

A Retrospective Analysis of Disease Epidemiology, Comorbidity Burden, Treatment Patterns, and Healthcare Resource Utilization of Migraine in United Arab Emirates

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SUPPLEMENTARY MATERIAL

TABLES

Table S1 ICD-10-CM codes for migraine.

Diagnosis Code	Diagnosis Name
G43.001	Migraine w/o aura, not intractable, with status migrainosus
G43.009	Migraine w/o aura, not intractable, w/o status migrainosus
G43.011	Migraine without aura, intractable, with status migrainosus
G43.019	Migraine w/o aura, intractable, without status migrainosus
G43.101	Migraine with aura, not intractable, with status migrainosus
G43.109	Migraine with aura, not intractable, w/o status migrainosus
G43.111	Migraine with aura, intractable, with status migrainosus
G43.119	Migraine with aura, intractable, without status migrainosus
G43.501	Perst migraine aura w/o cereb infrc, not ntrct, w stat migr
G43.509	Perst migrn aura w/o cereb infrc, not ntrct, w/o stat migr
G43.511	Perst migraine aura w/o cerebral infrc, ntrct, w stat migr
G43.519	Perst migraine aura w/o cerebral infrc, ntrct, w/o stat migr
G43.601	Perst migraine aura w cerebral infrc, not ntrct, w stat migr
G43.609	Perst migraine aura w cereb infrc, not ntrct, w/o stat migr
G43.611	Perst migraine aura w cerebral infrc, ntrct, w stat migr
G43.619	Perst migraine aura w cerebral infrc, ntrct, w/o stat migr
G43.701	Chronic migraine w/o aura, not intractable, w stat migr
G43.709	Chronic migraine w/o aura, not intractable, w/o stat migr
G43.711	Chronic migraine w/o aura, intractable, w status migrainosus
G43.719	Chronic migraine w/o aura, intractable, w/o stat migr
G43.801	Other migraine, not intractable, with status migrainosus
G43.809	Other migraine, not intractable, without status migrainosus
G43.811	Other migraine, intractable, with status migrainosus
G43.819	Other migraine, intractable, without status migrainosus
G43.901	Migraine, unsp, not intractable, with status migrainosus
G43.909	Migraine, unsp, not intractable, without status migrainosus
G43.911	Migraine, unspecified, intractable, with status migrainosus
G43.919	Migraine, unsp, intractable, without status migrainosus

Abbreviations: ICD-10-CM, International Classification of Diseases, Tenth Revision, Clinical Modification; unsp, unspecified; w/o, without.

Table S2 List of -preventive and acute medications.

Preventive medications	
1	Beta blockers: Metoprolol, Bisoprolol, Propranolol, timolol
2	ACE's and ARAs: ARAs 'sartans', Lisinopril
3	Antidepressants: Amitriptyline, Opipramol, Tricyclics, SSRIs, SNRIs, Venlafaxine, amitriptyline
4	Anticonvulsants: Topiramate, Valproic acid
5	Muscle relaxants: Onabotulinum toxin
6	Calcium channel blockers: Verapamil, Flunarizine
7	Magnesium compounds: Valproic acid, Candesartan, Bisoprolol, Onabotulinum toxin, Topiramate, Metoprolol, ARAs 'sartans', Amitriptyline, Propranolol, Opipramol, Flunarizine, Lisinopril
8	Erenumab (Aimovig)
9	EMGALITY Galcanezumab (Emgality)
10	Eptinezumab (Vyepi)
11	Antiepileptics: Topiramate, Valproate, Divalproex
12	Anti-Convulsants: Topiramate, Valporic Acid, Divalproex Sodium
Acute medications	
1	Anti-emetics: Metoclopramide
2	Analgesics/non-steroidal anti-inflammatory drugs: Ibuprofen, Metamizole, Opioids, Diclofenac, Cyclooxygenase-2 inhibitors ('coxibs') 2, Naproxen
3	Selective serotonin (5-HT1) agonists (triptans): Sumatriptand, Rizatriptan, Zolmitriptane (all administration routes)
4	Emergency medication: Dexamethasone, Prednisone, Sumatriptan (subcutaneous), Metamizole (intravenous), Acetylsalicylic acid (intravenous)
5	Ergots
6	Hyponotic: Alprazolam
7	Stimulants: Caffeine, Aspirin, Codeine
8	Lasmitidan (Reyvow)

Table S3 Summary of migraine patients identified from DRWD (attrition table).

Criteria	Number of patients	
	Included	Excluded
	N (%)	N (%)
Inclusion criteria (The study period: 01 January 2014 to 31 March 2022)		
Patient with at least 1 diagnosis claim (principal, secondary and admitted) for migraine diagnosis (as per ICD-10-CM codes) anytime during the study period	451,983 (100.0%)	-
Patients with age \geq 18 years (based on demographic data availability and no claim for pediatric visits if patient age is missing)	430,544 (95.3%)	21,439 (4.7%)
Patient with first diagnosis claim (principal, secondary and admitted) for migraine diagnosis (as per ICD-10-CM codes) anytime during the index period	340,015 (79.0%)	90,529 (21.0%)
Continuous enrolment: Patient with at least 1 claim (migraine/non-migraine), anytime during the 12 months of pre-index period and 12 months of post-index (follow-up) period	203,222 (59.8%)	136,793 (40.2%)
Treatment cohorts		
1.Preventive migraine: Patients with a diagnosis code for migraine and those who were prescribed any preventive medicines alone in the journey.	8,308 (4.1%)	-
2.Acute migraine: Patients with a diagnosis code for migraine and those who were prescribed any acute medicines alone in the journey.	105,158 (51.7%)	-
3.Preventive + acute migraine: Patients with a diagnosis code for migraine and those who were prescribed any acute medicines and preventive medicine in the journey.	30,314 (14.9%)	-
4. Non-pharmacological: Patients with a diagnosis of migraine who did not take acute or preventive migraine medications but were instead undergoing migraine related non-pharmacological interventions (Electric Stimulation Therapy, Electrical Stimulation, Acupunct W/O Stimul 15 Min, Acupunct W/O Stimul Addl 15M, Acupunct W/Stimul 15 Min, Acupunct W/Stimul Addl 15M).	98 (0.05%)	-
5. Others: Patients who have a migraine related claim but did not have any related treatment defined in the medication list	59,344 (29.2%)	-

Abbreviations: Acupunct, Acupuncture; Addl, Additional; DRWD, Dubai Real-World Database; ICD-10-CM, International Classification of Diseases, Tenth Revision, Clinical Modification; w/o, without.

Table S4 ICD-10 codes for Quan Charlson comorbidity index.

Disease	ICD-10 Code	Score
Myocardial Infarction	I22-I23, I25.2	1
Congestive Heart Failure	I11, I13, I25.5, I42-43, I50, I51.7	1
Peripheral Vascular Disease	I70-I73, I77.0, I77.1, K55.1, K55.8-55.9, R02, Z95.8-95.9	1
Cerebrovascular Disease	G45-G46, I60-I69	1
Dementia	A81.0, F00-F03; F05.1; G30-G31	1
Chronic Pulmonary Disease	I26-27, J40-J47; J60-J67; J68.4; J70.1; J70.3;	1
Rheumatic disease	M05-06, M09, M12.0, M31.5, M32-M36	1
Liver Disease	B18, I85, I86.4, I98.2, K70-71, K72.1, K72.9, K76, R16.2, Z94.4	1
Diabetes Mellitus	E10-14	1
Hemiplegia or paraplegia	G11.4, G81-83	2
Renal Disease	I12-13, N01, N03, N05, N07, N08, N17.1, N17.2, N18, N19, N25, Z49, Z94.0, Z99.2	2
Malignancy	C00-26, C30-34, C37-41, C43, C45-58, C60-76, C80-85, C88, C90-97	2
Metastatic Tumor	C77-C79	6
AIDS/ HIV	B20-B24	6

Abbreviations: AIDS, Acquired immunodeficiency syndrome; HIV, Human immunodeficiency virus; ICD-10, International Classification of Diseases, Tenth Revision.

Table S5 Cardiovascular Comorbidities in the study period in the overall and cohort population (sub-cohort 1: Preventive, sub-cohort 2: Acute, sub-cohort 3: Preventive + Acute).

	Overall		Sub-cohort 1		Sub-cohort 2		Sub-cohort 3	
	N	%	N	%	N	%	N	%
Overall Study population in the index period	203,222	100.0	8,304	4.1	105,158	51.7	30,314	14.9
Patients with Cardiovascular Disease in the entire study period	27,148	13.4	1,835	22.1	11,761	11.2	5,613	18.5
Cardiovascular Comorbidities	Number of Patients	Percentage of Patients by Overall patient sample	Number of Patients	Percentage of Patients by Preventive patient sample	Number of Patients	Percentage of Patients by Acute patient sample	Number of Patients	Percentage of Patients by Preventive + Acute patient sample
Myocardial ischemia/infarction	12,498	6.1	819	9.9	5,752	5.5	2,264	7.5
Cerebrovascular disease	8,463	4.2	746	9.0	2,924	2.8	2,288	7.5
Peripheral vascular disease	5,059	2.5	285	3.4	2,360	2.2	994	3.3
Arrhythmias	3,498	1.7	273	3.3	1,507	1.4	689	2.3
Venous thromboembolism	1,414	0.7	83	1.0	630	0.6	298	1.0
Congestive heart failure	2,671	1.3	221	2.7	1,173	1.1	481	1.6
Pulmonary embolism	584	0.3	34	0.4	260	0.2	138	0.5
Hypertension*	72	0.0	1	0.0	42	0.0	10	0.0
Intestinal ischemia	30	0.0	2	0.0	12	0.0	5	0.0

Note: Patients are not mutually exclusive, patients might have more than one cardiovascular comorbidity.

*In the current study, only a subset of patients with uncontrolled hypertension (hypertensive crisis, hypertensive emergency etc) is considered for analysis; therefore, the data provided here does not represent the entire burden of hypertension in the study population.

Table S6 Cardiovascular comorbidity attrition.

Cardiovascular Comorbidity	Number of Migraine patients with Cardiovascular Comorbidity in the study period	Number of patients in Preventive, Acute, Preventive + Acute cohorts	Number of patients in the index period	Number of patients meet the Continuous enrollment
Myocardial ischemia/infarction	12,498	5,892	5,339	5,024
Cerebrovascular disease	8,463	4,624	4,329	4,125
Peripheral vascular disease	5,059	2,435	2,105	1,989
Arrhythmias	3,498	1,678	1,470	1,404
Congestive heart failure	2,671	1,240	1,102	1,045
Venous thromboembolism	1,414	692	587	560
Pulmonary embolism	584	325	258	244
Hypertension	72	51	23	23
Intestinal ischemia	30	12	10	9

Table S7 Overall healthcare resource utilization and costs by cohort without encounter and activity breakup (12 months post-index period including index date).

Analysis of Claims for overall and cohort population												
	Overall			Preventive			Acute			Preventive + Acute		
Number of patients in the index Period	143,780			8,308 (4.1%)			105,158 (51.7%)			30,314 (14.9%)		
	Disease specific	All Cause	Average disease burden	Disease specific	All Cause	Average disease burden	Disease specific	All Cause	Average disease burden	Disease specific	All Cause	Average disease burden
N (Patient Counts)	143,690	143,766		8,307	8,308		105,073	105,145		30,310	30,313	
Total	423,037	2,046,483		23,632	127,945		257,262	1,371,123		142,143	547,415	
Mean	2.9	14.2	20.7%	2.8	15.4	18.5%	2.4	13.0	18.8%	4.7	18.1	26.0%
Median	2.0	10.0		2.0	11.0		2.0	9.0		3.0	13.0	
Std	2.8	13.1		2.6	13.7		1.9	11.8		4.4	16.1	
Min	1.0	1.0		1.0	1.0		1.0	1.0		1.0	1.0	
Max	71.0	323.0		36.0	180.0		41.0	323.0		71.0	309.0	
Gross Cost (USD) for overall and cohort population												
	Overall			Preventive			Acute			Preventive + Acute		
Total	91,601,057.4	460,840,115.8	19.9%	5,289,712.9	32,735,298.1	16.2%	47,922,449.8	287,509,470.8	16.7%	38,388,895.2	140,595,346.9	27.3%
Mean	637.3	3,205.3		636.8	3,940.2		456.0	2,734.4		1,266.5	4,638.3	
Median	198.1	1,252.6		181.3	1,693.3		158.9	1,039.7		424.9	2,030.6	
Std	1,992.8	7,599.5		1,536.4	8,019.6		1,500.5	6,878.9		3,141.1	9,443.5	
Min	0.0	2.4		0.0	2.9		0.0	2.4		1.4	8.6	
Max	168,903.3	564,740.7		37,210.0	182,907.7		143,753.1	539,190.0		168,903.3	564,740.7	

Abbreviations: USD, United States Dollars.

Note: Excluded the patients/claims having claim amount less than equal to 0 USD by each cohort.

Gross Cost = Insurance Paid Amount + Patient Share

Implied PPP conversion rate (National currency per international dollar): <https://www.imf.org/external/datamapper/PPPEX@WEO/OEMDC/ARE>

Table S8 Overall healthcare resource utilization and cost by cardiovascular comorbidity

Comorbidity	Number of claims							Gross Cost (USD)						
	Disease specific							Disease specific						
	N	Total	Mean	Median	Std	Min	Max	N	Total	Mean	Median	Std	Min	Max
Myocardial ischemia/infarction	5,012	14,994	3.0	2.0	3.5	1.0	78.0	5,012	9,220,442.1	1,839.7	478.5	6,027.3	1.4	161,878.5
Cerebrovascular disease	4,119	12,418	3.0	2.0	3.9	1.0	84.0	4,119	6,944,034.9	1,685.6	647.8	8,208.6	1.0	356,042.1
Peripheral vascular disease	1,985	6,068	3.1	2.0	3.0	1.0	25.0	1,985	4,806,219.6	2,421.1	577.0	5,860.8	2.4	102,354.5
Arrhythmias	1,404	4,016	2.9	2.0	3.2	1.0	35.0	1,404	2,871,071.3	2,045.0	536.4	8,863.2	2.4	176,428.7
Congestive heart failure	1,044	2,974	2.8	2.0	3.7	1.0	42.0	1,044	2,081,622.5	1,993.8	582.3	5,566.5	2.9	107,123.9
Venous thromboembolism	560	1,717	3.1	2.0	3.3	1.0	26.0	560	1,051,127.3	1,877.0	644.0	6,033.5	6.2	97,620.6
Pulmonary embolism	243	862	3.5	2.0	4.1	1.0	22.0	243	969,259.8	3,988.5	1,039.2	12,606.7	8.6	126,246.9
Hypertension	23	41	1.8	1.0	1.3	1.0	6.0	23	23,997.6	1,043.5	166.5	1,633.5	4.3	5,878.5
Intestinal ischemia	9	11	1.2	1.0	0.4	1.0	2.0	9	28,618.2	3,179.9	1,175.6	4,169.4	43.1	12,613.9

Abbreviations: Max, maximum; Min, minimum; Std, standard deviation; USD, United States Dollars.

Implied PPP conversion rate (National currency per international dollar): <https://www.imf.org/external/datamapper/PPPEX@WEO/OEMDC/ARE>

Table S9 Healthcare resource utilization and costs by visit type for cardiovascular comorbidity.

Comorbidity	Number of claims							Gross Cost (USD)						
	Disease specific							Disease specific						
	<i>In-patients</i>													
	N	Total	Mean	Median	Std	Min	Max	N	Total	Mean	Median	Std	Min	Max
Myocardial ischemia/ infarction	284	327	1.2	1.0	0.5	1.0	4.0	284	4,141,098.1	14,581.3	7,355.0	18,762.7	416.7	161,878.5
Cerebrovascular disease	176	205	1.2	1.0	0.5	1.0	4.0	176	2,634,829.7	14,970.8	6,011.0	35,051.2	461.7	356,042.1
Peripheral vascular disease	91	100	1.1	1.0	0.3	1.0	3.0	91	1,467,363.2	16,124.9	6,870.8	29,312.0	229.7	171,206.7
Arrhythmias	81	103	1.3	1.0	0.9	1.0	8.0	81	1,037,834.9	12,812.9	9,698.6	13,203.8	1,300.0	89,921.5
Congestive heart failure	80	97	1.2	1.0	0.9	1.0	8.0	80	1,118,016.3	13,975.1	9,148.3	16,109.1	1,369.4	102,176.6
Venous thromboembolism	35	39	1.1	1.0	0.3	1.0	2.0	35	428,765.1	12,250.2	5,460.3	19,498.1	1,701.4	95,175.6
Pulmonary embolism	27	31	1.1	1.0	0.5	1.0	3.0	27	570,386.6	21,125.4	8,505.7	31,944.0	2,190.4	126,246.9
Hypertension	4	4	1.0	1.0	0.0	1.0	1.0	4	17,047.4	4,261.7	3,802.4	1,094.7	3,564.1	5,878.5
Intestinal ischemia	3	3	1.0	1.0	0.0	1.0	1.0	3	22,391.4	7,463.6	5,507.2	3,590.9	5,276.1	11,608.1
<i>Out-patients</i>														
Myocardial ischemia/ infarction	4,836	14,295	3.0	2.0	3.4	1.0	78.0	4,836	4,937,584.7	1,021.1	429.2	1,767.5	1.4	35,444.0
Cerebrovascular disease	3,897	11,819	3.0	2.0	3.9	1.0	80.0	3,897	4,093,684.7	1,050.2	567.0	1,668.4	1.0	34,823.9
Peripheral vascular disease	1,329	3,828	2.9	2.0	3.2	1.0	34.0	1,329	1,356,892.3	1,021.1	473.7	1,736.8	2.4	21,276.1
Arrhythmias	977	2,830	2.9	2.0	3.7	1.0	41.0	977	1,014,141.1	1,037.8	515.8	1,599.5	2.9	17,202.4
Congestive heart failure	1,958	5,941	3.0	2.0	3.0	1.0	24.0	1,958	3,682,185.6	1,880.4	554.1	4,002.4	2.4	34,998.1
Venous thromboembolism	526	1,585	3.0	2.0	3.3	1.0	25.0	526	563,921.1	1,072.2	570.3	1,809.1	4.8	19,845.9
Pulmonary embolism	201	743	3.7	2.0	4.2	1.0	21.0	201	336,377.0	1,673.7	804.8	2,118.2	8.6	9,903.3

Hypertension	16	34	2.1	1.5	1.5	1.0	6.00	16	5,872.7	367.0	123.4	563.6	4.3	2,045.5
Intestinal ischemia	7	8	1.1	1.0	0.4	1.0	2.00	7	6,226.8	889.5	385.6	1,173.7	43.1	3,349.3
Emergency Room Visit														
Myocardial ischemia/infarction	211	372	1.8	1.0	1.4	1.0	9.0	211	141,759.3	671.8	478.5	659.8	33.5	4,199.5
Cerebrovascular disease	268	394	1.5	1.0	1.0	1.0	9.0	268	215,520.6	804.3	727.8	593.8	5.3	5,027.3
Peripheral vascular disease	63	88	1.4	1.0	1.0	1.0	6.0	63	46,815.3	743.1	695.7	434.4	57.4	1,838.3
Arrhythmias	28	41	1.5	1.0	0.7	1.0	4.0	28	29,646.9	1,058.9	701.4	978.9	148.8	4,611.0
Congestive heart failure	18	30	1.7	1.0	0.9	1.0	4.0	18	6,018.2	334.4	241.1	345.0	19.1	1,475.1
Venous thromboembolism	60	93	1.6	1.0	1.2	1.0	7.0	60	58,441.1	974.2	747.8	1,002.4	14.4	4,915.8
Pulmonary embolism	46	88	1.9	1.0	1.3	1.0	7.0	46	62,496.2	1,358.4	848.8	1,351.7	130.1	6,701.0
Hypertension	3	3	1.0	1.0	0.00	1.0	1.0	3	1,078.0	359.3	232.5	299.0	144.0	701.0
Intestinal ischemia	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Abbreviations: USD, United States Dollars.

Gross Cost = Insurance Paid Amount + Patient Share

Note: Excluded the claims having claim amount less than equal to 0 USD

Implied PPP conversion rate (National currency per international dollar): <https://www.imf.org/external/datamapper/PPPEX@WEO/OEMDC/ARE>

Table S10 Healthcare resource utilization and costs by activity type for cardiovascular comorbidity.

Comorbidity	Number of claims							Net Cost (USD)						
	Disease specific							Disease specific						
	<i>Medications</i>													
	N	Total	Mean	Median	Std	Min	Max	N	Total	Mean	Median	Std	Min	Max
Myocardial ischemia/ infarction	3,308	6,820	2.1	1.0	2.2	1.0	71.0	3,308	2,551,312.4	771.3	221.1	1,527.3	0.5	23,538.3
Cerebrovascular disease	2,689	5,027	1.9	1.0	2.3	1.0	57.0	2,689	939,051.2	349.3	80.9	1,036.8	0.0	29,120.6
Peripheral vascular disease	1,197	2,059	1.7	1.0	1.5	1.0	18.0	1,197	486,329.7	406.2	123.0	1,157.9	1.4	25,073.7
Arrhythmias	784	1,490	1.9	1.0	1.8	1.0	13.0	784	425,593.8	543.1	101.4	1,442.6	0.5	14,821.1
Congestive heart failure	612	1,276	2.1	1.0	2.4	1.0	27.0	612	453,564.6	741.1	262.2	1,381.3	0.5	14,233.5
Venous thromboembolism	372	758	2.0	1.0	1.8	1.0	14.0	372	266,648.8	716.7	218.2	1,950.2	2.4	19,845.9
Pulmonary embolism	154	320	2.1	1.0	1.8	1.0	8.0	154	126,126.8	819.1	194.3	2,522.5	3.8	29,651.7
Hypertension	16	20	1.3	1.0	0.4	1.0	2.0	16	2,356.5	147.4	33.0	297.1	3.3	1,205.7
Intestinal ischemia	7	7	1.0	1.0	0.0	1.0	1.0	7	3,790.9	541.6	233.0	589.5	40.7	1,381.3
<i>Procedures</i>														
Myocardial ischemia/ infarction	3,688	6,731	1.8	1.0	1.7	1.0	50.0	3,688	3,601,634.0	976.6	301.9	2,749.3	3.8	56,941.1
Cerebrovascular disease	3,039	5,168	1.7	1.0	1.8	1.0	60.0	3,039	3,789,831.6	1,246.9	635.4	2,954.5	1.9	73,936.4
Peripheral vascular disease	1,297	2,546	2.0	1.0	1.8	1.0	18.0	1,297	2,754,429.7	2,123.9	707.7	4,066.0	2.9	42,478.0
Arrhythmias	1,069	1,961	1.8	1.0	1.6	1.0	15.0	1,069	1,349,792.8	1,262.7	472.2	4,529.7	9.6	83,431.1
Congestive heart failure	748	1,377	1.8	1.0	1.7	1.0	19.0	748	859,301.4	1,148.8	459.3	2,429.7	4.8	34,662.2
Venous thromboembolism	412	784	1.9	1.0	1.7	1.0	13.0	412	433,285.2	1,051.7	490.4	2,151.7	6.7	25,539.2
Pulmonary embolism	216	488	2.3	1.0	2.1	1.0	13.0	216	401,232.1	1,857.4	710.5	3,713.4	26.3	30,731.6

Hypertension	13	21	1.6	1.0	0.8	1.0	3.0	13	5,793.8	445.5	166.5	600.5	40.7	2,204.8
Intestinal ischemia	6	7	1.2	1.0	0.4	1.0	2.0	6	13,767.5	2,294.7	1,255.5	3,179.4	20.6	8,687.6
<i>Consumables</i>														
Myocardial ischemia/ infarction	255	317	1.2	1.0	1.7	1.0	27.0	255	880,364.1	3,452.6	940.2	4,986.1	0.0	31,880.9
Cerebrovascular disease	136	162	1.2	1.0	0.5	1.0	4.0	136	392,597.1	2,886.6	40.2	16,850.2	0.5	185,118.7
Peripheral vascular disease	194	230	1.2	1.0	0.6	1.0	5.0	194	510,213.9	2,630.1	1,987.6	4,634.4	0.5	38,210.5
Arrhythmias	79	93	1.2	1.0	0.5	1.0	3.0	79	159,833.5	2,023.4	161.7	4,628.2	1.4	25,538.3
Congestive heart failure	59	68	1.2	1.0	0.4	1.0	3.0	59	52,747.8	894.3	139.7	1,839.2	3.8	8,922.5
Venous thromboembolism	34	39	1.1	1.0	0.4	1.0	3.0	34	32,795.2	964.6	47.8	1,905.7	0.5	6,216.3
Pulmonary embolism	19	21	1.1	1.0	0.5	1.0	3.0	19	33,630.1	1,769.9	191.4	2,878.5	1.9	7,600.0
Hypertension	1	1	1.0	1.0		1.0	1.0	1	22.0	22.0	22.0	0.0	22.0	22.0
Intestinal ischemia	1	1	1.0	1.0		1.0	1.0	1	1,546.9	1,546.9	1,546.9	0.0	1,546.9	1,546.9
<i>Services</i>														
Myocardial ischemia/ infarction	3,599	6,242	1.7	1.0	1.6	1.0	16.0	3,599	5,756,301.0	1,598.9	271.7	10,059.2	2.1	343,284.6
Cerebrovascular disease	3,159	5,213	1.7	1.0	1.7	1.0	22.0	3,159	5,703,977.8	1,805.8	380.4	17,094.1	10.5	872,203.0
Peripheral vascular disease	1,497	2,938	2.0	1.0	1.7	1.0	17.0	1,497	3,142,289.9	2,098.4	587.3	6,017.1	2.1	83,071.2
Arrhythmias	1,088	1,869	1.7	1.0	1.6	1.0	12.0	1,088	2,613,940.0	2,403.5	472.3	13,513.9	20.9	354,802.6
Congestive heart failure	721	1,225	1.7	1.0	1.7	1.0	17.0	721	1,813,810.7	2,516.4	457.7	8,086.2	20.9	94,789.9
Venous thromboembolism	382	672	1.8	1.0	1.6	1.0	14.0	382	982,274.9	2,570.7	597.7	11,896.3	2.1	169,634.9
Pulmonary embolism	196	374	1.9	1.0	1.6	1.0	9.0	196	1,314,911.0	6,708.9	760.8	31,389.7	52.3	321,694.9
Hypertension	13	15	1.2	1.0	0.4	1.0	2.0	13	18,371.1	1,412.8	169.3	4,157.0	46.0	15,215.2

Intestinal ischemia	5	6	1.2	1.0	0.4	1.0	2.0	5	30,495.2	6,098.6	7,335.9	5,507.2	83.6	12,184.7
<i>DRG</i>														
Myocardial ischemia/infarction	17	19	1.1	1.0	0.3	1.0	2.0	17	152,923.4	8,995.7	4,748.8	12,538.3	0.0	49,134.9
Cerebrovascular disease	11	13	1.2	1.0	0.4	1.0	2.0	11	44,399.0	4,036.4	3,978.0	2,754.1	0.0	9,671.3
Peripheral vascular disease	3	3	1.0	1.0	0.0	1.0	1.0	3	30,625.4	10,208.6	7,139.7	8,066.5	4,126.8	19,358.9
Arrhythmias	5	5	1.0	1.0	0.0	1.0	1.0	5	100,508.6	20,101.9	5,893.3	35,884.7	0.0	84,137.8
Congestive heart failure	6	7	1.2	1.0	0.4	1.0	2.0	6	128,333.5	21,389.0	7,599.0	33,986.6	2,049.8	89,921.5
Venous thromboembolism	1	1	1.0	1.0		1.0	1.0	1	2,707.7	2,707.7	2,707.7	0.0	2,707.7	2,707.7
Pulmonary embolism	2	2	1.0	1.0	0.0	1.0	1.0	2	7,655.0	3,827.3	3,827.3	5,412.9	0.0	7,655.0
Hypertension	3	3	1.0	1.0	0.0	1.0	1.0	3	10,451.2	3,483.7	3,249.3	442.6	3,207.7	3,994.3
Intestinal ischemia	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Abbreviations: DRG, diagnosis related group; Max, maximum; Min, minimum; Std, standard deviation, USD, United States Dollars.

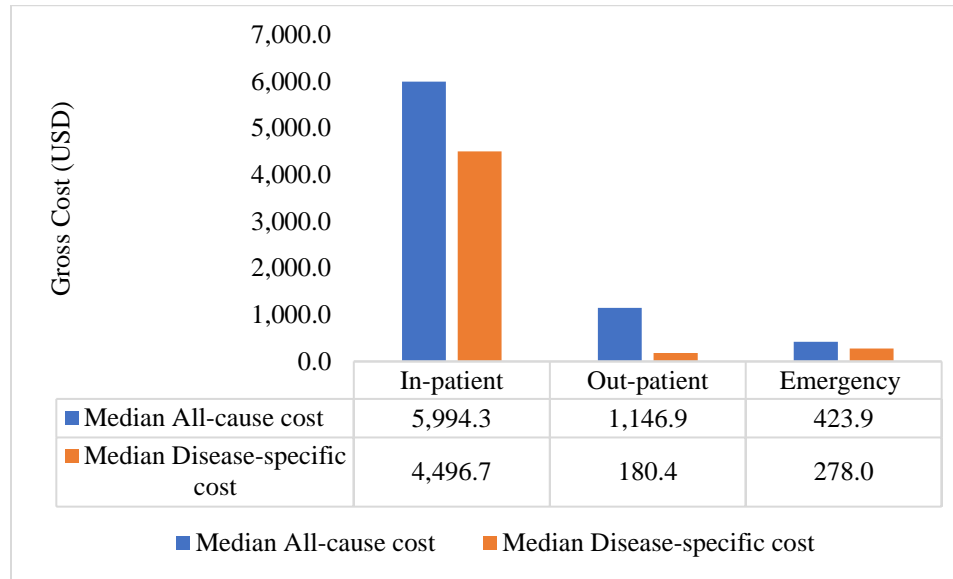
Note: Excluded the claims having claim amount less than equal to 0 USD.

Net Cost = Insurance Paid Amount

Implied PPP conversion rate (National currency per international dollar): <https://www.imf.org/external/datamapper/PPPEX@WEO/OEMDC/ARE>

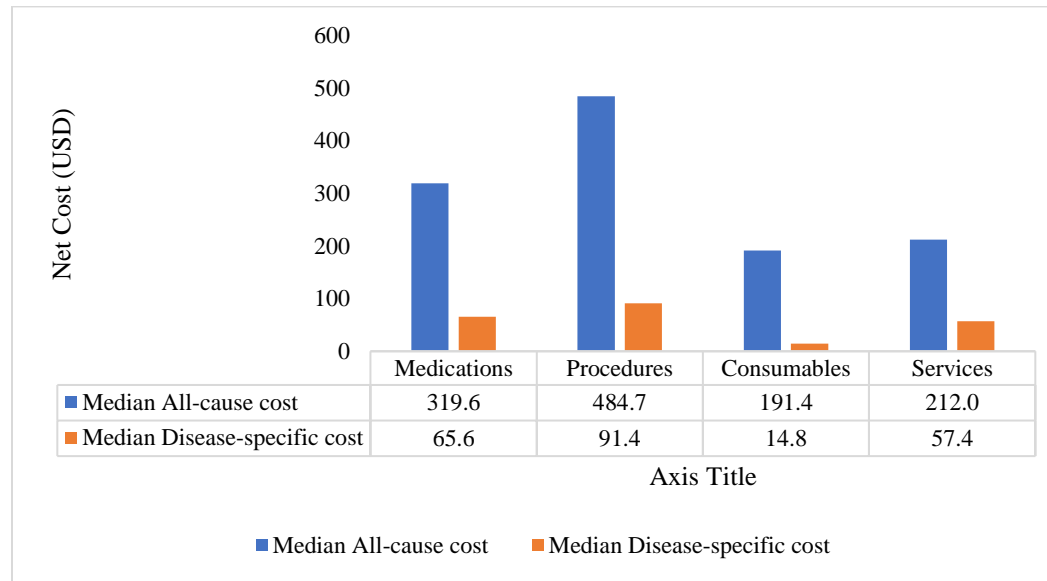
FIGURES

Figure S1 Gross cost comparison between all-cause cost and disease-specific cost.



Abbreviations: USD, United States Dollar

Figure S2 Net cost comparison between all-cause cost and disease-specific cost.



Abbreviations: USD, United States Dollar