

노인장기요양 방문간호서비스의 소요시간별 방문당 원가 분석

김은경¹ · 김윤미² · 김명애³

¹

²

³

Estimation of Nursing Costs Based on Nurse Visit Time for Long-Term Care Services

Kim, Eun-Kyung¹ · Kim, Yun Mi² · Kim, Myung Ae³

¹Assistant Professor, Department of Nursing, Mokpo National University, Muan

²Associate Professor, Department of Nursing, Eulji University, Seongnam

³Director, Nursing Department, Seoul National University Hospital, Seoul, Korea

Purpose: The purpose of this study was to estimate nursing costs and to establish appropriate nursing fees for long-term care services for community elders. **Methods:** Seven nurses participated in data collection related to visiting time by nurses for 1,100 elders. Data on material costs and management costs were collected from 5 visiting nursing agencies. The nursing costs were classified into 3 groups based on the nurse's visit time under the current reimbursement system of long-term care insurance. **Results:** The average nursing cost per minute was 246 won. The material costs were 3,214 won, management costs, 10,707 won, transportation costs, 7,605 won, and capital costs, 5,635 won per visit. As a result, the average cost of nursing services per visit by classification of nursing time were 41,036 won (care time <30 min), 46,005 won (care time 30-59 min), and 57,321 won (care time over 60 min). **Conclusion:** The results of the study indicate that the fees for nurse visits currently being charged for long-term care insurance should be increased. Also these results will contribute to baseline data for establishing appropriate nursing fees for long-term care services to maintain quality nursing and management in visiting nursing agencies.

Key words: Long-term care, Cost, Nursing services

서론

1. 연구의 필요성

(Jung et al., 2005).

2020 100

6

(Kim et al., 2008).

주요어 : 장기요양, 원가, 방문간호

*본 논문은 2007년 대한간호협회의 재원을 지원받아 수행된 연구임.

*This study was financially supported by the Korean Nurses Association in 2007.

Address reprint requests to : Kim, Eun-Kyung

Department of Nursing, Mokpo National University, 61 Dorim-ri, Cheongye-myeon, Muan 534-729, Korea

Tel: 82-61-450-2672 Fax: 82-61-450-2679 E-mail: eunkyung@mokpo.ac.kr

투고일 : 2009년 8월 12일 심사외뢰일 : 2009년 8월 24일 게재확정일 : 2010년 5월 20일

2008 7 1
 (National Health
 Insurance Corporation [NHIC], 2008).

“ ”
 1-3
 (NHIC, 2008).

()
 (Kim et al., 2004).

30 , 30- 60 , 60
 (Jung et al., 2005).

1
 (Seok, 2006).

(Lee, 2003)
 30 33,825 , 30- 60 41,175 ,
 60- 90 48,525 (Jung et al., 2005).
 (Kang, 2008; Lee, 2003; Ryu, 2004; Ryu, Jung, &
 Im, 2006)

2008 1 ,
 30
 25,430 , 30- 60 32,990 , 60 40,550
 . 2005

76.0%
 “ ” 84.6%
 (Sung, 2009).

2. 연구 목적

3. 용어 정의

1) 간호활동비

2) 직접 비용

(Jung et al., 2005),

3) 간접 비용

(Jung et al., 2005),

4) 방문간호원가

2007

연구 방법

1. 연구 설계

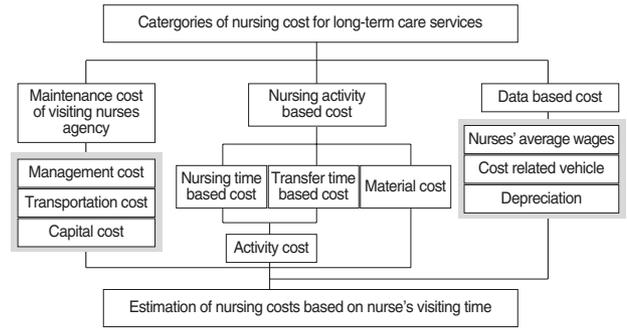


Figure 1. Study framework for estimation of nursing cost.

Figure

1

2. 연구 대상

3. 연구 도구

1) 간호활동기록지

5

2) 방문간호사업소 운영현황 조사지

1

4. 연구 진행 절차

1) 직접 비용
(1) 방문간호활동비

91 2005 14,326

5

2006 2007
5.6% 5.5%

(2) 간호소모품비

5. 자료 수집 방법

2007 9 1 12 31

11 30 3 7

2007 9 1

2) 간접 비용
(1) 관리운영비

(, ,) ,

2005

. 2

6. 자료 분석 방법

(, ,)

(2) 차량유지비

$$\frac{[(\text{ } \times \text{ }) + \text{ }] > + < \text{ } (\text{ } + \text{ } + \text{ }) >}{\text{ } = < \text{ } >}$$

7 4 1,600 cc

연구 결과

5
2- 12

1. 방문간호사업소별 방문간호 현황

7

5 8

7 346 , 1,100
44- 51 , A E
2 99- 102
1

3

. A, B, D

(3) 자본 비용

1 1- 3 , B E

4- 6

5

1 1 3.2 (Table 1).

2. 방문간호소요시간별 간호활동시간

30 , 30- 60

7%

, 60

(Table 2).

30 23.7 , 30- 60 43.2 , 60

3) 방문간호원가 산출

73.4 . 30 32.7 , 30- 60

33.4 , 60 49.2 .

Table 1. Visit Days and Number of Customer per Day by Visiting Nurse Agencies and Nurses

Agencies	Nurses	No. of customers visited per day							No. of days (%)	No. of visits
		1	2	3	4	5	6	7		
A	N1		39	11					51 (14.7)	111
	N2	4	22	25					51 (14.7)	123
B	N3		3	17	24	6			50 (14.5)	183
C	N4	7	7	18	6	6			44 (12.7)	129
D	N5	11	39	1					51 (14.7)	92
E	N6		1	4	17	13	11	3	49 (14.2)	234
	N7		1	11	14	9	13	2	50 (14.5)	228
Total	7								346 (100.0)	1,100
Mean (SD)/day									1	3.2 (1.4)

Table 2. Nursing Activity Time and Transfer Time Based on Nursing Service Time
Unit: Minutes (N=1,100)

Length of nurse visits	n (%)	Nursing care time	Transfer time	Nursing activity time
		M (SD)	M (SD)	M (SD)
<30 min	61 (5.5)	23.7 (3.7)	32.7 (15.8)	56.4 (16.0)
30-59 min	961 (87.4)	43.2 (7.5)	33.4 (19.4)	76.6 (21.1)
≥ 60 min	78 (7.1)	73.4 (15.6)	49.2 (19.7)	122.6 (29.6)

3. 방문간호활동 원가 분석

1) 방문간호사 인건비

Year	Personnel	Rate	Cost (Won)
2005	12		26,088,873
2006	5.6%		2,174,073
2007	5.5%		2,422,091
2007	40		246,000
2007	12	20.5	1,600 cc

2) 간호소모품비

Item	Quantity	Unit Price	Total Cost (Won)
간호소모품비	1,100		290,000
(Table 3)		837.7	520,000
30-60	30	3,224.9	246
30-60	60	2,596.9	12,584.2
30-60	30	4,062.6	1,785,714
30-60	60	3,141.9	1,932.6
30-60	60	3,434.6	3,932.6
30-60	60	3,665.3	7,597.9
30-60	60	3,214.0	3,214.0

4. 방문간호사업소 운영비 분석

1) 관리운영비

Year	Personnel	Rate	Cost (Won)
2007	1	12	334,167
2007	1	12	5,635.2

Table 3. Material Costs Based on Length of Nurse Visits for Long-Term Care Services
Unit: Won

Length of nurse visits	Individual material cost	Common material cost	Total cost
	M (SD)	M (SD)	M (SD)
<30 min	3,224.9 (3,106.5)	837.7	4,062.6 (3,106.5)
30-59 min	2,304.2 (4,838.9)	837.7	3,141.9 (4,838.9)
≥ 60 min	2,596.9 (4,948.1)	837.7	3,434.6 (4,948.1)
F (p)			1.147 (.316)
Average cost	2,376.3 (4,470.6)	837.7	3,214.0 (4,770.6)

Year	Personnel	Rate	Cost (Won)
2005	12		8,639.9
2006	5.6%		1,962,259
2007	5.5%		2,067.3
2007	40		10,707.2

2) 차량유지비

Year	Personnel	Rate	Cost (Won)
2007	12		12,500,000
2007	12	20.5	1,785,714
2007	12	20.5	290,000
2007	12	20.5	520,000
2007	12	20.5	246
2007	12	20.5	12,584.2
2007	12	20.5	1,932.6
2007	12	20.5	3,932.6
2007	12	20.5	7,597.9

3) 자본 비용

Year	Personnel	Rate	Cost (Won)
2007	1	12	2,300
2007	1	12	59.3

Table 4. Nursing Costs Based on Length of Nurse Visits for Long-Term Care Services

Unit: Won

Length of nurse visits	Direct cost per visit		Indirect cost per visit			Total cost	Current cost
	Activity cost	Material cost	Management cost	Transportation cost	Capital cost		
<30 min	13,874.4	3,214.0	10,707.2	7,597.9	5,635.2	41,028.7	27,360
30-59 min	18,843.6	3,214.0	10,707.2	7,597.9	5,635.2	45,997.9	35,310
≥60 min	30,159.6	3,214.0	10,707.2	7,597.9	5,635.2	57,313.9	43,260

5. 방문간호 소요시간별 간호원가

(Table 4). , Lee (2003)
 37 62,741 , Ryu (2006)
 50 50,626 , Kang (2008)
 246 , 30 54,296-
 13,874.4 , 30- 60 18,843.6 , 60 93,455
 30,159.6 . 30- 60 45,997.9 ,
 3,214.0 , 10,707.2
 7,597.9 , 5,635.2 2007 2008 4.7%
 (Korea National Statistical Office, 2008),
 2009 30
 30 41,028.7 , 30- 60 45,997.9 42,957 , 30- 60 48,160 , 60 60,008
 , 60 57,313.9 . 30 (28,700) , 30- 60
 2007 12 30 (36,650) , 60 (44,600)
 27,360 , 30- 60 35,310 , 60 43,260

논 의

(Gesture, Joan, Rosalie, Ira, & Eugene, 1991; Ryu, 2004),

50%

3,191,451 (Ryu et al., 2006)- 2,332,333 (Ryu, 2004),
 2,424,583 (Lee, 2003),
 2,047,222 (Kang, 2008)

(Park

et al., 2001; Ryu, 2006; Ryu et al., 2000),

1,500,000

49,227

2007 12

2,422,091

2004

5 (Ryu et al., 2006)

7

3- 10

20%, 30%

(overuse)

(Jung et al., 2005).

30 23.7 , 30- 60

43.2 , 60 73.4

(Lee, 2003; Ryu et al., 2006; Seok, 2006).

1

. 1 8 3.2

(Seok, 2008).

1

(0.5 , 1 2009

13) 3 1 25,757- 52,796 , 41,030-

5 , 48,150 , 27,360- 43,260

6,439 , 5,688 , 3,726

30 32,941 , 30- 60 37,911 , 60

50% 15% 20% 5

(Seok, 2008). 66.7- 76.8% 15%

2008 7

() (Ryu, 2006), 15% (Kwon, 1999; Murray, 2009; Park, Song, Sung, Ham, & Yun, 1997).

15% 30 47,183.0 , 30- 60 52,897.6 , 60 65,911.0

(Seok, 2006).

(Lee, 2003; Park, Song, Sung, Jo, & Sim, 1999; Ryu et al., 2006),

결론

REFERENCES

Gesture, B. D., Joan, D. P., Rosalie, A. K., Ira, S. M., & Eugene, C. R. (1991). Modeling the costs management in long-term care. *Health Care Financing Review, 13*, 73-81.

Jung, K. H., Seok, J. E., SunWoo, J. D., Lee, T. W., Lee, T. J., Lee, Y. K., et al. (2005). *Development of targeting and fee system for*

- long-term care*. Seoul: Korea Institute for Health and Social Affairs.
- Kang, S. Y. (2008). Estimation of home-visiting care costs for low-income elderly with chronic disease in a metropolitan city using the severity classification and ABC (active-based costing). *Journal of Korean Academy of Nursing Administration*, 14, 118-130.
- Kim, Y. H., Seok, J. E., Shin, J. G., Ryu, G. S., Lee, S. S., Kim, J. M., et al. (2008). *A model of financial estimation in long-term care insurance*. Seoul: Korea Institute for Social Insurance.
- Kim, Y. I., Kang, Y. G., Park, J. Y., Lee, G. O., Kim, K. Y., Choi, S. J., et al. (2004). *System development of long-term care elderly*. Seoul: Ministry for Health, Welfare and Family Affairs.
- Korea National Statistical Office. (2008, December 31). *Average and trend of the consumer prices in 2008*. Retrieved December 31, 2008, from http://kostat.go.kr/board_notice/BoardAction.do?method=view&board_id=73&seq=111&num=111&parent_num=0
- Kwon, S. M. (1999). The medical industry and cost regulation: Effectiveness and reform strategies. *The Korean Association for Policy Studies*, 8, 255-271.
- Lee, S. J. (2003). *Cost analysis of home health care with activity-based costing (ABC)*. Unpublished doctoral dissertation, Yonsei University, Seoul.
- Murray, R. (2009). Setting hospital rates to control costs and boost quality: The Maryland experience. *Health Affairs*, 28, 1395-1405.
- National Health Insurance Corporation. (2008, July 1). *Long-term care insurance*. Retrieved August 1, 2009, from <http://www.long-termcare.or.kr/portal/site/nydev/menuitem.6b1ad78dd7b58491ccdc3d584b310a0>
- Park, J. H., Hwang, N. M., Yun, S. N., Kim, M. J., Han, K. J., Hong, K. J., et al. (2001). *Policy directions for establishment and expansion of home nursing care in Korea*. Unpublished manuscript, Seoul National University, Seoul.
- Park, J. H., Song, M. S., Sung, Y. H., Ham, M. L., & Yun, S. O. (1997). Estimation of nursing costs for hospitalized patients based on the KDRG classification. *Journal of Korean Academy of Nursing Administration*, 3, 151-165.
- Park, J. H., Song, M. S., Sung, Y. H., Jo, J. S., & Sim, W. H. (1999). Estimation of nursing cost for hospitalized patients using the resource-based relative value scale. *Journal of Korean Academy of Nursing Administration*, 5, 253-279.
- Ryu, H. S. (2004). Estimating the cost of visiting nursing service by visiting nursing model for urban public health center in Korea. *Journal of Korean Academy of Nursing*, 34, 983-993.
- Ryu, H. S. (2006). Current status of costs and utilizations of hospital based home health nursing care in Korea. *Journal of Korean Academy of Nursing*, 36, 1193-1203.
- Ryu, H. S., Jung, K. S., & Lim, J. Y. (2006). Test on the cost development on the payment system of home health care nursing. *Journal of Korean Academy of Nursing*, 36, 503-513.
- Ryu, H. S., Lee, S. J., Moon, H. J., Whang, N. M., Park, S. A., Park, J. S., et al. (2000). A preliminary study for evaluating on demonstration project of community-based home health care nursing services by the Seoul Nurses Association. *Journal of Korean Academy of Nursing*, 30, 1488-1502.
- Seok, J. E. (2006). The unit cost of long-term care service: Evaluation of 1st demonstration project. *Health-Welfare Policy Forum*, 120, 44-59.
- Seok, J. E. (2008, November). *Development of long-term care insurance: Characteristics and policy themes*. Paper presented at the international meeting of the Korean Gerontological Society, Seoul.
- Sung, M. S. (2009, July 2). Long-term care insurance 1 year-management and development strategy-. *The Korean Nurses Association News*, p. E3.