

## *Report on Medical Inflation over the years*

The Insurance Regulatory and Development authority is collecting transaction level data on Health Insurance policies and claims from all non life insurance companies in India. The Health data is collected in 3 formats.

1. Policy Data
2. Members Data
3. Claims Data

The Claims data for the years 2007-08 and 2009-10 are considered for the study. The report is generated for transactions with amount claimed are more than ₹ 40,000/- . The reasons for this choice are:

- (1) Many small claims for diagnostics tests and medicines without major treatment, etc affect the claim severity disproportionately. Hence are excluded.
- (2) Most surgeries and other procedures cost not less than ₹40,000.

The 'amount claimed' is considered for the study as the 'claims paid' is subject to the limitations of Sum Insured, pre-existing diseases etc. But the amount claimed reflects the actual expenditure incurred by the insured which reflects the true medical cost for comparing the inflation over the years.

### **I. Claim severities analysis of all major diseases.**

Disease Name	ICD Codes	Average Claimed Amount ( in ₹)		Proportion (in %)		Increase in average claimed amount for 2009-10 in comparison with 2007-08 (in %)
		2007-08	2009-10	2007-08	2009-10	
Arthropathies	M00-M99	1,36,354	1,47,401	10.10	7.60	7.49
Blood Diseases	D50-D89	95,992	1,07,944	0.70	0.54	11.07
Circulatory	I00-I99	1,53,349	3,56,505	28.04	44.95	56.99
Digestive	K00-K93	75,694	79,564	10.01	7.35	4.86
Ear	H60-H95	65,841	68,066	0.49	0.41	3.27
Endocrine	E00-E90	1,05,843	1,03,402	3.02	1.69	-2.36
Eye	H00-H59	60,137	57,168	1.94	1.83	-5.19
Infections	A00-B99	88,200	83,301	4.40	2.74	-5.88
Injury	S00-T98	88,039	94,284	11.03	7.99	6.62
Neoplasm	C00-D48	96,287	1,03,566	10.83	8.27	7.03
Nervous	G00-G99	1,10,135	1,28,055	2.34	1.96	13.99
Pregnancy	O00-O99	56,148	57,820	4.42	4.19	2.89
Respiratory	J00-J99	85,237	92,019	3.67	3.23	7.37
Skin	L00-L99	78,747	78,477	0.91	0.68	-0.34
Urology	N00-N99	72,023	77,455	8.11	6.57	7.01
<b>TOTAL</b>		<b>98,101</b>	<b>1,34,550</b>	<b>100</b>	<b>100</b>	<b>27.09</b>

**Table 1**

#### **Inference:-**

- I. The Claim Severity has increased in all cases except for Endocrine, Eye, Infections and Respiratory diseases.
- II. The increase is very high for Circulatory disease i.e. 56.99 %.
- III. Overall 27.09 % increase in the claim severity for the year 2009 – 10 compared to 2007-08.

### Disease-wise 'Amount Claimed'

DISEASE NAME	ICD Codes	Claimed Amount( in ₹)	
		2007-08	2009-10
Arthropathies	M00-M99	1,977,132,430	2,996,672,453
Blood Diseases	D50-D89	137,748,597	212,865,724
Circulatory	I00-I99	5,473,080,851	7,888,469,036
Digestive	K00-K93	1,959,026,786	2,897,709,520
Ear	H60-H95	96,522,932	161,384,483
Endocrine	E00-E90	591,769,828	664,458,885
Eye	H00-H59	378,743,047	721,635,683
Infections	A00-B99	860,748,304	1,080,329,103
Injury	S00-T98	2,157,671,986	3,149,092,797
Neoplasm	C00-D48	2,118,223,523	3,259,732,946
Nervous	G00-G99	457,279,281	772,171,116
Pregnancy	O00-O99	864,181,148	1,650,116,393
Respiratory	J00-J99	718,123,725	1,272,073,661
Skin	L00-L99	177,574,153	267,604,977
Urology	N00-N99	1,586,518,374	2,587,533,137
<b>Total</b>		<b>19,554,344,965</b>	<b>29,581,849,914</b>

Table 2

### Disease-wise - Number of Claims

DISEASE NAME	ICD Codes	Number Of Claims	
		2007-08	2009-10
Arthropathies	M00-M99	14,500	20,330
Blood Diseases	D50-D89	1,435	1,972
Circulatory	I00-I99	35,776	49,687
Digestive	K00-K93	25,881	36,420
Ear	H60-H95	1,466	2,371
Endocrine	E00-E90	5,591	6,426
Eye	H00-H59	6,298	12,623
Infections	A00-B99	9,759	12,969
Injury	S00-T98	24,508	33,400
Neoplasm	C00-D48	21,999	31,475
Nervous	G00-G99	4,152	6,030
Pregnancy	O00-O99	15,391	28,539
Respiratory	J00-J99	8,425	13,824
Skin	L00-L99	2,255	3,410
Urology	N00-N99	22,028	33,407
<b>Total</b>		<b>1,99,464</b>	<b>2,92,883</b>

Table 3

## 2. Claim Severity Analysis for specific Diseases

The diseases are treated with various procedures and the medical cost for these procedures vary drastically based on the technology used, number of days of hospitalisation required and type of medicines used. To further refine the Diseases-wise claims severity worked out in above tables, disease which have a single procedure are grouped and the following tables are generated.

### Claim Severity

ICD CODE	Disease Name	Claim Severity		Proportions (in %)		Increase in severity for 2009 - 10 in comparison with 2007-08
		2007- 08	2009-10	2007- 08	2009-10	
D25 - Leiomyoma of Uterus	Cancer	66,049	74,716	9.54	7.62	11.6
H25 - Senile Cataract	Cataract	52,577	53,266	8.74	13.5	1.29
H26 - Senile Cataract (other)	Cataract	53,240	53,421	3.88	3.49	0.34
K35 - Acute Appendicitis	Appendicitis	60,355	64,339	7.94	8.03	6.19
K40 - Inguinal Hernia	Hernia	64,417	67,970	10.66	9.44	5.23
K80 – Cholelithiasis	Gall Bladder Stone	63,664	73,127	11.3	10.31	12.94
N20 - Calculus of Kidney and Ureter	Kidney Stone	60,701	64,840	11.59	11.79	6.38
N40 - Calculus of Kidney Prostate	Prostate Problem	70,381	75,338	7.15	6.19	6.58
O80 - Single Spontaneous Delivery	Pregnancy	53,313	53,776	7.08	5.92	0.86
O82 - Single Delivery by Caesarean Section	Pregnancy	55,709	56,891	22.13	23.7	2.08

Table 4

Claim severities are calculated by the following formula.

<b>Claim Severity =</b>	<b>Amount claimed</b>
	<b>Number of Claims</b>

### Inference:-

- I. The Claim Severity percentages for all the diseases are in the increasing trend.
- II. Among all diseases K80 – Cholelithiasis is the highest increase (12.94) in Severities percentages.
- III. Whereas H26 - Senile cataract is the lowest increase (0.34 %) in Severities percentages

### **Number of Claims**

The following table contains no of claims claimed against the diseases for the years 2007 – 08 and 2009 – 10.

S. NO.	DISEASE NAME	ICD CODE	Number Of Claims	
			2007-08	2009-10
1	Cancer	D25 - Leiomyoma of Uterus	1819	2609
2	Cataract	H25 - Senile Cataract	1667	4622
3	Cataract	H26 - Senile Cataract (other)	739	1196
4	Appendicitis	K35 - Acute Appendicitis	1513	2749
5	Hernia	K40 - Inguinal Hernia	2032	3232
6	Gall Bladder Stone	K80 – Cholelithiasis	2154	3529
7	Kidney Stone	N20 - Calculus of Kidney and Ureter	2209	4036
8	Prostate Problem	N40 - Calculus of Kidney Prostate	1363	2118
9	Pregnancy	O80 - Single Spontaneous Delivery	1350	2025
10	Pregnancy	O82 - Single Delivery by Caesarean Section	4220	8113

Table 5

### **Amount Claimed**

The following table contains the amount claimed against the diseases for the year 2007 - 08 and 2009- 10.

S. NO.	DISEASE NAME	ICD CODE	Claimed Amount( in ₹)	
			2007-08	2009-10
1	Cancer	D25 - Leiomyoma of Uterus	1,20,143,054	1,94,935,184
2	Cataract	H25 - Senile Cataract	87,645,464	2,46,196,473
3	Cataract	H26 - Senile Cataract (other)	39,344,581	63,891,094
4	Appendicitis	K35 - Acute Appendicitis	91,317,811	1,76,869,047
5	Hernia	K40 - Inguinal Hernia	1,30,895,173	2,19,680,608
6	Gall bladder Stone	K80 – Cholelithiasis	1,37,131,907	2,58,065,476
7	Kidney Stone	N20 - Calculus of Kidney and Ureter	1,34,087,830	2,61,694,761
8	Prostate Problem	N40 - Calculus of Kidney Prostate	95,929,500	1,59,566,466
9	Pregnancy	O80 - Single Spontaneous Delivery	71,972,167	1,08,896,242
10	Pregnancy	O82 - Single Delivery by Caesarean Section	2,35,091,064	4,61,559,664

Table 6