

Supplementary file 1. Annual average KRW-USD exchange rate and price level of health expenditure

Year	KRW/USD	Price level
2010	1,156.00	0.9345
2011	1,107.99	0.9510
2012	1,126.76	0.9597
2013	1,095.04	0.9631
2014	1,053.12	0.9699
2015	1,131.52	0.9820
2016	1,160.41	0.9918
2017	1,130.48	1.0005
2018	1,100.58	1.0000

This information is available on the following website: Korean Statistical Information Service (<http://kosis.kr>).

The price level of health expenses is adjusted as of the year 2018.

Supplementary file 2. General medical service use for migraine patients in Korea

Year	Type of visit	Number of patients	Total claims	Total expenditure (USD)	Average expenditure per patient (USD)	Average expenditure per claim (USD)
2010	Total	19,468	46,846	921,857.88	47.35	19.68
	WM	14,485	27,590	620,133.28	42.81	22.48
	KM	4,983	19,256	301,724.60	60.55	15.67
2011	Total	19,964	48,551	1,027,627.69	51.47	21.17
	WM	14,739	28,891	692,485.00	46.98	23.97
	KM	5,225	19,660	335,142.69	64.14	17.05
2012	Total	20,061	50,487	1,045,607.09	52.12	20.71
	WM	15,141	31,127	720,382.76	47.58	23.14
	KM	4,920	19,360	325,224.33	66.10	16.80
2013	Total	19,984	51,765	1,126,280.21	56.36	21.76
	WM	15,090	30,993	755,195.51	50.05	24.37
	KM	4,894	20,772	371,084.70	75.82	17.86
2014	Total	19,829	50,088	1,240,977.56	62.58	24.78
	WM	15,065	30,202	863,047.30	57.29	28.58
	KM	4,764	19,886	377,930.26	79.33	19.00
2015	Total	19,950	50,259	1,189,466.10	59.62	23.67
	WM	15,277	32,393	862,879.74	56.48	26.64
	KM	4,673	17,866	326,586.36	69.89	18.28
2016	Total	21,228	53,705	1,361,904.76	64.16	25.36
	WM	16,583	34,207	1,011,548.55	61.00	29.57
	KM	4,645	19,498	350,356.21	75.43	17.97

2017	Total	20,484	52,656	1,521,687.53	74.29	28.90
	WM	16,087	33,808	1,163,607.00	72.33	34.42
	KM	4,397	18,848	358,080.53	81.44	19.00
2018	Total	20,802	52,729	1,711,219.60	82.26	32.45
	WM	16,792	36,607	1,361,558.17	81.08	37.19
	KM	4,010	16,122	349,661.43	87.20	21.69

All expenditures were converted based on the annual average exchange rate (KRW/USD) and the price is adjusted as of health expenditure price level of year 2018. (See Supplementary file 1 for detail)

Supplementary file 3. Claims of healthcare utilization

Category		Total (2010–2018)		WM institutions (2010–2018)		KM institutions (2010–2018)	
Type of visit	Outpatient	449,152	99.10	280,765	98.59	168,387	99.96
	Inpatient	4,094	0.90	4,024	1.41	70	0.04
Medical institution	Tertiary hospital / general hospital / hospital	88,927	19.62	88,770	31.17	157 *	0.09 *
	Clinic	195,944	43.23	195,944	68.80	-	-
	KM hospital	3,241	0.72	75 *	0.03 *	3,166	1.88
	KM clinic	165,134	36.43	-	-	165,134	98.03

Department of KM within a tertiary or general hospital or department of WM within a KM hospital *

Supplementary file 4. Number of claims and medical expenditure per category

Fees	All				Western				Korean			
	Total expenditure (USD)		No. of claims		Total expenditure (USD)		No. of claims		Total expenditure (USD)		No. of claims	
	Avg. exp*	Avg.CR*	Avg. n*	Avg. CR*	Avg. exp	Avg. CR	Avg. n	Avg.CR	Avg. exp	Avg. CR	Avg. n	Avg.CR
Examination	500,739.63	6.89	72,438.44	5.84	369,487.50	8.19	52,831.44	7.90	131,252.13	2.79	19,607.00	(0.40)
Hospitalization	74,283.06	13.32	2,075.11	16.25	71,060.43	16.34	2,031.56	17.47	3,222.62	(16.65)	43.56	(9.05)
Medication	24,738.25	10.89	20,601.11	5.07	17,728.08	10.93	14,104.44	1.73	7,010.16	10.80	6,496.67	17.53
Injection / procedure	219,020.66	4.78	82,122.78	1.52	30,074.51	8.34	23,537.44	3.58	188,946.14	4.16	58,585.33	0.64
Anesthesia	29,628.13	11.66	1,715.56	2.52	28,463.01	12.93	1,423.33	5.17	-	-	-	-
Physical therapy	7,516.04	8.71	2,900.67	2.06	7,516.04	8.71	2,900.67	2.06	-	-	-	-
Treatment and surgery	4,681.63	22.69	418.33	11.00	4,681.63	22.69	418.33	11.00	-	-	-	-
Testing	180,913.03	16.22	40,227.78	9.43	180,913.03	16.22	40,227.78	9.43	1,165	(15.97)	292.22	(11.99)
Radiological diagnosis and radiotherapy	17,554.62	11.89	3,038.00	1.94	17,554.62	11.89	3,038.00	1.94	-	-	-	-
Special equipment	132,005.79	3.51	2,336.33	4.43	132,005.79	3.51	2,336.33	4.43	-	-	-	-
Psychotherapy	2,597.92	12.48	173.67	6.36	2,597.92	12.48	173.67	6.36	-	-	-	-
Others	2,468.07	3.78	144.78	7.04	2,468.07	3.78	144.78	7.04	-	-	-	-

* Avg. exp=Average gross expenditure over nine years; Avg. N=Average number of cases over nine years; Avg. CR=Average change rate over nine years
 All expenditures were converted based on the annual average exchange rate (KRW/USD) and the price is adjusted as of health expenditure price level of year 2018. (See Supplementary file 1 for detail.)

Supplementary file 5. High frequency care for migraine in WM & KM Outpatients

		WM outpatients		
		Total claims	Average expenditure per claim (USD)	Average expenditure per patient (USD)
Injection	Subcutaneous or intramuscular (SC/IM) injection	57,942	1.14	1.81
	Intravenous (IV) injection	16,307	4.85	6.14
	Other injection	6,710	1.75	2.08
Block of the peripheral branch of the spinal nerve (peripheral nerve blocks; PNB)		8,033	23.87	47.74
Deep heat therapy (per day)		6,433	1.27	2.24
Superficial heat therapy (SHT)		7,995	0.61	1.13
Transcutaneous electrical nerve stimulation (TENS)		4,721	4.00	7.18
Interference current therapy (ICT)		2,964	3.96	9.45
Personal psychotherapy		1,033	11.50	37.35
Laser therapy (per day)		602	6.07	12.19
Myofascial trigger point injection therapy		565	8.62	16.07
		KM Outpatients		
		Total claims	Average expenditure per claim (USD)	Average expenditure per patient (USD)
Acupuncture		166,430	6.85	27.86
Hot/cold meridian therapy-Infrared irradiation therapy		50,715	0.81	2.82
Moxibustion (indirect moxibustion)		37,573	2.29	8.73
Cupping (dry cupping)		30,503	3.43	12.41
Cupping (bloodletting cupping)		24,490	5.83	14.35
Electroacupuncture stimulation		22,345	3.73	13.36
Herbal formulation		21,823	0.40	1.31
Hot/cold meridian therapy-Therapy of cutaneous and muscle meridian		9,214	0.83	2.67
Moxibustion (direct moxibustion)		5,578	5.45	21.22

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