2000   6

2000   6

,

.

,

.

,

2000   6

,

,

.

DRG   .

.   1

,   .

11   256

DRG

(Appropriateness Evalua

-tion Protocol; AEP)   .

.

DRG   .

.

1.   (MDC)   (01) 15.6%,

·   (08) 15.6%,   (04) 15.2%   46.8%

,   KADRG   (202) 7.4%,

(088) 6.3%,   (014) 4.7%

KADRG   (   )   .

2.   256   25.0%(64)   ,

(MDC)   1   2

,   ·   (08) 42.5%,   ·   (07)

41.2%,   (01) 30.0%   .   KADRG

(243) 77.8%, (018) 70.0%,

(202) 47.4% .

3. 256 34.0%(87)

, (MDC) (01) 55.0%, · (08)

55.0%, (06) 39.1% .

KADRG (243) 66.7%, (018) 60.0%,

(014) 58.3%, (012) 50.0%

. , 1

2 .

4. ,

(MDC 04) (MDC 01), · (MDC 07), ·

(MDC 08) .

3.82 .

, 2 1

.

.

(DRG) . DRG

. (MDC 08) DRG .

,

.

•

1.

1977

.

1977   209   1987   10
439   1999   137
.

1992   3,010   ,   1996   5,363   ,   1999
10,687   (   )   (, 2000).
1990
'93   '98
14.87%   18.63%
1   16%
31%   (, 1999).

1999   9   "   "
,
.

.
(Gertman   Restuccia, 1981).

(·

, 1991).

Donabedian(1973)   ,   (service

reserve)   (manifest reserve)

(latent reserve)   .

,

,

(, 1993).

(Diagnosis Related Groups; DRG)

.

DRG

.   DRG

.

,   ·   ,

,   ,

(, 1999)

. DRG

,

11.2%

0.8 %

(,   1999,

2000).

,

.

.

(1999)

26.5 %,   1   42.7 %,   2   34.5 %

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,

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2.

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, $(1 \quad / 2 \quad)$

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1.

            ,   ,   ,   ,

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1   2

.   1

2

(acute care)   (non-acute care)

.

1

2   .

(, 1991;   , 1993;   ,
1993).   ,

.

(1993)   1,500

90%

634   6,241   Gertman   Restuccia

(Appropriateness Evaluation Protocol; AEP)

,   83.5%

, 91.3% ,

66.7% . 4

95.2% ,

.

62.4% .

,

62.4% , (17.4%),

(11.6%) .

,

, , ,

, . , ,

. 1

.

(1991) 1 86

90 AEP ,

21.7%, 28.2%,

14.8% , ,

.

20.9% 8.7% .

, ,

.

.

(1994) 830 1

(AEP) (Delay Tool)

" "

2

,

.

.

100% 98.1%,

94.1% .

.

96.0%,

90.6% .

86.0%, 74.1% ,

87.0%, 69.0%

. 1

1

.

1

,

.

_____

1) (1993) 5 ,
(1991) 10

,   (1999)   13

                                              2%   13   737
                                          424 (57.5%)   1
291 (39.5%),   2   133 (18.0%)   .
                                                                                      (AEP)
                ,
                          125   17.0%   ,
                          10.9%,   1   22.3%,   2
20.2%   2
                              .
                          26.5%,   1   42.7%,   2   34.5%

                              .

                                                                              63%

                          21.6%,   1   37.0%,   2   27.0%
                              1
          .
    .

                  (12.2%)   1   (25.9%)
                            (11.4%)   1 (21.5%),   2
(20.7%)   .
                          30.4%,   1   54.3%,   2   49.2%
                                      .

              (1993)   5
                                  (selection bias)

- 8 -

(36.2%), (14.9%),

(9.9%), (8.2%), (6.1%)

.

.

2.

.

.

Gertman Restuccia(1981)

(Appropriateness Evaluation

Protocol; AEP) .

(AEP) Gertman Restuccia(1981)

. 92 94%

, (,

1991; , 1993; , 1993; , 1994; ,

1999) .

(acute

hospital level of care) , ,

,

(, 1991).

AEP '   ', '   ', (elective

surgery)[2) ′   . , ,

,   6   .

(/   )   ,   (

)   .

.

,   ,

,   .

1

,   .

95 %   .

(override option)[3]   .

,

.

,   ,

,   (prospective),   (concurrent),   (retro

-spective)

.   ,
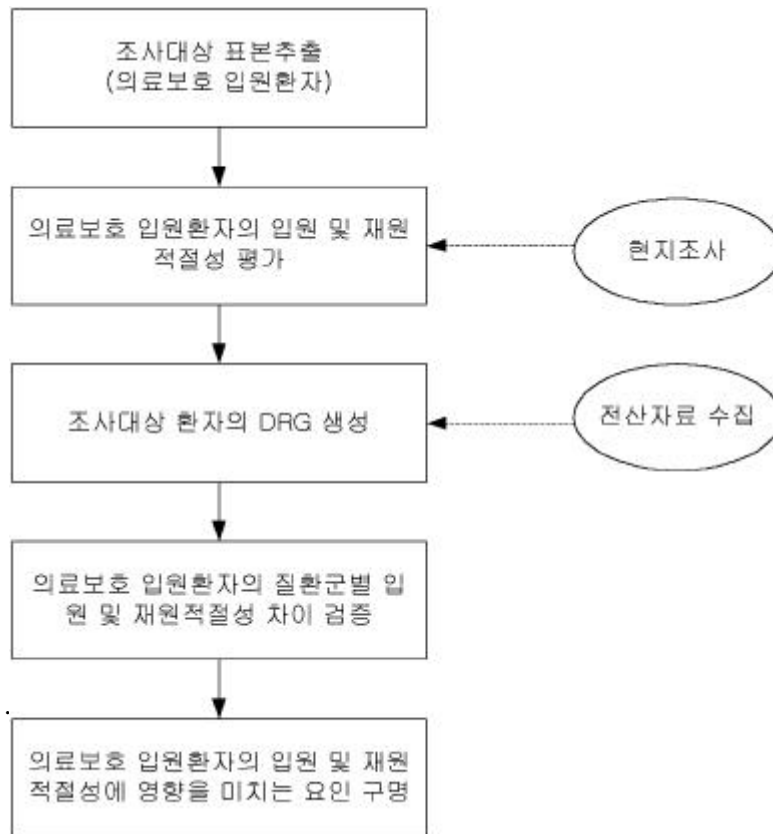
,   ,   ,

.

.

I/ O   ,   (total

─────────────────────────────
2)   (emergency surgery)
3)   (1991)   (override option)   ′   ′

parenteral nutrition)

.

(, 1999).

•

1.

<   1>   .

,

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```
┌─────────────────────────┐
│      조사대상 표본추출       │
│    (의료보호 입원환자)       │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ 의료보호 입원환자의 입원 및 재원  │◄········  현지조사
│       적절성 평가            │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│   조사대상 환자의 DRG 생성     │◄········  전산자료 수집
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ 의료보호 입원환자의 질환군별 입   │
│  원 및 재원적절성 차이 검증     │
└─────────────────────────┘
            │
            ▼
┌─────────────────────────┐
│ 의료보호 입원환자의 입원 및 재원  │
│ 적절성에 영향을 미치는 요인 구명  │
└─────────────────────────┘
```

.

1.

11

,   DRG
            .

2.

   1)

                                                                         .

                                                            4)
                        11   .
                        <   1>   .

                                                                      .

                                                    2

      ,   1

                        1   2   2
         (10   )   (random sampling)   .
      ,   20   .

                                                                   343
      ,   1   224   (65.3%),   2   119
(34.7%)   .
_____
4) 1998   1   1   6   30   6   30   (
                        13%   )   2%

1999   8   9   9   5   1
　　　　　　　　　　　　　　　.

KADRG   .

                                                          KADRG

                                                               ,

              ,   (unrelated OR

procedure)   (KADRG 468),

              (KADRG 469), KADRG   (KADRG 470)

        256   .

    1.

		%
	6	54.5
	5	45.5
	3	27.3
	8	72.7
3	3	27.3
	8	72.7
300	2	18.2
300 500	4	36.4
500	5	45.4
	7	63.6
	4	36.4
	11	100.0

2)

　　　　　　　　　　　　　　　　　　　.

　　　　Gertman　　Restuccia(1981)

　　(Appropriateness Evaluation Protocol; AEP)　　　　　　　.

　　　　　　　　　　　　　　　　　　　.

3.

　　　　　　　　　　　　　　KADRG　　　　　　　, KADRG

　　　　　　　　　　　.

　　　　　　　　　　　　　　(KADRG),　　　　　　(Major Diag
-nostic Category; MDC)　　　　　　　　　　　,

　　　(1　/ 2　)

　　　t-　　　　　　　　.

　　　　　　　　　　　　　.

　　　　　　　　　　　.

　　<　2>　　　.

2.

		0 :	1 :
		0 :	1 :
		0 :	1 :
		0 : 65	1 : 65
		0 : 1	1 : 2
	KADRG	0 : class 0	1 : class 1, 2
	1*	MDC 01( )	
	2*	MDC 06( )	
	3*	MDC 07(·)	
	4*	MDC 08(·)	
		0 : 500	1 : 500
		0 :	1 :

: 1   4   (reference group)   MDC 04
(- respiratory system)

•

1.

(Appropriate Evaluation Protocol; AEP)

.   343

KADRG

256   .   1   171   (66.8%),   2

85   (33.2%)   .

57.4%,   45.3%

,   1   (55.6%)   2

(61.2%)   .

(·   , 1998)   48.8%

51.2%   .

,   60

47.6%   60

(49.7%)   (·   ,

1998).   1   60   (52.0%)

2   60   (38.9%)   50

1   (11.7%)   2   (32.9%)

.

3.

		1	2	
		95 (55.6)	52 (61.2)	147 (57.4)
		76 (44.4)	33 (38.8)	109 (42.6)
20	30	6 (3.5)	1 (1.2)	7 (2.7)
31	40	28 (16.4)	7 (8.2)	35 (13.7)
41	50	28 (16.4)	16 (18.8)	44 (17.2)
51	60	20 (11.7)	28 (32.9)	48 (18.8)
61	70	39 (22.8)	14 (16.5)	53 (20.7)
71	80	39 (22.8)	13 (15.3)	52 (20.3)
80		11 (6.4)	6 (7.1)	17 (6.6)
		80 (46.8)	47 (55.3)	127 (49.3)
		7 (4.1)	1 (1.2)	8 (3.1)
		22 (12.9)	7 (8.2)	29 (11.3)
		4 (2.3)	1 (1.2)	5 (2.0)
		2 (1.2)	3 (3.5)	5 (2.0)
		18 (10.5)	5 (5.9)	23 (9.0)
		22 (12.9)	12 (14.1)	34 (13.3)
		2 (1.2)	2 (2.4)	4 (1.6)
		1 (0.6)	—	1 (0.4)
		1 (0.6)	—	1 (0.4)
		4 (2.3)	—	4 (1.6)
		1 (0.6)	2 (2.4)	3 (1.2)
		1 (0.6)	1 (1.2)	2 (0.8)
		3 (1.8)	1 (1.2)	4 (1.6)
		0 (0.0)	2 (2.4)	2 (0.8)
		3 (1.8)	1 (1.2)	4 (1.6)
		171(100.0)	85(100.0)	256(100.0)

, 49.6% ,

(13.3%), (11.3%), (9.0%) . 1 2

1 (46.8%)

2 (55.3%)

. ,

(, 1999) 1 65.4%, 2 52.0%

1 .

< 3> .

2.

(MDC)

(01) 15.6%, · (08) 15.6%, (04) 15.2%

46.8% , · (07) 13.3%, (06) 9.0%

.

(MDC) 1

2

(04) 17.6%, · (07) 16.5%, · (08)

15.3%, (06) 10.6%, (01) 9.4%

, (01) 1

18.7% 2 9.4% . <

3> 1 2

.

(MDC) < 4> .

4. (Major Diagnostic Category; MDC)

<div style="text-align:right">(: , %)</div>

MDC		1	2	
01		32 (18.7)	8 (9.4)	40 (15.6)
08	·	27 (15.8)	13 (15.3)	40 (15.6)
04		24 (14.0)	15 (17.6)	39 (15.2)
07	·	20 (11.7)	14 (16.5)	34 (13.3)
06		14 (8.2)	9 (10.6)	23 (9.0)
05		12 (7.0)	6 (7.1)	18 (7.0)
11		12 (7.0)	4 (4.7)	16 (6.3)
09		7 (4.1)	4 (4.7)	11 (4.3)
10		5 (2.9)	3 (3.5)	8 (3.1)
17		4 (2.3)	4 (4.7)	8 (3.1)
02		3 (1.8)	—	3 (1.2)
19		3 (1.8)	—	3 (1.2)
18		1 (0.6)	2 (2.4)	3 (1.2)
03		2 (1.2)	1 (1.2)	3 (1.2)
13		2 (1.2)	—	2 (0.8)
16		1 (0.6)	1 (1.2)	2 (0.8)
21		1 (0.6)	1 (1.2)	2 (0.8)
		1 (0.6)	—	1 (0.4)
		171(100.0)	85(100.0)	256(100.0)

KADRG(Korean Adjacent Diagnosis Related
Groups) (5), (202) 7.4%

(088) 6.3%, (014) 4.7%,

(018) 3.9% .

(　　　　·　　　　　　　　　　　　　, 1998)

，　　　　　　　　　　　　　　　　　　　　(202) 5.8%,

(088) 4.1%,　　　　　　3.3%　　　　　　　　　　　　　　　　KADRG

　　　　　　　　　　　　　　　　　．

　　　　　　　1　　　　　　　2　　　　　KADRG

　1　　　　　　　　　　　　　　　(202)　8.2%　　　　　　　，

　　2　　　　　　　　　　　　　(088)　8.2%

　　(014),　　　　　　　　　　(018)　　　　　　1　　　　　　　2

　　　　2　　　　　　．

5.　　　　KADRG

(　　：　, %)

KADRG	1	2	
202	14(8.2)	5(5.9)	19(7.4)
088	9(5.3)	7(8.2)	16(6.3)
014	10(5.8)	2(2.4)	12(4.7)
018	8(4.7)	2(2.4)	10(3.9)
243	6(3.5)	3(3.5)	9(3.5)
079	5(2.9)	4(4.7)	9(3.5)
172	5(2.9)	4(4.7)	9(3.5)
082	6(3.5)	1(1.2)	7(2.7)
012	5(2.9)	1(1.2)	6(2.3)
294	5(2.9)	1(1.2)	6(2.3)
(　　)	73(42.6)	30(35.4)	103(40.1)
	98(57.4)	55(64.6)	153(59.9)
	171(100.0)	85(100.0)	256(100.0)

3.

　　　　　　　　　　　　　　　　　　　64　　　　　　　　　　　　　　　25.0%　　　　　　．

　　　1　　　　26.9%,　　　　2　　　　21.2%　　　　　　　　　　2

　　　　　　1　　　　　　　　　　　　　　　　　　　　　　　　　　　．

　　　　　　　　　　　　　　．

6.

(　　:　, %)

	1	2		χ^2
125(73.1)	67(78.8)	192(75.0)		0.992
46(26.9)	18(21.2)	64(25.0)		
171(100.0)	85(100.0)	256(100.0)		

　　　　　　256　　34.0%　　　　　　　87

　．　　　　　1　　　171　　　　　　　39.2%　67

　　　　　　　　　　　　2　　　　　　　　　23.5%　20

　　　　　　　　　　　1　　　　　2

　　　　　．　　　　　　　　1

．

7.

	1	2		χ^2
	104(60.8)	65(76.5)	169(66.0)	6.2*
	67(39.2)	20(23.5)	87(34.0)	
	171(100.0)	85(100.0)	256(100.0)	

P   0.05

(MDC)   (8),   10
·   (08)

42.5%   ,   ·   (07) 41.2%,   (01)
30.0%,   (06) 17.4%,   (04) 12.8%,   (05) 11.1%,
(11) 6.3%   .

(MDC)   ·   (08)
1   48.1%,   2   30.8%   ,   ·   (07)
1   50.0%,   2   28.6%,   (01)   1
31.3%,   2   25.0%,   (06)   1   0%,
2   44.4%   1
.

8.　　　　　　　　　(MDC)

<p align="right">(　　:　, %)</p>

MDC	1			2		
01	22(68.8)	10(31.3)	6(75.0)	2(25.0)	28(70.0)	12(30.0)
08 ·	14(51.9)	13(48.1)	9(69.2)	4(30.8)	23(57.5)	17(42.5)
04	20(83.3)	4(16.7)	14(93.3)	1(6.7)	34(87.2)	5(12.8)
07 ·	10(50.0)	10(50.0)	10(71.4)	4(28.6)	20(58.8)	14(41.2)
06	14(100.0)	—	5(55.6)	4(44.4)	19(82.6)	4(17.4)
05	10(83.3)	2(16.7)	6(100.0)	—	16(88.9)	2(11.1)
11	12(100.0)	—	3(75.0)	1(25.0)	15(93.8)	1(6.3)
-	23(76.7)	7(23.3)	14(87.5)	2(12.5)	37(80.4)	9(19.6)
	125(73.1)	46(26.9)	67(78.8)	18(21.2)	192(75.0)	64(25.0)

　　　　　　　　　　　KADRG　　　　　　　　　　　　　(9),

　　　　　　　　　　　　(243)　77.8%,

(018)　70.0%,　　　　　　　　　　　(202)　47.4%,　　　　　　　(172)　44.4%,

　　　　　(012)　33.3%,　　　　　　　　(079)　22.2%

　　　.

　　　　　　　　　　　　　　　　　　　,

(243)　　　　　　　1　83.3%,　　　　2　66.7%,

(018)　　　　　　　1　75.0%,　　　　2　50.0%,

(202)　　　　　　　1　50.0%,　　　　2　40.0%,　　　　　(012)

　　　1　40.0%,　　　　2　0%,　　　　　　　　(079)

1   40.0%,   2   0%   2

    1   .

9.   KADRG

KADRG	1			2		
202	7(50.0)	7(50.0)	3(60.0)	2(40.0)	10(52.6)	9(47.4)
088	8(88.9)	1(11.1)	6(85.7)	1(14.3)	14(87.5)	2(12.5)
014	9(90.0)	1(10.0)	2(100.0)	—	11(91.7)	1(8.3)
018	2(25.0)	6(75.0)	1(50.0)	1(50.0)	3(30.0)	7(70.0)
243	1(16.7)	5(83.3)	1(33.3)	2(66.7)	2(22.2)	7(77.8)
079	3(60.0)	2(40.0)	4(100.0)	—	7(77.8)	2(22.2)
172	5(100.0)	-	4(100.0)	—	5(55.6)	4(44.4)
082	5(83.3)	1(16.7)	1(100.0)	—	6(85.7)	1(14.3)
012	3(60.0)	2(40.0)	1(100.0)	—	4(66.7)	2(33.3)
294	4(80.0)	1(20.0)	1(100.0)	—	5(83.3)	1(16.7)

                    (MDC)   (10),   10
                                                                (01)   ·

        (08)   55.0%   (06) 39.1%,
·   (07) 23.5%,   (05) 22.2%,   (11) 18.8%,
(04) 12.8%   .

(01)   1   56.3%,   2   50.0%   ,   ·

(08)　　　　　　　　　　1　51.9%,　　　　　2　46.2%

　　　　　　　　　　　　　　　　　　,　·　　　　　(07)　　　　　　　　　　　　1

35.0%,　　　　2　7.1%,　　　　　(05)　　　　　　　　　1　　　33,3%,

　　　2　　0%,　　(11)　　　　　　1　　25.0%,　　　　2

　0%　,　　　　(04)　　　　1　16.7%,　　　　2

6.7%　　　　　2　　　　　　　　　1

　　　,　　　(06)　　　　　　1　　28.6%,

　2　55.6%　　　1　　　　　　2

.

10.　　　　　　(MDC)

(　: , %)

MDC	1			2		
01	14(43.8)	18(56.3)	4(50.0)	4(50.0)	18(45.0)	22(55.0)
08 ·	13(48.1)	14(51.9)	7(53.8)	6(46.2)	20(50.0)	20(50.0)
04	20(83.3)	4(16.7)	14(93.3)	1(6.7)	34(87.2)	5(12.8)
07 ·	13(65.0)	7(35.0)	13(92.9)	1(7.1)	26(76.5)	8(23.5)
06	10(71.4)	4(28.6)	4(44.4)	5(55.6)	14(60.9)	9(39.1)
05	8(66.7)	4(33.3)	6(100.0)	—	14(77.8)	4(22.2)
11	9(75.0)	3(25.0)	4(100.0)	—	13(81.3)	3(18.8)
-	17(56.7)	13(43.3)	13(81.2)	3(18.8)	30(65.2)	16(34.8)
	104(60.8)	67(39.2)	65(76.5)	20(23.5)	169(66.0)	87(34.0)

KADRG   (11),

　　　KADRG   ,   (243) 66.7%,

　　　　　(018)   60.0%,   (014)   58.3%,   (012)

50.0%,   (294) 50.0%,   (172) 33.3%,

(202) 31.6%   .

KADRG   ,

(243)   1   50.0%,   2   100.0%,

(018)   1   50.0%,   2   100.0%,   (014)

　　　　　1   50.0%,   2   100.0%,   (172)

　1   0.0%,   2   75.0%,   (202)

　1   35.7%,   2   40.0%   1

　　　2   KADRG   .

11.   KADRG

KADRG	1			2		
202	9(64.3)	5(35.7)	3(60.0)	2(40.0)	13(68.4)	6(31.6)
088	8(88.9)	1(11.1)	6(85.7)	1(14.3)	14(87.5)	2(12.5)
014	5(50.0)	5(50.0)	—	2(100.0)	5(41.7)	7(58.3)
018	4(50.0)	4(50.0)	—	2(100.0)	4(40.0)	6(60.0)
243	3(50.0)	3(50.0)	—	3(100.0)	3(33.3)	6(66.7)
079	4(80.0)	1(20.0)	4(100.0)	—	8(88.9)	1(11.1)
172	5(100.0)	—	1(25.0)	3(75.0)	6(66.7)	3(33.3)
082	4(66.7)	2(33.3)	1(100.0)	—	5(71.4)	2(28.6)
012	2(40.0)	3(60.0)	1(100.0)	—	3(50.0)	3(50.0)
294	2(40.0)	3(60.0)	1(100.0)	—	3(50.0)	3(50.0)

, (KADRG 082) 1 33.3%, 2

0.0%, (012) 1 60.0%, 2 0.0%,

(294) 1 60.0%, 2 0.0% 2

1 KADRG

.

4.

< 12> . 1, 3, 4

.

(MDC 04) (MDC 01), ·

(MDC 07), (MDC 08) .

12.

			χ^2
	3.49	3.47	1.01
	1.47	1.48	0.98
	0.60	1.50	1.62
	1.07	1.51	0.02
KADRG	1.04	1.49	0.01
1( )	0.25	1.90	4.76*
2( )	0.53	2.13	0.70
3(·)	0.16	1.89	8.15**
4(·)	0.15	1.88	9.03**
	1.93	1.55	2.24
	1.84	1.53	2.08

* $p < 0.05$ ** $p < 0.001$

13.

			χ^2
	1.14	3.29	0.01
	1.30	1.48	0.45
	1.77	1.52	1.86
	1.43	1.50	0.78
KADRG	1.80	1.47	0.32
1( )	0.10	1.87	13.00**
2( )	0.14	2.00	7.96**
3(·)	0.63	1.94	0.56
4(·)	0.11	1.88	12.55**
	1.30	1.53	0.38
	3.82	1.54	9.76*

* p < 0.05   ** p < 0.001

<   13>   .   1,   3,   4

(/)

·

(MDC 04)   (MDC 01),   ·

(MDC 07),   (MDC 08)   .

(3.82).

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1.

11

,   DRG   .

DRG

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2   ,

1   ,

2   2   (10)   (random

sampling)   .

Sample size

,

.

KADRG

,   ,   ,

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,

.

.

2.

(MDC)   (01)   15.6%,

.   (08)   15,6%,   (04)   15.2%

46.8%   .   KADRG   ,

(202)   7.4%

(   )   .

(202)

.

, 25%

1 (26.9%) 2 (21.2%)

. ,

, (1993)

16.5%

, (1999) 1 22.3%,

2 20.0%, 10.9%

.

, 34.0%

1 39.2%, 2 23.5%

1 2 .

, , (1993)

37.6% , , (1991)

21.7%

. , , (1991) 10

.

DRG

, (MDC) · (08) 42.5%

, · (07) 41.2%, (01) 30.0%

. 1 .

· (08)

.

KADRG (243) 77.8%,

(018) 70.0%, (202) 47.4%

(1999) .

, (MDC) , (01)

· (08) 55.0% .

KADRG (243) 66.7%, (018)

60.0% KADRG

. (MDC) KADRG

1 2 .

, (MDC 01), ·

(MDC 07), · (MDC 08)

.

,

3.82 .

,

.

(DRG)

.

DRG DRG DRG

DRG ,

(, 6%

· 17.3%, DRG 29.0%

) DRG .

DRG

(4)

· (MDC 08) DRG

.

, 2

1 .

(1999) .

.

Sample size ,

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1999 8 9   9 5   1

11   256 (

1   171 ,   2   85)

(AEP)   ,   ,

DRG

(1

/ 2)

.

,   (MDC)   (01) 15.6%,   ·

(08) 15.6%,   (04)   15.2%   46.8%

,   ·   (07) 13.3%,   (06) 9.0%

,   KADRG   (202) 7.4%,

(088) 6.3%,   (014) 4.7%,   (018) 3.9%

KADRG   (   )

.

,   256   64 (25.0%)

,   (MDC)   1

2   , ·   (08) 42.5%,   ·

(07) 41.2%,   (01) 30.0%,   (06) 17.4%

.   KADRG

(243) 77.8%,   (018) 70.0%,   (202)

47.4%,   (172) 44.4%,   (012) 33.3%

                          .   2

      1   .

            ,   256   87 (34.0%)

            ,   (MDC)   (01) 55.0%,   ·

(08) 55.0%,   (06) 39.1%,   ·   (07) 23.5%,   (05)

22.2%,   (11) 18.8%   .   KADRG

                          (243) 66.7%,   (018) 60.0%,

            (014) 58.3%,   (012) 50.0%

            .   1

      2   .

         ,

                                                            ,

            (MDC 01),   ·   (MDC 07),   ·   (MDC 08)

                                                            .

            3.82   .

                                                ,   2

1   .

                                    .   Sample size

         ,

                                                                        .

                                                      .

                              (DRG)   .

DRG

,

·   (MDC 08)   DRG

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DRG   ·

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, 1999

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. . 1993;26(4): 650-60

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. , 1990;101:125-9

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. '98 , 1999

. . DRG ; 2 3
, 1999

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1994

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. 1991;44(1):57-65

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, 1993

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. 1993;3(1):1-24

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          , 1993

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                        .   , 1998

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· **(AEP)**

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Abstract

A study on appropriateness of admission and hospital stay in Medicaid inpatients

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Increasing rate of Medicaid expenditures is greater than that of Health Insurance in spite of decrease in the number of Medicaid recipients. Total medical expenditure shows a rapidly increasing pattern, and accessibility to health care get improved, which is one of the reasons of recent increase in utilization. Hospital oriented care and trend in length of stay in hospitalization make it urgent to implement cost containment measure on Medicaid. We may consider introduction of DRGs in Medicaid as one of the cost containment measure.

For the efficient management of medical service utilization, it is essential to assess the appropriateness of utilization and factors relating to it. Some of the studies on this issue were done only in one hospital. And some evaluated the appropriateness of admission and hospital stay between Health Insurance patients and Medicaid patients.

I used medical records and electronic data after discharge to make DRGs for 256 Medicaid inpatients who had been admitted in 11 general hospitals, to evaluate the appropriateness of admission and hospital stay in the hospitals using Appropriateness Evaluation Protocol(AEP). I investigate whether any difference in the appropriateness of admission and hospital stay was found among disease groups. I also suggested some disease groups to which DRGs can be applied immediately.

The following is the summary of the results ;

1. Diseases in nervous system and musculoskeletal system & connective tissue were 15.6%, and disease in respiratory system were 15.2% of the sample by MDC(Major Diagnostic Category) in my study respectively. By KADRG(Korea Adjusted Disease Related Group) cirrhosis & alcoholic hepatitis, chronic obstructive pulmonary disease, and specific cerebrovascular disorders except TIA were 7.4%, 6.3%, and 4.7% respective. The distribution was very similar to the distribution by KADRG of total Medicaid inpatients(except for the patients with mental diseases).

2. The admission was not appropriate for the twenty five percent of the patients(64 persons). Medicaid type 1 were more likely to be admitted than Medicaid type 2 by MDC, and inpatients with disease in musculoskeletal system & connective tissue(42.5%), hepatobiliary system & pancreas(41.2%), nervous system(30.0%) were more likely to be admitted even it was not medically appropriate. Patients with disease in medical back problems(77.8%), cranial & peripheral nerve disorders(70.0%), and cirrhosis & alcoholic hepatitis(47.4%) had more medically inappropriate admission By KADRG.

3. Among 256 Medicaid inpatients, 87(34.0%) were inappropriately hospitalized. By MDC, hospital stay of inpatients with disease in nervous system(55.0%), musculoskeletal system & connective tissue(55.0%), and digestive

system(39.1%) were found inappropriate. By KADRG hospital stay of inpatients with disease in medical back problems(66.7%), cranial & peripheral nerve disorders(60.0%), specific cerebrovascular disorders except TIA(58.3%), and degenerative nervous system disorders(50.0%) were found inappropriate. Medicaid type 1 were more likely to be found inappropriately hospitalized.

4. I analyzed factors affecting the appropriateness of admission and hospital stay, and found that inpatients with disease in respiratory system are more likely to be inappropriately admitted and hospitalized than the inpatients with disease in nervous system, hepatobiliary system & pancreas, musculoskeletal system & connective tissue, which was statistically significant.

We can conclude that admission and hospital stay of Medicaid inpatients tends to be inappropriate in general, and this is more easily found in Medicaid type 1 inpatients than type 2. Since we could not investigated the reason for this phenomenon, more research needs to be done on this topic.

One of the method to improve the appropriateness of admission and hospital stay of Medicaid is to implement DRG payment system. It would be relatively easy to implement DRG payment system for the disease groups in musculoskeletal system & connective tissue(MDC 08) among the surgical diseases.

And long term care facilities for Medicaid with non-acute chronic diseases as well as systemic level containment for inappropriate resource utilization in private hospitals will reduce the inappropriate admission and utilization.