0.000)	27.556 (0.000)	0.595 (0.000)	3.967 (0.000)	1.134 (0.000)	6.571 (0.000)	1.013 (0.000)	4.338 (0.000)	0.083 (0.000)	0.687 (0.000)	0.002 (0.000)	-0.012 (0.000)	0.049 (0.001)	0.479 (0.000)	33.594 (0.000)	40.957 (0.000)
Time (β ₁) (base: 2015)	0.331 (0.584)	0.169 (0.776)	0.128 (0.316)	0.121 (0.337)	0.094 (0.545)	0.158 (0.307)	-0.071 (0.642)	-0.034 (0.824)	0.036 (0.190)	0.041 (0.144)	0.006 (0.611)	0.006 (0.604)	0.048 (0.026)	0.054 (0.012)	-1.255 (0.260)	-1.194 (0.286)
Group Effects (β ₂)	12.121 (0.000)	11.936 (0.000)	2.026 (0.000)	1.919 (0.000)	5.689 (0.000)	5.411 (0.000)	4.617 (0.000)	4.502 (0.000)	0.675 (0.000)	0.654 (0.000)	0.076 (0.000)	0.077 (0.000)	0.358 (0.000)	0.358 (0.000)	-9.301 (0.000)	-10.138 (0.000)
Treatment Effects (β ₃)	-4.736 (0.001)	-4.505 (0.001)	-0.719 (0.013)	-0.692 (0.016)	-4.286 (0.000)	-4.291 (0.000)	-3.381 (0.000)	-3.382 (0.000)	-0.422 (0.000)	-0.422 (0.000)	-0.055 (0.024)	-0.055 (0.025)	-0.200 (0.000)	-0.199 (0.000)	7.963 (0.001)	7.977 (0.001)
Hospital size		-1.800 (0.006)		-0.339 (0.015)		-0.789 (0.000)		-0.485 (0.003)		-0.076 (0.011)		0.002 (0.888)		-0.007 (0.744)		-0.686 (0.570)
Operating period		0.332 (0.525)		0.008 (0.944)		0.331 (0.012)		0.277 (0.032)		0.021 (0.375)		-0.0002 (0.977)		0.027 (0.138)		-2.820 (0.003)
Founding capital		1.915 (0.057)		0.354 (0.099)		0.503 (0.053)		0.600 (0.018)		0.069 (0.138)		0.013 (0.513)		-0.018 (0.615)		0.705 (0.709)
Location		-1.877 (0.000)		-0.408 (0.000)		-0.235 (0.085)		-0.213 (0.110)		-0.029 (0.229)		0.007 (0.482)		-0.031 (0.096)		1.250 (0.206)
Number of participations in the evaluation		-0.224 (0.743)		0.055 (0.707)		-0.009 (0.961)		0.332 (0.057)		0.027 (0.404)		-0.010 (0.483)		-0.003 (0.893)		2.003 (0.120)
Number of patients per physician		-0.174 (0.032)		-0.037 (0.034)		-0.081 (0.000)		-0.060 (0.003)		-0.009 (0.015)		-0.0002 (0.877)		-0.012 (0.000)		-0.049 (0.743)
Number of patients per nurse		-0.530 (0.000)		-0.057 (0.000)		0.026 (0.182)		-0.000 (0.995)		-0.003 (0.438)		0.000 (0.996)		-0.003 (0.309)		0.049 (0.724)
Adjusted R ²	0.112	0.160	0.077	0.100	0.300	0.325	0.235	0.254	0.164	0.1731	0.011	0.008	0.0861	0.100	0.019	0.022
Number of observations	1,576		1,576		1,646		1,646		1,646		1,646		1,646		1,631	

Parentheses are p-values.
HRG=high risk group; LRG=low risk group; DPG=dementia patients group; None dementia patients group=N-DPG.