

A Prospective Method of Complexity Adjustment to Case Mix Groups*

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Introduction

Case Mix Groups with Complexity refinement (CMG™/Plx™) is an inpatient classification system developed and maintained by the Canadian Institute for Health Information (CIHI) that assigns discharges to categorical groups according to expected resource requirements. Patient age and co-morbid diagnoses are used to refine assignment within a base CMG according to cost implications derived from a national case costing database. For acute inpatient discharges, the Plx methodology allows for a retrospective patient specific complexity estimate based on multiple diagnoses and diagnosis typing information as reported by hospitals.

In September 2002, analyses undertaken by CIHI, the Ontario Joint Policy and Planning Committee (JPPC) and the Ontario Ministry of Health and Long Term Care (MOHLTC), concluded that inter-hospital variation in the reported incidence of multiple diagnoses could result in inaccurate estimates of hospital specific complexity. To support investigation of this variation, the MOHLTC developed a method of estimating the impact on CMG resource estimates of the removal of the Plx dimension. Subsequently, the Hospital Funding Formula Committee of the JPPC recommended that the MOHLTC use the weights produced by this methodology for analysis (particularly funding formula calculations) using 2000/2001 acute inpatient discharge data. The adjusted weights will also be used by the Hospital Report Card initiative, and in conjunction with the MOHLTC's clinical data quality audit project planned in 2003.

This technical document describes a method used to calibrate base CMG resource estimates without the complexity overlay for typical and atypical cases in the absence of case costing data. The methodology attempts to be internally consistent with the structure of CMG/Plx, while incorporating prior information about the distribution of complexity.¹

* Case Mix Groups (CMG), Resource Intensity Weights (RIW) and CMG Plx are referred to throughout this document and are registered trademarks of the Canadian Institute for Health Information (CIHI)

¹ For information on the CMG Plx methodology and the calculation of Resource Intensity Weights (RIW) see *DAD Resource Intensity Weights and Expected Length of Stay 2002* available from CIHI.

Methods

In addition to the “Typical” Resource Intensity Weights (RIWTM) specific to CMG/Age/Plx combinations, underlying component RIW values (trim points, expected length of stay, death and transfer cost curve factors, blended outlier per diem weights) include CMG/Age/Plx specific values. To calculate adjusted weights for all typical and atypical cases, RIWs and all component values were estimated specific to CMG/Age combinations. The formulas used to calculate the weighted means are described in subsequent sections.

In general, for any acute inpatient discharge, the RIW can be written as RIW_{ijkl} where i refers to the base CMG, j refers to age group, k refers to patient type (typical, death, long stay, transfer or outlier), and l refers to complexity level. In the case of Ontario’s prospective complexity adjustment, l is constant, so that discharge weights are ultimately represented as RIW_{ijk} .

CMG Reference Values

CMG specific reference values used to identify atypical cases and subsequent RIW assignment are recalibrated consistent with the specifications of each alternate model. These values include:

- $Trim_{ij,l}$ is used to identify LOS Outliers abstracts
- $ELOS_{ij,l}$ is used to assign RIW for LOS outliers and Sign-Outs
- $BlendedOutlierPDW_{ij,l}$ is used to assign RIW for LOS outliers
- $DeathCostCurveFactor_{Med/Surg,LOS,l}$ is used to adjust for the higher average cost per day of death cases relative to typical cases. These values do not vary by CMG or age but do vary by program type (medical or surgical), complexity level and length of stay.
- $TransferCostCurveFactor_{Med/Surg,LOS,In/Out,l}$ is used to adjust for the higher average cost per day of transfer cases relative to typical cases. These values do not vary by CMG or age but do vary by program type (medical or surgical), complexity level and length of stay.

These concepts are recalculated using the formulas below.

$$\bullet \quad Trim_{ij} = \frac{\sum_l Trim_{ij,l}}{\sum_l Cases_{ij,l}}$$

$$\bullet \quad ELOS_{ij} = \frac{\sum_l ELOS_{ij,l}}{\sum_l Cases_{ij,l}}$$

- $$\text{BlendedOutlierPDW}_{ij} = \frac{\sum_l \text{BlendedOutlierPDW}_{ij,l}}{\sum_l \text{Cases}_{ij,l}}$$

- $$\text{DeathCostCurveFactor}_{\text{Med/Surg,LOS}} = \frac{\sum_l \text{DeathCostCurveFactor}_{\text{Med/Surg/LOS/l}}}{\sum_l \text{Cases}_{\text{Med/Surg/LOS/l}}}$$

weighting cases equally, where $\text{LOS} > 10$ and $\text{LOS} \leq \text{Trim}_{ij}$,

- $$\text{TransferCostCurveFactor}_{\text{Med/Surg,LOS, In/Out}} = \frac{\sum_l \text{TransferCostCurveFactor}_{\text{Med/Surg/LOS/In/Out/l}}}{\sum_l \text{Cases}_{\text{Med/Surg/LOS/In/Out/l}}}$$

weighting cases equally, where $\text{LOS} > 10$ and $\text{LOS} \leq \text{Trim}_{ij}$,

The prior distributions of Complexity may be estimated in ways specified by the user. For the case of Ontario, these calculations are based on typical and LOS outlier abstracts from 1996/1997 to 1999/2000 .

Typical Cases

The weight assigned to cases that are classified as neither Sign-Outs, Deaths, Transfers In/Out, nor LOS Outliers (where $LOS > Trim_{ij}$) is the typical RIW_{ijkl} . The typical RIW value is recalculated for the various models as follows:

For all Typical and LOS Outliers within a base CMG

$$\text{If } LOS \leq Trim_{ij}, \text{ then, } RIW = RIW_{ijk} = \frac{\sum_l RIW_{ijkl}}{\sum_l Cases_{ijkl}}$$

If $LOS > Trim_{ij}$, then RIW assignment is based on the LOS outlier methodology.

Length of Stay Outliers

The formula to calculate RIW_{ijkl} for a LOS Outlier case is:

$$RIW_{ij,l} + (\text{BlendedOutlierPDW}_{ij,l} * (LOS - ELOS_{ij,l}))$$

The formula to recalculate RIW for LOS Outliers :

$$RIW_{ij} = RIW_{ij} + (\text{BlendedOutlierPDW}_{ij} * (LOS - ELOS_{ij}))$$

Sign-Out Cases

The formula to calculate RIW_{ijkl} for a Sign-Out case is :

if Sign-Out $LOS \leq ELOS_{ij,l}$

then, $RIW_{ijkl} = CIHI PDW_{CMG} * LOS$

else if Sign-Out $LOS > ELOS_{ij,l}$ and $< Trim_{ij,l}$

then, $RIW_{ijkl} = CIHI PDW_{CMG} * ELOS_{ij,l}$

Otherwise, weight assignment is based on the LOS outlier methodology.

The RIW value for a Sign-Out case is recalculated for the various complexity, age, and facility type models as follows:

if Sign-Out $LOS \leq ELOS_{ij}$

then, $RIW_{ijk} = CIHI PDW_{CMG} * LOS$

else if Sign-Out $LOS > ELOS_{ij}$ and $< Trim_{ij}$

then, $RIW_{ijk} = CIHI PDW_{CMG} * ELOS_{ij}$

Otherwise, weight assignment is based on the LOS outlier methodology

(Note that $CIHI PDW_{CMG}$ does not vary with complexity or age in the base.)

Death Cases

The formula to calculate RIW_{ijkl} for a death case is:

if Death LOS \leq Trim_{ij,l}
then, $RIW_{ijkl} = \text{CIHI PDW}_{\text{CMG}} * \text{LOS} * \text{DeathCostCurveFactor}_{\text{Med/Surg,LOS,l}}$
Otherwise, weight assignment is based on the LOS outlier methodology

The RIW value for a Death case is recalculated for the various complexity, age, and facility type models as follows:

If LOS \leq Trim_{ij}, then,
 $RIW_{ijk} = \text{CIHI PDW}_{\text{CMG}} * \text{LOS} * \text{DeathCostCurveFactor}_{\text{Med/Surg,LOS}}$
Otherwise, weight assignment is based on the LOS outlier methodology

Transfer Cases

The formula to calculate RIW_{ijkl} for a transfer case is:

if Transfer LOS \leq Trim_{ij,l}
then, $RIW_{ijkl} = \text{CIHI PDW}_{\text{CMG}} * \text{LOS} * \text{TransferCostCurveFactor}_{\text{Med/Surg,LOS, In/Out,l}}$
Otherwise weight assignment is based on the outlier methodology

The RIW value for a Transfer case is recalculated for the various complexity, age, and facility type models as follows:

If LOS \leq Trim_{ij}, then,
 $RIW_{ijk} = \text{CIHI PDW}_{\text{CMG}} * \text{LOS} * \text{TransferCostCurveFactor}_{\text{Med/Surg,LOS, In/Out}}$
Otherwise weight assignment is based on the outlier methodology

Results

Using the method described above, weights were derived based on 1996/1997 to 1999/2000 Ontario discharge abstracts grouped using RIW 2001. Appendix 1 provides the detailed results of these calculations.

Appendix 1

Cost Curve Factors 2001

Prospective Complexity Adjustment*

Partition	LOS	Death	Transfer In	Transfer Out
Surgical	1	3.4459	1.8112	1.5757
	2	3.1059	0.9388	1.3020
	3	2.4838	0.8072	1.2442
	4	1.8792	0.8089	1.0777
	5	1.7960	0.8139	1.0867
	6	1.7975	0.8225	1.0820
	7	1.6522	0.8268	1.0296
	8	1.5821	0.8320	0.9825
	9	1.3035	0.8381	1.0000
	10	1.3054	0.8986	0.9891
Medical	1	2.5971	1.1330	1.6744
	2	1.9507	1.0321	1.4790
	3	1.6901	0.9689	1.2629
	4	1.5199	0.9734	1.2508
	5	1.4626	0.9765	1.2115
	6	1.3524	0.9839	1.1188
	7	1.3663	0.9908	1.1148
	8	1.2294	0.9984	1.0940
	9	1.0979	1.0034	1.0357
	10	1.1332	1.0688	1.0143

* Complexity Level 9 curves are not adjusted and remain as published by CIHI for RIW2001

Appendix 2

RIW & ELOS 2001

Prospective Complexity Adjustment*

CMG	CMG Title	Age 0-17					Age 18-69					Age 70 +				
		Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS
001	CRANIOTOMY PROCEDURES	1,525	3.1514	0.2615	26.8905	8.2219	10,387	2.8416	0.2088	30.6555	9.1545	2,968	3.0716	0.1789	45.0822	12.9838
003	SPINAL PROCEDURES	458	1.7419	0.1634	18.2402	5.7522	1,742	1.8787	0.1645	21.3617	6.6761	266	2.4617	0.1660	30.5338	9.3733
004	EXTRACRANIAL VASCULAR PROCEDURES	17	1.5247	0.1770	14.2941	4.1353	3,839	1.2392	0.1545	8.0701	2.8882	3,665	1.2936	0.1586	9.1973	3.1069
005	VENTRICULAR SHUNT REVISION	617	1.0171	0.1281	10.2334	3.4211	364	1.0519	0.1263	11.7170	3.6907	57	1.2027	0.1255	13.5439	4.0684
006	CARPAL TUNNEL RELEASE AND SPECIFIED NERVOUS SYSTEM PROCEDURES	511	0.9361	0.1384	12.5558	3.9325	1,996	0.7220	0.1383	8.3602	2.1551	402	0.9264	0.1384	11.4975	3.8779
007	PERIPHERAL, CRANIAL NERVE AND OTHER NEUROLOGICAL PROCEDURES	90	1.3897	0.1417	22.7111	6.0944	699	1.7666	0.1412	30.0615	8.1413	327	2.4058	0.1416	47.3670	12.9275
010	NEOPLASM OF NERVOUS SYSTEM	427	0.6173	0.1227	20.4590	2.7342	5,713	1.2498	0.1235	26.3240	7.4656	2,714	1.5299	0.1236	28.8099	9.6506
011	DEGENERATIVE NERVOUS DISORDERS	256	0.9642	0.1321	35.2344	6.4063	2,459	1.2758	0.1322	35.5864	8.4192	4,143	1.7694	0.1322	40.6568	11.9372
012	MULTIPLE SCLEROSIS AND CEREBELLAR DISORDERS	89	0.8994	0.1283	21.8764	6.1640	2,695	1.0271	0.1318	24.1429	7.0018	289	1.2505	0.1366	27.5848	8.2484
013	SPECIFIC CEREBROVASCULAR DISORDERS EXCEPT TRANSIENT ISCHEMIC ATTACKS	285	0.9456	0.1349	28.7930	5.8723	19,671	1.3926	0.1350	31.6531	8.2292	42,623	1.7363	0.1354	35.5579	10.4943
014	TRANSIENT ISCHEMIC ATTACKS AND PRECEREBRAL OCCLUSIONS	39	0.5539	0.1414	13.6667	3.3821	6,194	0.6252	0.1415	13.7415	3.6794	11,587	0.7460	0.1417	15.1221	4.3878
015	NONSPECIFIC CEREBROVASCULAR DISORDERS	140	1.3669	0.1233	31.3857	7.9386	937	1.3599	0.1233	31.2924	7.8818	1,648	1.4196	0.1247	31.8532	8.0098
017	CRANIAL AND PERIPHERAL NERVE DISEASES	311	0.6330	0.1328	18.7428	4.4650	3,922	0.9642	0.1332	24.3848	6.4234	1,623	1.3494	0.1339	29.6482	9.1551
018	VIRAL MENINGITIS	581	0.5577	0.1468	8.9673	3.2714	1,088	0.5663	0.1468	9.1287	3.3044	24	0.6855	0.1470	14.1250	4.2500
019	INFECTION EXCEPT VIRAL MENINGITIS	936	1.6928	0.1949	27.5641	8.2098	1,519	1.7816	0.1953	29.3140	8.8723	546	1.8229	0.1946	30.4176	9.2877
020	HYPERTENSIVE ENCEPHALOPATHY	4	1.4370	0.2552	20.0000	5.8000	120	1.4370	0.2552	20.0000	5.8000	87	1.4370	0.2552	20.0000	5.8000
021	NON-TRAUMATIC STUPOR AND COMA	106	0.8598	0.1581	16.1038	4.4066	613	0.9482	0.1588	17.1517	4.7623	730	1.0665	0.1592	18.6438	5.2181
022	SEIZURE AND HEADACHE	14,867	0.5178	0.1763	7.5107	2.1199	18,653	0.5057	0.1442	10.8429	2.9479	5,072	0.8433	0.1481	17.9941	4.8817
028	OTHER NERVOUS SYSTEM DIAGNOSES	1,137	0.7307	0.1367	21.2181	4.6338	3,449	0.9837	0.1386	25.6515	6.2687	2,098	1.2714	0.1398	29.6263	8.4267
040	TRACHEOSTOMY AND GASTROSTOMY PROCEDURES	179	10.2315	0.2071	115.4693	37.1492	1,800	14.5815	0.2357	131.1528	44.2492	2,428	12.7552	0.2239	124.7862	41.3918
050	ORBITAL PROCEDURES	344	0.6533	0.1390	4.6047	1.5052	3,350	0.6602	0.1388	4.4418	1.4909	1,453	0.6700	0.1394	4.9105	1.5807
051	OTHER INTRAOCULAR PROCEDURES	155	0.6420	0.1571	7.1935	1.9484	932	0.6475	0.1570	7.3155	1.9802	564	0.6561	0.1570	7.5213	2.0310
052	RETINAL PROCEDURES	291	0.5598	0.1346	3.2199	1.2529	6,371	0.5595	0.1346	3.1318	1.2236	2,598	0.5594	0.1345	3.1524	1.2273
053	IRIS AND LENS PROCEDURES	16	0.4231	0.0885	4.0000	1.5000	150	0.4261	0.0885	4.1000	1.5313	120	0.4273	0.0885	4.3750	1.6175
054	EXTRAOCULAR PROCEDURES	125	0.5785	0.0993	3.0480	1.2264	356	0.5778	0.0992	3.1826	1.2413	254	0.5762	0.0993	3.0709	1.2315
055	LENS INSERTION (MNRH)	34	0.5464	0.1321	3.0000	1.2000	1,643	0.5466	0.1319	3.1029	1.2192	3,097	0.5465	0.1320	3.0717	1.2140
057	OTHER OPHTHALMIC PROCEDURES (MNRH)	159	0.5079	0.1328	3.2767	1.1830	476	0.5052	0.1328	3.3025	1.1908	330	0.5090	0.1327	3.3636	1.2091
060	MAJOR EYE INFECTIONS	1,201	0.5288	0.1261	9.4221	3.1299	522	0.6847	0.1266	10.8314	4.4557	385	0.8268	0.1276	12.4805	5.5722
062	HYPHEMA	148	0.3117	0.1197	10.0000	2.7000	150	0.3117	0.1197	10.0000	2.7000	27	0.3117	0.1197	10.0000	2.7000
063	OTHER OPHTHALMIC DIAGNOSES (MNRH)	723	0.4334	0.1286	9.6722	2.5635	1,252	0.4704	0.1285	9.5823	2.9516	602	0.5862	0.1286	11.0914	3.6930
075	RADICAL LARYNGECTOMY AND GLOSSECTOMY	1	5.4306	0.1637	40.0000	16.5000	362	6.4534	0.2000	57.9724	21.2685	138	6.7205	0.2043	60.5870	21.8877
076	MAJOR HEAD AND NECK PROCEDURES	135	2.9252	0.2027	35.4667	9.6778	1,934	2.9654	0.2076	34.1779	9.2089	745	3.3455	0.2089	36.7034	10.3742
077	LESS EXTENSIVE HEAD AND NECK PROCEDURES	391	0.8338	0.1942	5.6164	2.4550	2,555	0.6171	0.1952	3.9773	1.6080	373	1.0319	0.1918	8.0858	3.4895
078	CLEFT LIP AND PALATE REPAIR	1,270	0.8557	0.1537	4.4307	2.0065	238	0.7589	0.1537	3.1681	1.4399	4	0.7692	0.1523	4.0000	1.5000
081	SALIVARY GLAND PROCEDURES	178	0.8687	0.1041	4.6798	2.1478	2,107	0.8001	0.1056	4.1277	1.5251	372	0.8366	0.1050	4.4597	1.8973
082	MINOR EAR, NOSE AND THROAT PROCEDURES	90	0.4321	0.1131	6.8556	1.9700	497	0.4249	0.1111	4.6258	1.4692	175	0.4713	0.1122	6.8914	1.9171
083	RECONSTRUCTIVE ENT PROCEDURES	1,745	1.2759	0.2087	7.1742	2.0531	4,241	1.2729	0.2087	7.1259	2.0452	167	1.2938	0.2090	7.6826	2.1689
084	MISCELLANEOUS EAR, NOSE AND THROAT PROCEDURES	720	0.5139	0.1654	3.3542	1.2869	1,583	0.5645	0.1658	4.7265	1.6903	465	0.6318	0.1662	5.0946	2.0839
085	MASTOID PROCEDURES	956	0.7765	0.1233	3.2521	1.2411	1,957	0.7741	0.1233	3.1589	1.2251	153	0.7757	0.1233	3.5621	1.2935
086	OTHER TONSILLAR PROCEDURES	596	0.4146	0.1488	7.0201	2.2131	1,185	0.4046	0.1482	7.0118	2.2077	57	0.4109	0.1487	7.1404	2.2912
087	SINUS PROCEDURES	90	0.5701	0.1464	3.0667	1.2133	1,370	0.5769	0.1466	3.3029	1.2635	186	0.5778	0.1469	3.5484	1.3091
088	ETHMOIDECTOMY (MNRH)	131	0.5076	0.1214	3.0687	1.2137	2,070	0.5066	0.1214	3.0493	1.2096	186	0.5070	0.1214	3.0699	1.2140
089	DENTAL EXTRACTION OR RESTORATION (MNRH)	512	0.4843	0.1125	3.3105	1.2609	1,559	0.4800	0.1124	3.2341	1.2461	875	0.4779	0.1123	3.1566	1.2310
090	EXTERNAL AND MIDDLE EAR PROCEDURES (MNRH)	1,325	0.5096	0.1059	3.1457	1.1122	2,797	0.5085	0.1059	3.0640	1.1042	136	0.5091	0.1059	3.1985	1.1081
091	NASAL PROCEDURES (MNRH)	916	0.4654	0.1162	3.0775	1.1236	4,731	0.4640	0.1164	3.0332	1.1101	146	0.4645	0.1161	3.0959	1.1247
092	MYRINGOTOMY (MNRH)	242	0.4845	0.1221	7.5207	2.2045	59	0.4644	0.1225	7.1017	2.0542	9	0.4572	0.1222	7.8889	2.2556
093	TONSILLECTOMY AND ADENOIDECTOMY PROCEDURES (MNRH)	14,213	0.3856	0.1412	3.0522	1.1158	4,501	0.3909	0.1413	3.0282	1.1086	14	0.3964	0.1413	3.1429	1.1429
100	ENT MALIGNANCY	19	1.0068	0.1357	24.2632	5.8684	1,289	1.2154	0.1404	28.7898	7.4178	795	1.2588	0.1403	28.3434	7.2677
101	ACUTE SUPPURATIVE INFECTIONS	507	0.5489	0.1478	9.3669	3.1949	515	0.5999	0.1476	10.2505	3.5703	92	0.7875	0.1494	11.9348	4.9250
102	DYSEQUILIBRIUM	101	0.3233	0.1254	9.4554	2.3228	4,227	0.3555	0.1255	9.3267	2.5915	4,870	0.4476	0.1254	10.7023	3.3957
104	INFLUENZA	4,551	0.4062	0.1424	8.9352	2.1918	2,114	0.5461	0.1427	10.1887	3.1440	2,429	0.7807	0.1429	11.9625	4.8081
107	EPIGLOTTITIS	69	0.6043	0.2223	7.0870	2.3609	544	0.6023	0.2219	7.2335	2.4928	59	0.6537	0.2187	7.5763	2.7712
108	EPISTAXIS	79	0.4017	0.1455	10.4684	2.3595	1,695	0.4382	0.1430	10.2496	2.9208	1,675	0.4720	0.1435	10.4382	3.1070
109	OTHER ENT INFECTIONS	2,567	0.4519	0.1311	8.5968	2.4976	1,122	0.5589	0.1314	9.4635	3.3807	319	0.7669	0.1309	11.7806	4.8235
113	SINUSITIS (MNRH)	365	0.5093	0.1465	9.3644	2.9499	657	0.5248	0.1463	9.8737	3.0731	113	0.7715	0.1469	11.7788	4.5938
114	SORE THROAT (MNRH)	3,445	0.3497	0.1512	6.0682	2.1338	4,240	0.3657	0.1514	6.0370	2.3180	180	0.4888	0.1511	7.1611	3.0800
115	MISCELLANEOUS ENT DIAGNOSES (MNRH)	1,581	0.4420	0.1475	5.6888	1.6969	1,446	0.4541	0.1482	6.0858	1.7982	527	0.5813	0.1530	8.0531	2.2647
116	CROUP (MNRH)	7,993	0.3133	0.1965	3.0837	1.4191	83	0.4400	0.1972	4.3373	2.0554	11	0.4585	0.1950	4.5455	2.1455

* Complexity Level 9 values are not adjusted and remain as published by CIHI for RIW2001

Appendix 2

RIW & ELOS 2001

Prospective Complexity Adjustment*

CMG	CMG Title	Age 0-17					Age 18-69					Age 70 +				
		Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS
125	TRACHEOSTOMY	40	18.9829	0.3319	132.4000	45.4100	1,204	25.5643	0.3679	165.6055	57.8908	1,009	27.1365	0.3753	172.5411	60.3979
126	RESECTION OF LUNG	73	2.1348	0.1469	15.2603	5.1096	4,469	2.6538	0.1511	19.4368	8.2733	2,277	2.9088	0.1547	22.5204	9.7406
127	MAJOR RESPIRATORY PROCEDURES	315	2.1036	0.1649	28.8730	8.7143	5,729	2.0932	0.1636	28.8340	8.7646	2,581	2.4809	0.1659	32.9171	11.1889
128	MINOR RESPIRATORY PROCEDURES	168	1.3786	0.1764	17.4583	4.8125	1,074	1.5099	0.1720	19.2244	5.3802	441	1.6015	0.1700	20.8912	5.8224
129	OTHER RESPIRATORY PROCEDURES	85	0.7573	0.1468	13.3647	4.1106	2,716	0.6899	0.1444	9.0029	2.7173	845	0.8737	0.1470	13.9669	4.2357
135	TUBERCULOSIS	65	1.7265	0.1165	52.2462	14.3554	455	1.9815	0.1168	61.4462	15.7873	249	2.1345	0.1175	67.7671	16.7703
136	RESPIRATORY FAILURE	232	1.9098	0.2094	27.2328	6.5591	3,240	3.1453	0.2141	32.8429	10.9444	4,785	3.6020	0.2159	35.2915	12.7144
137	RESPIRATORY INFECTIONS AND INFLAMMATIONS	1,040	1.3881	0.1746	26.0462	7.2402	3,931	1.8309	0.1771	29.9326	9.2534	7,111	2.0004	0.1772	31.1214	10.5239
138	RESPIRATORY NEOPLASMS	82	0.7558	0.1473	23.9512	4.1402	13,811	1.3653	0.1479	29.1797	8.2846	12,536	1.5862	0.1479	30.9502	9.7016
139	INTERSTITIAL DISEASE	121	1.0113	0.1624	21.3223	5.8934	1,829	1.2712	0.1640	24.3248	7.6391	2,221	1.6445	0.1640	28.0081	9.7980
140	CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)	47	1.0171	0.1521	21.7660	6.8234	13,508	1.0287	0.1516	20.1837	6.3926	24,613	1.1441	0.1522	21.9446	7.1837
141	PULMONARY EDEMA	45	1.1201	0.2087	19.6000	4.3311	1,413	1.6163	0.2123	23.7509	6.9718	2,132	1.6009	0.2037	22.8790	7.2753
142	CHRONIC BRONCHITIS	141	0.5271	0.1535	16.6099	3.6667	8,899	0.9485	0.1552	20.1526	6.2605	14,619	1.1066	0.1560	21.9432	7.3593
143	SIMPLE PNEUMONIA AND PLEURISY	20,182	0.7322	0.1987	8.6207	3.0934	32,378	0.9726	0.1694	15.8298	5.5028	58,905	1.3081	0.1591	25.4816	8.0152
144	PNEUMOTHORAX	342	0.4963	0.1476	10.3129	3.2102	2,997	0.6354	0.1478	12.9917	4.1641	959	0.9402	0.1487	17.2742	6.1842
145	TRACHEOBRONCHITIS	22,418	0.6180	0.1656	7.1466	2.7314	3,523	0.7765	0.1659	8.9126	3.5947	4,438	1.0081	0.1663	10.8148	4.8643
146	ASTHMA	30,925	0.4275	0.1264	8.5368	2.2550	18,966	0.5875	0.1270	9.9343	3.5631	5,693	0.8187	0.1286	12.1781	5.1352
147	OTHER RESPIRATORY DIAGNOSES	4,344	0.5951	0.1487	11.0668	2.8837	5,239	0.7533	0.1501	13.2115	3.9131	4,334	1.0037	0.1510	15.5865	5.4532
175	HEART OR LUNG TRANSPLANT	62	17.3491	0.4960	87.7258	31.8355	363	15.3094	0.4717	81.7438	30.1300	1	21.3383	0.5629	105.0000	36.4000
176	CARDIAC VALVE REPLACEMENT WITH HEART PUMP WITH CARDIAC CATH	9	7.0748	0.1901	57.6667	21.4333	690	7.2537	0.1862	54.2087	20.6251	637	7.3818	0.1850	56.4631	21.4568
177	CARDIAC VALVE REPLACEMENT WITH HEART PUMP WITHOUT CARDIAC CATH	134	4.0264	0.2841	21.6642	8.7866	3,859	4.0719	0.2819	20.6077	8.7887	2,414	4.5888	0.2828	24.1309	10.5811
178	CORONARY BYPASS WITH HEART PUMP WITH CARDIAC CATH	1	3.9846	0.1403	31.0000	12.1000	4,097	5.0316	0.1629	34.1621	13.9225	2,184	6.1086	0.1830	41.3462	17.6688
179	CORONARY BYPASS WITH HEART PUMP WITHOUT CARDIAC CATH	10	2.7036	0.2598	13.9000	6.6500	16,807	3.0232	0.2697	13.6368	6.8536	6,416	3.5630	0.2399	19.8981	8.6641
181	OTHER CARDIO-THORACIC PROCEDURES WITH HEART PUMP WITH CARDIAC CATH	135	10.0605	0.3207	63.3111	21.1800	130	7.4201	0.3108	54.9769	19.0831	39	7.0680	0.3027	55.4615	19.0077
182	OTHER CARDIO-THORACIC PROCEDURES WITH HEART PUMP WITHOUT CARDIAC CATH	1,724	3.1709	0.3574	15.6676	6.8683	1,129	3.1988	0.3540	15.0948	7.2000	172	4.6157	0.3653	22.5116	10.6244
183	MAJOR CARDIO-THORACIC PROCEDURES WITHOUT HEART PUMP WITH CARDIAC CATH	97	3.2952	0.2247	32.5670	10.1010	832	4.3474	0.2585	39.9639	13.4399	425	5.2046	0.2810	43.0753	14.8687
184	MAJOR CARDIO-THORACIC PROCEDURES WITHOUT HEART PUMP WITHOUT CARDIAC CATH	109	2.7802	0.2145	20.2936	7.5110	1,495	3.1982	0.2295	24.4883	8.6613	727	3.6490	0.2409	27.6451	9.5072
185	PERMANENT PACEMAKER IMPLANT FOR SPECIFIED CARDIAC CONDITIONS	7	6.5689	0.1712	28.8571	8.5857	978	6.5638	0.1611	30.3160	8.8558	1,291	7.0525	0.1619	34.7413	12.0786
186	PERMANENT PACEMAKER IMPLANT WITHOUT SPECIFIED CARDIAC CONDITIONS	60	2.6447	0.1785	15.3333	3.7017	3,003	2.8360	0.1784	15.7373	4.2257	7,698	3.0124	0.1785	17.3380	5.2057
188	PERCUTANEOUS TRANSLUMINAL CORONARY ANGIOPLASTY W COMPLICATING CARD CONDITIONS	2	2.3334	0.1561	16.0000	4.5000	7,478	2.4999	0.1574	18.5659	5.4223	2,530	2.8320	0.1581	21.0672	7.3234
189	PERCUTANEOUS TRANSLUMINAL CORONARY ANGIOPLASTY W/O COMPLIC CARDIAC CONDITIONS	234	1.5510	0.5980	5.1795	1.5282	12,938	1.7310	0.5561	7.2795	2.0472	3,642	2.0181	0.5360	8.8929	2.8359
191	TEMPORARY CARDIAC PACEMAKER	22	1.5019	0.2125	19.3182	5.0227	1,094	1.9078	0.2248	23.8638	6.7654	2,010	2.5316	0.2266	27.4184	9.6740
193	CARDIAC PACEMAKER DEVICE REPLACEMENT OR REVISION	80	1.4988	0.1646	6.4000	2.0400	828	1.5236	0.1654	6.6304	2.0705	1,337	1.5234	0.1651	6.6365	2.0669
194	MINOR CARDIO-THORACIC PROCEDURES WITHOUT HEART PUMP	832	0.8586	0.3297	4.8534	1.7144	2,859	0.8294	0.3308	3.3340	1.5200	371	1.1621	0.3302	8.8976	3.6151
200	AMI, UNSTABLE ANGINA OR CARDIAC CATH WITH SHOCK OR PULMONARY EMBOLISM	2		0.2234	23.0000	8.1000	1,208	4.4019	0.2694	38.7070	12.5232	2,385	4.4868	0.2656	38.2713	12.2928
201	AMI WITH CARDIAC CATH WITH CONGESTIVE HEART FAILURE						783	3.1006	0.1384	32.1290	12.8768	679	3.1870	0.1390	33.5376	13.3081
202	AMI WITH CARDIAC CATH WITH VENTRICULAR TACHYCARDIA	1		0.1022	23.0000	8.8000	225	2.0870	0.1022	24.0622	9.8396	88	2.1212	0.1022	24.0455	9.8409
203	AMI WITH CARDIAC CATH WITH ANGINA						1,969	2.1726	0.1636	23.1183	9.3220	839	2.6104	0.1627	25.7628	11.9398
204	AMI WITH CARDIAC CATH WITHOUT SPECIFIED CARDIAC CONDITIONS	1	1.8603	0.1149	20.0000	8.1000	3,419	1.9071	0.1148	20.9813	8.4532	1,056	2.0925	0.1148	22.5777	9.8648
205	AMI WITHOUT CARDIAC CATH WITH CONGESTIVE HEART FAILURE	2		0.1945	36.5000	11.8000	5,201	1.9445	0.1923	24.0421	8.2938	14,991	2.2633	0.1925	25.7925	9.8141
206	AMI WITHOUT CARDIAC CATH WITH VENTRICULAR TACHYCARDIA	2		0.2358	34.0000	12.0000	1,687	1.5197	0.1837	14.2359	6.0730	1,481	1.8041	0.1886	16.7272	7.5471
207	AMI WITHOUT CARDIAC CATH WITH ANGINA						3,328	1.3956	0.1921	15.9736	5.9832	2,725	1.6205	0.1915	17.6738	7.0899
208	AMI WITHOUT CARDIAC CATH WITHOUT SPECIFIED CARDIAC CONDITIONS	24	1.3586	0.1654	15.7500	6.5833	28,375	1.3480	0.1639	12.9505	5.7061	23,266	1.5198	0.1644	15.0867	6.6939
210	UNSTABLE ANGINA WITH CARDIAC CATH WITH SPECIFIED CARDIAC CONDITIONS						757	2.3337	0.1171	26.8494	10.8321	549	2.3803	0.1189	27.4517	11.0705
211	UNSTABLE ANGINA WITH CARDIAC CATH WITHOUT SPECIFIED CARDIAC CONDITIONS						5,225	1.6993	0.1223	20.5317	8.4545	2,557	1.8056	0.1222	21.8576	9.3054
212	UNSTABLE ANGINA WITHOUT CARDIAC CATH WITH SPECIFIED CARDIAC CONDITIONS						2,566	1.0648	0.1838	15.7171	4.7781	4,533	1.2533	0.1836	17.3278	5.8380

* Complexity Level 9 values are not adjusted and remain as published by CIHI for RIW2001

Appendix 2

RIW & ELOS 2001

Prospective Complexity Adjustment*

CMG	CMG Title	Age 0-17					Age 18-69					Age 70 +				
		Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS
213	UNSTABLE ANGINA WITHOUT CARDIAC CATH WITHOUT SPECIFIED CARDIAC CONDITIONS	4	0.6976	0.1510	13.5000	4.3000	25,941	0.7151	0.1547	10.3530	3.3205	23,897	0.8114	0.1547	11.5582	3.9811
215	CARDIAC CATH WITH CONGESTIVE HEART FAILURE	16	2.0086	0.1615	31.5000	11.1063	1,767	1.9060	0.1589	27.4839	9.3999	1,168	2.2387	0.1594	30.2628	11.3706
216	CARDIAC CATH WITH VENTRICULAR TACHYCARDIA	20	1.5926	0.1592	24.1000	6.5000	1,274	1.5808	0.1571	22.1515	6.0692	448	1.8990	0.1588	25.0246	7.9507
217	CARDIAC CATH WITH UNSTABLE ANGINA	1		0.1661	19.0000	4.9000	2,967	1.2066	0.1661	19.4725	5.1055	1,319	1.4070	0.1662	20.7020	6.3901
218	CARDIAC CATH WITHOUT SPECIFIED CARDIAC CONDITIONS	499	0.6370	0.1644	11.4669	1.8353	20,301	0.8015	0.1646	10.5570	2.7216	6,774	0.8216	0.1646	10.7132	2.8542
219	ENDOCARDITIS	47	2.1076	0.0993	44.2553	13.6532	664	2.3924	0.1099	48.4398	14.9295	345	2.8266	0.1208	53.0000	15.8452
220	PULMONARY EMBOLISM	26	0.8022	0.1496	14.3846	4.4846	5,367	1.0817	0.1510	17.0035	6.5663	3,345	1.3708	0.1518	20.7055	8.5729
222	HEART FAILURE	249	1.0030	0.1696	16.4297	4.9948	23,053	1.1483	0.1611	18.9705	6.0901	70,176	1.2068	0.1564	23.4072	7.2196
225	HYPERTENSIVE HEART DISEASE	1	3.3639	0.1580	58.0000	15.3000	682	0.9870	0.1382	21.3255	6.0935	1,270	1.2065	0.1393	23.3488	7.5669
226	OTHER CIRCULATORY DIAGNOSES	382	0.8548	0.1573	17.2330	4.4859	7,482	0.9054	0.1574	17.4910	4.8440	5,327	1.0894	0.1579	19.2624	5.9465
229	ATHEROSCLEROSIS (MNRH)	5	0.5841	0.1864	13.0000	3.5000	7,138	0.6880	0.1874	15.3491	4.1512	9,563	0.9495	0.1883	18.4564	5.7341
232	ACQUIRED VALVULAR DISORDERS (MNRH)	16	1.3997	0.1647	26.7500	7.9875	745	0.9900	0.1454	20.7557	6.1572	1,256	1.0533	0.1442	21.4650	6.5441
233	HYPERTENSION (MNRH)	94	0.5416	0.1559	11.1702	3.3298	3,682	0.5406	0.1559	11.9492	3.2775	2,820	0.6363	0.1558	12.2667	3.8590
234	CONGENITAL CARDIAC DISORDERS (MNRH)	385	0.7665	0.1236	13.1481	3.9216	140	0.7122	0.1267	12.2929	3.5043	21	0.9488	0.1189	14.7143	4.5095
235	ANGINA PECTORIS	2	0.5449	0.1636	10.0000	2.6000	13,892	0.5598	0.1636	10.3198	2.6962	13,416	0.6422	0.1636	10.6538	3.1990
237	ARRHYTHMIA	604	0.5813	0.1672	5.8858	1.8056	22,197	0.5429	0.1859	8.6435	2.6281	28,205	0.7905	0.1869	15.0101	4.2505
240	SYNCOPE AND COLLAPSE	418	0.3533	0.1407	9.5526	1.8464	6,242	0.4374	0.1406	9.6860	2.4820	10,208	0.5584	0.1407	11.0616	3.2817
242	CHEST PAIN	194	0.4180	0.1791	6.4639	1.8237	41,400	0.4699	0.1793	7.2438	2.0709	15,381	0.5522	0.1793	7.4247	2.5227
250	EXTENSIVE GASTROINTESTINAL PROCEDURES	20	6.0594	0.1891	46.5000	18.1950	766	5.7662	0.2058	46.1201	18.1189	425	6.0333	0.2144	50.2118	19.2833
251	GASTROSTOMY AND COLOSTOMY PROCEDURES	1,184	2.5354	0.1794	38.0971	10.3097	8,686	3.6435	0.1840	46.5358	15.7931	6,777	4.4738	0.1900	55.9281	20.2323
252	MAJOR ESOPHAGEAL, STOMACH AND DUODENUM PROCEDURES	17	3.2087	0.1604	32.8824	12.4529	1,556	3.2445	0.1697	37.2725	13.6029	1,088	3.5224	0.1803	42.2739	15.0216
253	MAJOR INTESTINAL AND RECTAL PROCEDURES	849	2.0674	0.1387	21.6926	7.7455	23,172	2.1452	0.1645	23.4225	9.6224	17,055	2.7606	0.1752	31.7474	12.4951
255	LESS EXTENSIVE ESOPHAGEAL, STOMACH AND DUODENUM PROCEDURES	548	1.6986	0.1495	17.4964	6.1113	6,986	1.4409	0.1522	18.9319	5.9339	2,246	2.5415	0.1705	35.9711	11.4489
258	LAPAROTOMY	782	1.3343	0.1656	18.2379	5.9274	8,314	1.4302	0.1657	19.5692	6.6507	3,303	2.0556	0.1700	25.2707	10.1232
260	LESS EXTENSIVE INTESTINAL AND RECTAL PROCEDURES	124	1.0901	0.1465	15.8387	4.5653	937	1.1371	0.1458	16.8559	4.8187	507	1.1156	0.1453	16.7199	4.7736
261	COMPLICATED APPENDECTOMY	2,938	1.0419	0.1554	11.0667	4.8569	6,681	1.0117	0.1555	11.1645	4.6912	603	1.4634	0.1565	14.6965	7.4075
262	SIMPLE APPENDECTOMY	7,643	0.5955	0.1127	4.1965	2.3692	17,772	0.6066	0.1128	4.2988	2.5050	481	0.7833	0.1138	6.3576	3.9634
264	MINOR GASTROINTESTINAL PROCEDURES	712	0.8606	0.1493	9.3708	3.2455	692	0.9150	0.1493	10.7312	3.5705	401	0.9788	0.1479	13.5087	4.3092
265	ABDOMINAL LAPAROSCOPY	143	0.6978	0.1441	10.1469	2.7364	1,209	0.7222	0.1446	10.8164	2.9074	161	0.7913	0.1470	12.3727	3.3050
266	ANUS AND STOMAL PROCEDURES (MNRH)	393	0.5504	0.1425	7.0992	2.3740	12,046	0.5325	0.1425	6.8961	2.2299	2,220	0.6638	0.1425	8.9153	3.1751
269	BILATERAL HERNIA PROCEDURES	670	0.5305	0.1492	6.2701	1.3033	17,224	0.6701	0.1494	7.6230	2.2365	7,990	0.7203	0.1497	8.1488	2.6271
271	UNILATERAL HERNIA PROCEDURES (MNRH)	1,491	0.5092	0.1304	9.0309	1.4385	17,793	0.6391	0.1304	10.0341	2.4444	6,073	0.6541	0.1306	10.0948	2.5241
279	DIGESTIVE SYSTEM MALIGNANCY	41	0.9226	0.1275	21.8780	5.4146	6,691	1.0866	0.1283	24.1593	6.7109	7,541	1.2002	0.1281	24.8328	7.5243
281	G.I. HEMORRHAGE	603	0.5805	0.1958	8.0182	2.3697	16,115	0.6136	0.1549	9.8653	3.4657	18,192	0.8971	0.1570	17.4747	5.3077
285	COMPLICATED ULCER	32	0.7695	0.1238	17.3438	4.9875	932	0.8664	0.1251	19.1652	5.6088	719	0.8524	0.1253	19.7483	5.7964
286	UNCOMPLICATED ULCER	68	0.6554	0.1408	10.8088	4.0632	1,958	0.5934	0.1405	11.6782	3.6870	1,169	0.8193	0.1401	14.2036	5.1918
289	INFLAMMATORY BOWEL DISEASE	1,085	0.8675	0.1214	18.9991	6.0644	9,726	0.8187	0.1215	17.7558	5.7947	892	1.1194	0.1216	23.0930	8.4202
290	G.I. OBSTRUCTION	906	0.4448	0.1390	10.0982	2.9191	13,907	0.5932	0.1390	11.2373	3.9564	10,631	0.7135	0.1395	13.8185	4.9850
294	ESOPHAGITIS, GASTROENTERITIS AND MISCELLANEOUS DIGESTIVE DISEASE	34,709	0.4536	0.1557	7.1061	2.0634	72,663	0.5015	0.1449	11.0302	3.1720	39,175	0.7704	0.1524	16.6120	4.8939
297	OTHER G.I. DIAGNOSES	2,664	0.4121	0.1470	12.2417	2.3667	10,448	0.6521	0.1472	14.3620	3.9029	6,078	0.8114	0.1476	17.0661	5.1926
310	LIVER TRANSPLANT	69	8.8568	0.3345	53.9855	19.1725	513	8.9392	0.3419	55.6374	19.5942	4	7.4123	0.3340	50.0000	18.3000
311	MAJOR PANCREATIC PROCEDURES	26	4.5140	0.2181	53.2308	17.3154	1,798	4.1992	0.2161	51.5267	16.8038	756	4.7206	0.2230	56.6865	18.2862
312	MAJOR HEPATOBILIARY PROCEDURES	55	2.8423	0.1929	24.1091	10.1018	1,150	2.7680	0.1911	23.1990	9.3771	559	3.2955	0.1961	27.2075	11.7753
313	COMMON DUCT EXPLORATION	8	1.9579	0.1635	22.8750	8.6125	839	2.0821	0.1657	25.8880	9.2408	745	2.5156	0.1666	29.8174	12.0114
314	OTHER HEPATOBILIARY AND PANCREATIC PROCEDURES	51	2.0148	0.1538	27.3137	9.7804	1,923	1.6375	0.1551	26.0229	7.8174	1,414	2.0253	0.1572	28.7631	10.0157
315	CHOLECYSTECTOMY	43	1.2108	0.1524	13.9302	5.4791	6,936	1.2985	0.1529	14.6514	5.6994	2,770	1.6974	0.1566	19.0184	7.9986
317	LAPAROSCOPIC CHOLECYSTECTOMY	659	0.6295	0.1542	4.8923	1.7326	38,853	0.6556	0.1542	5.1477	1.8026	8,018	0.7595	0.1544	6.6772	2.5270
320	MISCELLANEOUS HEPATOBILIARY AND PANCREATIC PROCEDURES	37	1.7549	0.1867	34.5135	10.7595	720	2.2684	0.1814	31.1639	9.7610	393	2.4266	0.1867	33.1781	10.3216
323	CIRRHOIS AND ALCOHOLIC HEPATITIS	25	0.9763	0.1476	19.4000	5.8760	7,961	1.2859	0.1525	24.3809	7.3320	2,267	1.4763	0.1527	26.1531	8.5537
324	PANCREATIC CANCER OR OTHER MALIGNANCY OF HEPATOBILIARY SYSTEM	48	1.0362	0.1337	25.8125	6.1750	5,493	1.2146	0.1332	25.7579	7.1543	5,839	1.3481	0.1330	26.4189	8.1437
325	PANCREAS DISEASES EXCEPT MALIGNANCY	289	0.6494	0.1496	14.7024	4.4516	14,427	0.7894	0.1508	15.8912	5.2315	3,854	0.9822	0.1527	18.6850	6.5908
326	LIVER DISEASES EXCEPT CIRRHOIS OR CANCER	623	0.6471	0.1483	15.2456	3.8724	5,904	0.9793	0.1547	19.6612	5.7958	2,096	1.2538	0.1565	22.3177	7.5076
329	BILIARY TRACT DISEASES	399	0.8126	0.1099	13.8321	4.0383	15,434	0.5465	0.1417	11.1726	3.2564	8,866	0.9157	0.1619	16.9203	5.2876
350	MULTIPLE OR BILATERAL JOINT REPLACEMENT	4	3.7546	0.1363	39.7500	13.0000	1,170	2.8634	0.1468	22.6385	8.9822	1,117	2.9741	0.1448	25.8639	9.7282
351	JOINT REPLACEMENT FOR TRAUMA	1	2.0693	0.1431	27.0000	9.2000	1,155	2.3603	0.1439	32.6771	10.8965	10,882	2.5886	0.1440	34.4744	12.4370
352	HIP REPLACEMENT	68	1.7561	0.1319	12.6471	4.5485	14,333	1.9938	0.1344	11.8983	6.3804	14,339	2.1701	0.1397	16.9840	7.7358
354	KNEE REPLACEMENT	2	1.9045	0.1197	14.0000	6.4000	15,076	1.9342	0.1242	14.5406	6.5562	17,650	2.0481	0.1336	15.3726	7.1547

Appendix 2

RIW & ELOS 2001

Prospective Complexity Adjustment*

CMG	CMG Title	Age 0-17					Age 18-69					Age 70 +				
		Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS
355	REATTACHMENT PROCEDURES OR LOWER EXTREMITY OR SHOULDER AMPUTATIONS	35	2.9446	0.1429	38.4286	10.1171	359	3.6669	0.1474	55.6323	15.6159	191	3.7602	0.1486	61.8534	17.4723
356	REPAIR HIP AND FEMUR PROCEDURES	695	1.2777	0.1241	12.5050	3.0983	1,132	1.9642	0.1271	25.6943	8.6809	854	2.6074	0.1282	33.2600	13.3170
358	LOWER EXTREMITY PROCEDURES WITH INFECTION	294	1.6238	0.1457	24.6361	7.1027	1,660	1.7367	0.1471	28.2024	8.0716	440	2.0680	0.1491	34.3500	9.7550
359	UPPER EXTREMITY PROCEDURES WITH INFECTION	60	1.4415	0.1498	20.8333	6.3933	350	1.3108	0.1483	20.4229	6.1863	98	1.8936	0.1568	28.1020	8.8102
360	UPPER EXTREMITY AMPUTATIONS AND REVISIONS	21	1.1781	0.1086	21.2857	5.5619	285	1.3830	0.1121	27.4772	7.0642	126	1.4469	0.1142	28.3492	7.4484
361	MUSCULOSKELETAL BIOPSY FOR MALIGNANCY	105	2.3623	0.1234	45.3905	10.3771	399	2.5002	0.1271	47.1429	11.8940	175	3.2163	0.1368	51.1771	15.5343
362	MUSCULOSKELETAL BIOPSY WITHOUT MALIGNANCY	154	1.5011	0.1192	35.7273	8.4916	580	1.8854	0.1230	42.8000	10.6552	350	2.0213	0.1236	43.7600	10.9803
363	BACK AND NECK PROCEDURES WITH FUSION	968	2.4216	0.1661	17.7056	7.7611	7,311	1.9308	0.1656	13.8988	5.0978	1,196	2.5603	0.1676	20.1304	8.7474
365	BACK AND NECK PROCEDURES WITHOUT FUSION	127	0.8930	0.1343	9.3701	3.4906	15,630	0.8707	0.1332	7.9160	3.0305	2,549	1.1731	0.1341	11.5171	5.0690
367	SHOULDER ARTHROPLASTY						725	1.2648	0.1597	7.3917	3.1948	539	1.3603	0.1598	8.4026	3.8006
368	MAJOR HIP AND KNEE PROCEDURES	151	1.0072	0.1204	11.2781	2.5417	1,168	1.1369	0.1204	12.4392	3.6971	235	1.3462	0.1213	14.7362	5.5430
369	MAJOR LOWER EXTREMITY PROCEDURES	1,561	1.0136	0.1377	7.5003	2.8392	6,312	1.0328	0.1377	7.5074	3.0383	534	1.2037	0.1376	9.2378	4.2395
372	MAJOR UPPER EXTREMITY PROCEDURES	415	0.7475	0.1306	5.1373	1.5311	2,741	0.8157	0.1307	6.2824	1.9637	468	1.0180	0.1320	8.2564	3.5237
374	MINOR LOWER EXTREMITY PROCEDURES	2,288	0.7142	0.1288	4.1967	1.5343	12,666	0.7288	0.1289	4.2735	1.6476	1,312	0.7764	0.1290	4.7942	2.0361
375	MINOR UPPER EXTREMITY PROCEDURES	432	0.6436	0.1279	4.0833	1.3208	12,780	0.6586	0.1279	4.1318	1.4338	1,547	0.7079	0.1277	4.3413	1.8876
376	MISCELLANEOUS MUSCULOSKELETAL PROCEDURES	549	1.2202	0.1776	8.5483	3.3945	1,451	0.9787	0.1761	6.7140	2.2043	137	1.2404	0.1780	9.0438	3.7321
377	WOUND DEBRIDEMENT AND SKIN GRAFT FOR MUSCULOSKELETAL DISORDERS	509	1.1920	0.1514	20.6935	4.6477	2,426	1.7152	0.1534	27.9246	7.5114	613	2.2960	0.1562	36.9543	11.2897
378	SOFT TISSUE PROCEDURES (MNRH)	343	0.7929	0.1230	6.2741	2.0784	914	0.8326	0.1233	6.7298	2.4058	165	0.9738	0.1257	9.3212	3.6776
379	OTHER MUSCULOSKELETAL PROCEDURES (MNRH)	1,280	0.5926	0.1155	3.4414	1.5901	4,791	0.6057	0.1155	4.5640	1.7046	693	0.6717	0.1155	5.0447	2.1999
380	OTHER LOWER EXTREMITY PROCEDURES (MNRH)	1,401	0.5477	0.1331	4.0328	1.4096	9,744	0.5667	0.1332	4.0544	1.5173	1,347	0.5811	0.1333	4.0750	1.7192
381	HAND AND WRIST PROCEDURES (MNRH)	427	0.5709	0.1257	3.3513	1.2564	1,823	0.5718	0.1256	3.5288	1.2794	301	0.5687	0.1255	3.8538	1.3110
382	ARTHROSCOPY (MNRH)	34	0.4541	0.1315	4.0000	1.3000	210	0.5087	0.1302	5.8238	1.4838	46	0.7524	0.1271	8.2826	1.9957
383	JOINT REPLACEMENT FOR MALIGNANCY	16	4.2137	0.1460	30.7500	10.5000	386	4.2011	0.1433	35.8342	12.0326	198	4.3924	0.1443	35.9091	12.1495
384	BACK AND NECK PROCEDURES FOR MALIGNANCY	15	3.1468	0.1526	38.2667	11.3667	501	3.9191	0.1607	49.1756	15.0138	142	4.4632	0.1589	53.6620	16.6634
385	MAJOR ORTHOPAEDIC ONCOLOGY PROCEDURES	44	2.1807	0.1664	16.5227	5.4318	369	2.5086	0.1607	20.9404	7.2331	150	2.5472	0.1604	21.3600	7.4467
386	OTHER ORTHOPAEDIC ONCOLOGY PROCEDURES	68	1.5683	0.1431	15.0441	4.1941	514	1.7148	0.1433	18.9261	5.3471	186	1.9644	0.1438	23.7204	6.8613
391	SECONDARY NEOPLASMS AND PATHOLOGICAL FRACTURES	141	0.9508	0.1427	28.3830	6.1262	4,222	1.5077	0.1420	37.3302	9.9764	5,682	1.8458	0.1420	38.6853	12.1003
392	OSTEOMYELITIS	415	1.4079	0.1582	26.5060	8.0892	731	1.6851	0.1550	34.3174	9.7220	365	1.7134	0.1529	36.3726	10.0633
393	RHEUMATOID ARTHRITIS	264	0.6405	0.1125	23.2500	4.3197	1,729	1.0598	0.1135	28.0017	7.5883	1,023	1.3117	0.1144	31.1887	9.6085
394	SEPTIC ARTHRITIS	177	0.7885	0.1237	17.3559	4.7096	609	0.9677	0.1239	20.8670	6.2356	365	1.4220	0.1250	25.7425	9.4148
397	NON-INFLAMMATORY ARTHRITIS	21	0.7918	0.1206	22.3810	5.4476	827	0.7347	0.1218	20.5816	5.0243	2,433	1.0024	0.1215	24.0082	7.1174
398	OTHER INFLAMMATORY ARTHRITIS	1,207	0.6158	0.1202	15.5427	3.5180	4,523	0.9598	0.1222	20.5870	6.2111	2,409	1.0654	0.1218	21.2844	7.1348
399	ORTHOPAEDIC AFTERCARE	184	0.6046	0.1464	17.6793	3.7326	2,144	0.8201	0.1459	21.3717	5.0218	2,250	1.3385	0.1452	27.0289	8.6754
401	OTHER MUSCULOSKELETAL MALIGNANCIES	254	1.2461	0.1246	20.4606	4.8012	617	1.4460	0.1242	22.7455	6.5802	256	1.7288	0.1234	27.4766	8.7430
402	DISC DISEASE	48	0.5726	0.1243	16.4375	4.4688	6,273	0.6741	0.1245	17.4035	5.2864	3,615	1.0280	0.1242	22.7638	8.0375
404	OTHER MUSCULOSKELETAL INFECTIONS	19	0.5848	0.1558	18.6316	4.4105	111	0.6198	0.1558	18.2432	4.4450	28	0.7423	0.1558	18.2857	4.4714
407	OTHER MUSCULOSKELETAL DISORDERS	337	0.6010	0.1281	13.5964	3.3279	487	0.6360	0.1281	14.2485	3.5074	273	0.7079	0.1285	15.0513	3.8619
409	BACK PAIN (MNRH)	373	0.3220	0.1322	11.8016	2.1944	5,621	0.5046	0.1322	12.9520	3.6152	2,118	0.8244	0.1325	16.9736	5.8696
411	SIGNS, SYMPTOMS AND DEFORMITIES (MNRH)	533	0.4017	0.1360	11.9925	2.2492	3,108	0.5444	0.1358	12.6200	3.2571	1,734	0.8044	0.1357	15.4423	5.0484
413	JOINT DERANGEMENTS (MNRH)	112	0.4344	0.1334	9.6429	2.5214	887	0.4085	0.1333	10.0293	2.4039	489	0.6746	0.1332	12.2086	3.9869
414	SPRAINS STRAINS AND MINOR INJURIES (MNRH)	498	0.3791	0.1428	8.7028	2.1827	796	0.4710	0.1429	9.0729	2.7719	564	0.7428	0.1426	11.9610	4.6174
425	SKIN GRAFT AND WOUND DEBRIDEMENT FOR DERMATOLOGIC DIS EXCEPT ULCER OR CELLULITIS	266	1.0097	0.1450	14.0489	3.4090	2,548	1.0886	0.1478	15.9757	3.9827	1,145	1.1724	0.1490	17.5764	4.4459
427	SKIN GRAFT AND WOUND DEBRIDEMENT FOR SKIN ULCER OR CELLULITIS	78	2.1650	0.1516	50.8333	13.0667	1,708	2.8843	0.1564	61.6850	16.0094	773	2.9176	0.1584	63.2807	16.5604
428	BREAST PROCEDURES EXCEPT BIOPSY AND LOCAL EXCISION WITHOUT MALIGNANCY	595	0.7788	0.1433	4.0571	1.2197	16,318	0.8018	0.1434	4.1471	1.3511	296	0.8391	0.1434	4.3176	1.6105
429	TOTAL MASTECTOMY FOR BREAST MALIGNANCY	1	0.8428	0.1508	7.0000	2.3000	7,228	0.8551	0.1511	7.3517	2.4104	3,354	0.9112	0.1514	7.6729	2.8112
432	SUBTOTAL MASTECTOMY AND OTHER BREAST PROCEDURES FOR MALIGNANCY	1	0.7315	0.1310	4.0000	1.5000	8,059	0.7354	0.1310	4.2407	1.5446	2,902	0.7544	0.1310	4.4790	1.6943
434	BREAST BIOPSY AND LOCAL EXCISION WITHOUT MALIGNANCY	41	0.4618	0.1233	3.2927	1.2293	1,030	0.4616	0.1234	3.2427	1.2402	228	0.4655	0.1232	3.3246	1.2719
435	PERIANAL AND PILONIDAL CYST PROCEDURES	213	0.4595	0.1416	4.0845	1.6225	1,238	0.4600	0.1413	4.1575	1.6296	25	0.4716	0.1398	4.7200	1.7360
436	PLASTIC SURGERY	148	0.7477	0.1616	4.3311	1.4709	1,330	0.7531	0.1615	4.4113	1.4889	190	0.7569	0.1611	4.6526	1.5384
437	OTHER DERMATOLOGICAL PROCEDURES WITHOUT MALIGNANCY OR SKIN ULCER OR CELLULITIS	296	0.6100	0.1570	4.7432	1.5649	1,176	0.6164	0.1570	4.8971	1.5989	185	0.6580	0.1571	5.3730	1.7049
438	OTHER DERMATOLOGICAL PROCEDURES FOR MALIGNANCY OR SKIN ULCER OR CELLULITIS	241	0.8758	0.1384	14.8091	3.5490	2,225	0.9103	0.1391	16.7353	4.0788	650	0.9926	0.1396	18.8769	4.7349
439	SKIN ULCER	21	1.2329	0.1274	35.8571	8.8333	1,006	1.3438	0.1298	36.7753	9.5253	1,171	1.6674	0.1294	39.2084	11.8032
440	MAJOR SKIN DISORDERS	430	0.6644	0.1347	15.7047	3.9414	1,181	0.8749	0.1368	18.5216	5.4022	803	1.1896	0.1365	21.0399	7.4889

* Complexity Level 9 values are not adjusted and remain as published by CIHI for RIW2001

Appendix 2

RIW & ELOS 2001

Prospective Complexity Adjustment*

CMG	CMG Title	Age 0-17					Age 18-69					Age 70 +				
		Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS
443	MALIGNANT BREAST DISORDERS						1,801	1.4109	0.1375	32.9300	8.3279	1,067	1.3507	0.1380	31.5445	7.9226
446	NON-MALIGNANT BREAST DISORDERS						593	0.4649	0.1214	10.1551	2.7985	73	0.4665	0.1213	10.3836	2.9411
447	CELLULITIS	3,746	0.6354	0.1503	8.3545	3.0849	16,186	0.6679	0.1322	15.3835	4.6802	7,190	0.9752	0.1385	21.5007	6.8328
452	TRAUMA OF SKIN, SUBCUTANEOUS TISSUE AND BREAST	406	0.3751	0.1213	6.4680	1.4884	603	0.4229	0.1215	6.8375	1.8539	396	0.6260	0.1223	9.2348	3.2970
454	MINOR SKIN DISORDERS	1,290	0.4609	0.1370	10.1318	2.6295	2,041	0.5683	0.1371	11.4057	3.3170	939	0.7514	0.1372	13.6166	4.5789
476	ADRENAL AND PITUITARY PROCEDURES	93	2.3767	0.1534	18.3978	9.7581	1,218	1.7431	0.1508	12.5731	5.4380	136	1.9085	0.1562	15.6397	6.0787
477	PARATHYROID PROCEDURES	6	0.8736	0.1153	7.0000	2.1000	1,249	0.9226	0.1166	8.1073	2.4276	372	0.9103	0.1165	8.3011	2.4874
478	OBESITY PROCEDURES	15	1.1586	0.1633	17.4667	5.7267	3,049	1.1153	0.1647	9.1456	3.3950	36	1.3075	0.1632	18.4167	5.9694
479	THYROID PROCEDURES	149	0.8662	0.0743	4.2819	1.9644	9,145	0.8587	0.0755	4.5891	1.8487	863	0.9059	0.0770	5.2596	2.4487
480	THYROIDECTOMY PROCEDURES	307	0.5741	0.1234	4.0782	1.3313	361	0.5730	0.1234	4.0499	1.3199	16	0.5843	0.1233	4.2500	1.4000
482	OTHER ENDOCRINE, NUTRITION AND METABOLIC PROCEDURES	84	2.7810	0.1867	41.4762	10.7369	394	2.6644	0.1827	39.7107	10.3330	147	2.8732	0.1884	43.8980	11.6388
483	DIABETES	4,017	0.6591	0.1428	10.1914	3.2535	17,414	0.7706	0.1413	16.7213	4.8775	9,602	1.0802	0.1443	24.3079	7.2295
485	NUTRITIONAL AND MISCELLANEOUS METABOLIC DISORDERS	12,251	0.4922	0.1757	7.3854	2.1681	10,834	0.6376	0.1452	13.1791	3.8346	16,283	0.9342	0.1424	21.3663	6.1705
487	CYSTIC FIBROSIS	743	2.1726	0.1470	30.8856	11.3288	1,040	2.2324	0.1468	32.4038	11.5870	2	2.4311	0.1489	38.5000	12.5500
488	INBORN ERRORS OF METABOLISM	308	0.7597	0.1371	13.7175	3.8370	375	0.8256	0.1375	13.8933	3.9064	55	1.0281	0.1424	16.1636	4.5418
489	ENDOCRINE DISORDERS	439	0.6550	0.1067	14.8178	3.8597	3,130	0.6465	0.1060	13.2949	3.8933	1,382	1.0823	0.1098	20.3929	7.2204
500	KIDNEY TRANSPLANT	68	3.8049	0.2271	24.5882	10.5529	1,436	3.6418	0.2238	25.4645	10.8130	29	3.8383	0.2225	28.2414	11.7138
501	URINARY DIVERSION AND AUGMENTATION	64	3.2550	0.1975	27.2813	11.4672	884	3.5055	0.2023	31.5656	12.6671	680	3.7509	0.2052	35.9676	13.7226
502	RADICAL PROSTATECTOMY	1		0.1948	17.0000	7.3000	5,815	1.6037	0.1642	10.7531	5.2262	720	1.6434	0.1666	11.1986	5.3642
503	DIALYSIS PROCEDURES	56	1.3272	0.1215	23.4464	6.3732	2,634	1.6110	0.1247	34.8656	9.3986	1,521	1.9619	0.1271	45.7942	12.6048
504	MAJOR URINARY TRACT PROCEDURES	1,222	1.4352	0.1829	12.5311	4.9375	6,079	1.6409	0.1833	14.2974	6.0756	1,995	1.9724	0.1844	17.3729	7.7635
505	RECONSTRUCTIVE UROLOGICAL PROCEDURES	25	1.2756	0.1507	16.6400	6.5920	594	1.3725	0.1530	18.0084	6.0146	320	1.9053	0.1585	23.5031	9.4291
506	OPEN PROSTATECTOMY						507	1.1996	0.1479	16.8619	5.6497	566	1.2358	0.1459	17.4311	5.8799
507	VASCULAR AND OTHER URINARY PROCEDURES	23	1.4999	0.1434	29.3043	7.4696	972	1.4529	0.1477	25.4866	6.5277	575	1.6227	0.1455	32.6591	8.2273
508	MINOR UPPER URINARY TRACT PROCEDURES	552	1.2448	0.1684	14.6649	4.5187	4,893	1.3173	0.1699	16.3562	4.9668	1,758	1.7855	0.1739	22.2053	7.9505
509	MINOR LOWER URINARY TRACT PROCEDURES	216	0.8955	0.1379	11.7870	3.2639	1,710	0.8684	0.1378	11.1988	3.1741	1,837	0.9716	0.1376	12.8149	4.0764
510	TRANSURETHRAL PROSTATECTOMY						12,001	0.6732	0.1594	5.9694	2.4413	20,338	0.7460	0.1595	6.8532	2.9535
512	OTHER TRANSURETHRAL OR BIOPSY PROCEDURES (MNRH)	158	0.5652	0.1547	7.7152	1.9690	15,408	0.5669	0.1547	7.6590	2.0714	11,176	0.6208	0.1548	8.1377	2.4101
514	MISCELLANEOUS URINARY TRACT PROCEDURES (MNRH)	24	0.7707	0.1931	7.1250	2.3458	170	0.7756	0.1917	7.3824	2.4265	82	0.7707	0.1915	7.4390	2.4439
520	RENAL FAILURE WITH DIALYSIS	52	1.7875	0.1352	31.0962	9.6885	2,663	2.4178	0.1511	39.8306	12.4601	2,299	2.4630	0.1534	41.2745	12.9075
521	RENAL FAILURE WITHOUT DIALYSIS	178	0.8831	0.1457	19.9438	5.3208	4,951	1.0942	0.1484	23.5068	6.5788	7,550	1.3887	0.1490	26.2399	8.5900
522	URINARY NEOPLASM	136	0.6105	0.1364	19.3529	3.1206	2,317	0.9852	0.1372	23.5675	5.9950	4,592	1.2440	0.1375	26.8556	7.8691
524	NEPHROTIC SYNDROME	373	0.8016	0.1064	15.7239	4.3898	576	0.8876	0.1080	17.5347	5.2469	193	1.2466	0.1096	24.1347	8.9104
525	NEPHROPATHY WITHOUT NEPHROTIC SYNDROME	256	0.7183	0.1219	13.8320	3.7773	718	0.7788	0.1220	15.8245	4.2260	164	1.1635	0.1228	21.3659	6.9262
526	MISCELLANEOUS NEPHROLOGICAL DIAGNOSIS	37	0.7453	0.1362	16.9459	4.9135	358	0.8847	0.1365	17.2989	5.0729	145	0.9021	0.1352	18.1724	5.5048
527	UPPER URINARY TRACT INFECTION	2,221	0.5800	0.1476	10.5277	3.6461	7,798	0.5735	0.1476	10.8952	3.5714	1,940	0.8188	0.1477	13.2356	5.2000
529	LOWER URINARY TRACT INFECTION	4,942	0.7434	0.1531	8.5370	3.3093	7,053	0.6368	0.1492	12.2088	3.8732	10,806	0.9408	0.1477	18.3493	5.7958
532	URINARY RETENTION AND OTHER FUNCTIONAL DISORDERS OF BLADDER	123	0.4452	0.1433	12.8618	2.8041	1,555	0.5029	0.1433	13.1125	3.1895	2,053	0.6421	0.1432	14.6488	4.1925
534	MISCELLANEOUS UROLOGICAL DIAGNOSES (MNRH)	294	0.4656	0.1527	9.8571	2.2850	1,825	0.5733	0.1524	10.4318	2.9360	1,094	0.7347	0.1521	12.2468	3.9845
535	HEMATURIA (MNRH)	152	0.3818	0.1511	9.3947	2.0947	1,131	0.4898	0.1512	10.0327	2.8483	1,903	0.5990	0.1514	11.3558	3.5421
536	URINARY OBSTRUCTION (MNRH)	558	0.4516	0.1529	7.8154	2.3201	24,165	0.4078	0.1528	6.4663	2.0284	4,597	0.5597	0.1531	8.9258	3.0378
538	ADMISSION FOR DIALYSIS (MNRH)	19	0.1935	0.0384	3.0526	1.1053	1,566	0.1925	0.0382	3.1098	1.1068	1,333	0.1917	0.0381	3.0255	1.1022
550	MAJOR PELVIC AND RETROPERITONEUM PROCEDURES	1	2.0262	0.1709	10.0000	5.1000	67	2.3036	0.1709	19.7761	6.5358	4	2.0262	0.1709	10.0000	5.1000
551	PENIS PROCEDURES	959	0.7306	0.1360	5.0532	1.8637	930	0.7087	0.1359	4.9269	1.8265	140	0.8026	0.1365	6.5286	2.2707
552	TESTES PROCEDURES	695	0.5616	0.1476	4.3928	1.4878	1,646	0.5874	0.1476	5.6750	1.7669	1,012	0.6349	0.1479	8.0494	2.3369
554	MISCELLANEOUS MALE REPRODUCTIVE SYSTEM PROCEDURES (MNRH)	1,703	0.4314	0.1464	3.2267	1.1440	2,388	0.4560	0.1465	3.3488	1.3659	456	0.4828	0.1469	3.7039	1.5322
555	CIRCUMCISION (MNRH)	412	0.4445	0.0779	3.3714	1.2454	346	0.4449	0.0777	3.4942	1.2604	164	0.4443	0.0777	3.5488	1.2671
560	MALIGNANCY OF MALE REPRODUCTIVE ORGAN	11	1.0706	0.1988	14.0000	3.9000	166	1.0713	0.1988	14.0542	3.9000	17	1.0706	0.1988	14.0000	3.9000
561	MALE REPRODUCTIVE SYSTEM INFLAMMATION	270	0.3830	0.1457	9.4185	2.4263	1,332	0.5523	0.1455	10.8123	3.6524	413	0.7750	0.1450	12.5521	5.3099
562	OTHER MALE REPRODUCTIVE SYSTEM DIAGNOSES	37	0.3698	0.1357	7.1622	2.0811	187	0.4040	0.1354	8.2513	2.2920	39	0.3955	0.1348	9.1026	2.5308
563	MISCELLANEOUS MALE REPRODUCTIVE SYSTEM DIAGNOSES (MNRH)	145	0.3216	0.1456	3.1448	1.2290	105	0.3209	0.1456	3.2000	1.2400	33	0.3561	0.1456	4.0000	1.4000
575	PELVIC EXENTERATION						46	4.6856	0.2250	41.0000	16.3000	7	4.6856	0.2250	41.0000	16.3000
576	RADICAL HYSTERECTOMY AND VULVECTOMY	3	1.3284	0.1593	9.0000	4.6000	1,337	1.4176	0.1610	11.0658	5.0792	357	1.6249	0.1622	13.2045	6.3574
577	MAJOR GYNECOLOGICAL PROCEDURES FOR OVARIAN OR ADNEXAL MALIGNANCY	33	1.3412	0.1610	10.2424	4.8394	2,611	1.4780	0.1630	13.0594	5.6145	768	1.9417	0.1661	17.9818	8.0854
578	MAJOR GYNECOLOGICAL PROCEDURES FOR MALIGNANCY EXCEPT OVARIAN OR ADNEXAL	2	1.0069	0.1603	8.0000	3.6000	4,294	1.0474	0.1601	8.9744	3.9417	1,545	1.2372	0.1596	11.0686	5.1884

Appendix 2

RIW & ELOS 2001

Prospective Complexity Adjustment*

CMG	CMG Title	Age 0-17					Age 18-69					Age 70 +				
		Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS
579	MAJOR UTERINE AND ADNEXAL PROCEDURES WITHOUT MALIGNANCY	671	0.8435	0.1435	8.0939	2.9532	92,757	0.8917	0.1357	8.2315	3.3333	5,136	1.1166	0.1461	10.0927	4.4104
581	RECONSTRUCTIVE GYNECOLOGICAL PROCEDURES	18	0.8190	0.1254	8.2222	3.3778	16,917	0.8243	0.1255	8.2372	3.3489	4,709	0.8647	0.1256	8.4292	3.7403
582	OTHER GYNECOLOGICAL PROCEDURES	107	0.6702	0.1434	7.7383	2.9486	1,713	0.7946	0.1433	8.5949	3.6656	83	1.5019	0.1436	18.9880	9.5410
583	RADIO-IMPLANT FOR MALIGNANCY						783	0.5172	0.1034	7.6130	2.4801	231	0.5495	0.1034	8.5931	2.7680
584	VAGINA, CERVIX AND VULVA PROCEDURES	68	0.4493	0.1320	6.1618	1.3588	1,473	0.5329	0.1322	6.6701	2.0930	334	0.6326	0.1324	8.1856	2.7449
585	GYNECOLOGICAL LAPAROSCOPY (MNRH)	173	0.4827	0.1266	7.0462	2.1000	1,805	0.4852	0.1261	7.1086	2.1284	34	0.4902	0.1224	8.5000	2.3382
586	TUBAL INTERRUPTION (MNRH)						864	0.4387	0.1268	4.0278	1.3014					
587	MISCELLANEOUS GYNECOLOGICAL PROCEDURES (MNRH)	83	0.4524	0.1448	5.1084	1.8795	3,482	0.3774	0.1447	4.7895	1.5214	601	0.4785	0.1450	6.0300	2.2453
592	MALIGNANCY OF FEMALE REPRODUCTIVE ORGAN	11	0.7595	0.1274	15.9091	3.7727	2,194	0.9389	0.1298	22.7767	5.7745	1,357	1.3505	0.1304	26.5520	8.7212
594	FEMALE REPRODUCTIVE SYSTEM INFECTION	234	0.4437	0.1310	6.0000	2.8000	2,360	0.4980	0.1316	6.5568	3.2303	32	1.0698	0.1344	12.5938	6.1656
595	OTHER FEMALE REPRODUCTIVE SYSTEM DIAGNOSES AND INJURIES	131	0.3142	0.1410	7.0763	2.0366	1,114	0.3188	0.1410	7.1391	2.0829	38	0.3088	0.1409	7.2632	2.1263
596	MISCELLANEOUS GYNECOLOGICAL DIAGNOSES (MNRH)	558	0.3222	0.1387	6.2760	1.9787	5,746	0.3312	0.1387	6.4424	2.0249	308	0.4469	0.1387	8.0779	2.7198
650	TRACHEOSTOMY AND GASTROSTOMY PROCEDURES FOR TRAUMA	62	16.8503	0.2030	140.5161	46.7452	783	17.0583	0.2023	142.9119	47.7930	338	18.2565	0.2001	152.3491	51.2704
660	INTRACRANIAL PROCEDURES FOR TRAUMA	207	3.5400	0.2087	41.6232	12.9488	779	3.9611	0.2044	44.7599	13.6442	601	3.6342	0.2034	44.8486	13.5797
661	SPINAL PROCEDURES FOR TRAUMA	118	3.7063	0.1956	39.3051	13.0178	1,072	3.3182	0.1924	35.0000	11.3991	170	3.9606	0.1926	41.2000	13.6218
662	FEMUR OR PELVIC PROCEDURES FOR TRAUMA	1,539	1.5002	0.1400	22.5107	5.9274	5,833	1.8986	0.1402	27.9842	8.7167	20,845	2.4279	0.1406	33.2750	12.1739
663	THORACO-ABDOMINAL PROCEDURES FOR TRAUMA	303	2.0657	0.2125	19.8614	8.0683	1,691	2.2693	0.2143	21.1786	8.8572	207	4.0486	0.2286	34.1981	15.5647
664	WOUND DEBRIDEMENT AND SKIN GRAFT FOR TRAUMA	1,096	1.1760	0.1582	16.8741	4.3683	4,424	1.3984	0.1591	19.2755	5.7565	490	1.7948	0.1609	25.4714	8.6076
665	ELEVATED SKULL FRACTURES	76	1.3856	0.1539	12.6316	4.2118	122	1.3620	0.1559	13.6803	4.5541					
666	MAJOR LOWER EXTREMITY PROCEDURES FOR TRAUMA	2,176	0.7467	0.1490	6.9761	2.5564	21,762	0.8842	0.1492	7.7577	3.3707	3,340	1.2994	0.1501	12.8443	5.8863
667	MINOR LOWER EXTREMITY PROCEDURES FOR TRAUMA	135	0.7060	0.1466	7.2667	2.4541	569	0.7215	0.1462	7.8612	2.7757	56	1.1124	0.1453	10.3929	4.2732
668	MISCELLANEOUS MUSCULOSKELETAL PROCEDURES FOR TRAUMA	271	0.9177	0.1588	8.8930	2.9406	2,489	0.9357	0.1595	8.9984	3.1012	78	1.1526	0.1647	13.0000	5.8154
669	VASCULAR REPAIR FOR TRAUMA	109	0.8273	0.1386	7.2202	2.2532	622	0.8799	0.1405	8.5466	2.5868	32	0.9508	0.1512	10.4375	3.2563
670	UPPER EXTREMITY PROCEDURES FOR TRAUMA	5,563	0.5594	0.1428	6.2436	1.4647	9,382	0.6743	0.1431	7.2167	2.3254	2,703	0.8615	0.1440	9.8576	3.7050
680	FEMUR OR PELVIC FRACTURES AND DISLOCATIONS	930	1.2785	0.1339	33.4247	8.6701	2,282	1.1594	0.1341	33.7555	7.8591	8,066	1.6347	0.1342	38.5945	11.1814
681	FROSTBITE	9	1.0756	0.1546	23.0000	6.1222	89	1.1097	0.1546	23.3596	6.3157	13	1.0788	0.1546	23.4615	6.1615
682	SPINAL INJURIES	378	0.5551	0.1460	16.1111	3.1921	3,545	0.8382	0.1458	18.6567	5.1229	2,620	1.5552	0.1451	26.5511	9.6995
683	INTRACRANIAL INJURIES	791	0.8886	0.1799	16.3186	3.8277	2,202	1.3028	0.1802	21.2380	5.9435	1,428	1.8863	0.1805	25.1134	8.6796
684	FRACTURE OF HUMERUS	103	0.3584	0.1290	21.2816	2.1845	608	0.7166	0.1296	25.8289	4.9729	1,443	1.2929	0.1302	32.0097	9.0611
685	HIP AND THIGH INJURIES	61	0.3325	0.1436	14.4590	2.4180	366	0.5243	0.1438	17.4372	3.7779	1,242	0.9189	0.1432	20.2045	6.2942
686	MAJOR NERVE INJURIES	15	1.0085	0.1193	16.0000	3.8000	97	1.0102	0.1193	16.9072	4.1979	11	1.2335	0.1193	20.0000	5.5000
687	THORACO-ABDOMINAL INJURIES	939	0.8650	0.1771	13.4058	4.3486	5,292	0.8771	0.1775	14.1625	4.4055	2,443	1.3344	0.1786	18.3340	6.9083
688	WEIGHT BEARING INJURIES	1,618	0.3660	0.1189	7.3115	1.7723	4,258	0.5370	0.1193	10.2461	3.2236	2,107	0.9989	0.1201	16.5225	6.4577
689	GENITO-URINARY INJURIES	277	0.4616	0.1933	7.7220	2.5025	515	0.5182	0.1929	8.6427	2.7536	104	0.5782	0.1901	11.0096	3.4635
690	CRUSHING INJURIES AND CONTUSIONS	439	0.3153	0.1399	8.4806	1.6349	2,140	0.4108	0.1402	8.9117	2.2565	1,479	0.7688	0.1410	12.3644	4.5686
691	MINOR LOWER EXTREMITY FRACTURES	50	0.4396	0.1475	7.6200	2.0660	199	0.4476	0.1475	8.0905	2.1920	28	0.6102	0.1475	10.3214	2.7893
692	WOUNDS	1,382	0.4156	0.1605	3.4233	1.4744	4,356	0.4611	0.1609	4.1329	1.6919	723	0.7094	0.1618	8.0747	2.7021
693	AMPUTATIONS OR VASCULAR AND OTHER NERVE INJURIES	133	0.4759	0.1237	3.1278	1.3436	890	0.5013	0.1238	3.9933	1.7245	88	0.7027	0.1239	7.6705	3.6841
694	FACIAL INJURIES	488	0.4476	0.1502	3.4283	1.5838	1,918	0.4809	0.1502	3.6486	1.7306	215	0.7841	0.1504	7.6047	3.2200
695	OTHER CRANIAL INJURIES	5,969	0.3054	0.1636	3.6353	1.2330	5,535	0.3967	0.1636	4.7868	1.8786	1,749	0.6659	0.1636	8.7210	3.2090
696	UPPER EXTREMITY FRACTURES	4,178	0.3784	0.1500	3.1072	1.1266	3,814	0.4762	0.1500	5.2997	1.8312	1,815	0.6494	0.1499	7.7074	2.9586
700	BONE MARROW TRANSPLANT	318	9.4315	0.2309	69.9874	35.0994	1,829	8.0447	0.2485	61.3685	26.3823	3	9.3769	0.2902	63.0000	28.6000
701	SPLENECTOMY	129	1.1430	0.1584	11.7287	3.8264	748	1.4126	0.1596	15.1965	5.6082	144	2.2626	0.1643	23.3681	10.6222
703	OTHER O.R. PROCEDURES OF BLOOD AND BLOOD-FORMING ORGANS	402	1.0510	0.1559	12.8806	3.6284	909	1.1704	0.1586	14.4774	4.1565	188	1.8035	0.1736	21.5638	6.5957
704	RED BLOOD CELL DISORDERS	2,355	0.7275	0.1639	11.5117	3.4807	7,497	0.6856	0.1260	14.6499	4.1808	10,660	0.8249	0.1441	19.9008	5.3335
709	COAGULATION DISORDERS	1,816	0.4654	0.1390	9.0887	2.4330	1,848	0.7130	0.1395	12.3490	4.1086	1,048	0.8528	0.1401	15.7548	5.2990
710	RETICULOENDOTHELIAL AND IMMUNITY DISORDERS	3,958	0.8434	0.1472	15.7564	4.5818	5,745	0.9314	0.1460	16.8421	5.1577	1,916	0.9998	0.1459	17.0825	5.7393
725	MAJOR LEUKEMIA AND LYMPHOMA PROCEDURES	96	2.6662	0.1954	43.7188	12.5063	2,457	2.0163	0.1879	31.4302	8.6063	1,017	2.3261	0.1871	36.5113	10.2989
726	ACUTE LEUKEMIA WITHOUT MAJOR PROCEDURES	1,278	2.4632	0.1637	39.5008	10.3290	3,636	4.0794	0.1744	54.2797	17.2284	1,449	2.9213	0.1661	44.1877	12.5354
728	LYMPHOMA AND CHRONIC LEUKEMIA WITH OTHER PROCEDURES	155	1.7003	0.1492	29.7484	7.7168	2,781	1.9486	0.1505	33.6419	9.0349	1,216	2.0758	0.1524	36.9655	10.0370
730	LYMPHOMA AND CHRONIC LEUKEMIA	347	1.1911	0.1442	25.5504	5.7043	9,451	1.4258	0.1445	28.0390	7.9425	7,049	1.5815	0.1450	30.0020	8.9561
733	MAJOR ILL-DEFINED NEOPLASM PROCEDURES	50	2.5267	0.1905	32.4400	10.3520	909	2.3177	0.1874	29.0737	9.2285	433	2.5110	0.1897	32.0462	10.2115
734	ILL-DEFINED NEOPLASM WITH OTHER PROCEDURES	75	1.4252	0.1614	22.0800	6.2893	819	1.2724	0.1612	21.3993	6.0245	433	1.4531	0.1590	26.6259	7.7822
735	RADIATION THERAPY	37	0.4699	0.0427	6.5405	2.6351	1,985	0.4955	0.0442	9.2469	3.2951	632	0.6489	0.0470	16.2943	6.2324
736	CHEMOTHERAPY	4,146	0.7833	0.1803	10.2557	3.2917	8,574	0.7113	0.1801	10.4193	2.9419	1,808	0.6582	0.1802	9.3927	2.6258
737	OTHER POORLY DIFFERENTIATED NEOPLASTIC DIAGNOSES	158	0.6103	0.1516	22.6772	3.4785	2,427	1.1900	0.1530	26.3004	7.2867	2,128	1.4104	0.1525	27.6419	8.6673
750	MULTISYSTEMIC OR UNSPECIFIED SITE INFECTIONS WITH SURGERY	402	2.8576	0.1913	39.4104	11.7149	4,445	3.0555	0.2033	47.7798	13.8548	1,804	4.6111	0.2224	62.7938	20.2627
751	SEPTICEMIA	2,384	0.8656	0.1646	17.4702	4.1653	6,822	1.5153	0.1697	24.8555	7.6790	8,941	1.6953	0.1692	25.4219	8.9538
756	POST-OPERATIVE AND POST-TRAUMATIC INFECTIONS	685	0.6505	0.1476	13.0774	4.2137	6,555	0.7355								

Appendix 2

RIW & ELOS 2001

Prospective Complexity Adjustment*

CMG	CMG Title	Age 0-17					Age 18-69					Age 70 +				
		Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS	Cases	RIW	Blended Out PDW	Trim	ELOS
757	VIRAL ILLNESS	6,900	0.4707	0.1493	7.2446	2.4479	3,590	0.5500	0.1499	7.3014	2.9650	1,172	0.7363	0.1499	9.2602	4.0372
761	FEVER OF UNKNOWN ORIGIN	4,059	0.4299	0.1469	8.5932	2.1761	2,571	0.6776	0.1471	11.9043	3.8409	1,441	0.7441	0.1471	12.3983	4.2523
763	OTHER INFECTIOUS DIAGNOSES	862	0.5895	0.1420	12.7796	3.4516	1,757	0.9071	0.1426	17.3865	5.4306	849	1.2265	0.1432	21.7809	7.6963
803	EXTENSIVE PROCEDURES FOR INJURY OR COMPLICATION OF TREATMENT	202	3.1145	0.1814	35.3861	13.1302	3,234	2.6920	0.1825	35.0229	11.2073	2,242	3.1504	0.1831	38.2935	13.3957
804	NON-EXTENSIVE PROCEDURES FOR INJURY OR COMPLICATION OF TREATMENT	1,298	0.7993	0.1593	12.1356	2.7326	8,557	1.0357	0.1598	15.2816	4.1126	3,848	1.0879	0.1602	16.2716	4.4784
805	MNRH PROCEDURES FOR INJURY OR COMPLICATION OF TREATMENT	530	0.4661	0.1353	5.5453	1.2489	1,330	0.6052	0.1358	7.2180	2.3293	293	0.7480	0.1364	9.1160	3.1635
811	ALLERGIC REACTION	584	0.3358	0.1479	4.5445	1.6423	1,306	0.3383	0.1478	4.7335	1.6832	373	0.3638	0.1474	5.1850	1.8121
813	DRUG REACTIONS	5,505	0.3946	0.1873	4.1128	1.4346	21,743	0.4899	0.1890	5.0653	1.8911	3,348	0.8959	0.1637	16.3680	4.8332
818	COMPLICATIONS OF TREATMENT	1,929	0.4824	0.1491	10.9108	2.5259	11,653	0.6870	0.1494	13.5924	3.7875	4,522	0.7854	0.1495	14.1482	4.4299
823	MINOR INJURIES AND TRAUMA DIAGNOSIS	1,074	0.4624	0.1356	6.7011	2.0118	2,670	0.4899	0.1356	7.5337	2.1811	1,077	0.8333	0.1381	10.6045	4.1901
830	EXTENSIVE BURNS WITH SKIN GRAFT WOUND DEBRIDEMENT OR OTHER BURN PROCEDURES	32	13.9817	0.3407	103.4063	36.7188	220	16.3044	0.3388	127.8045	43.8895	26	16.5277	0.3445	133.6154	47.3615
831	EXTENSIVE BURNS WITHOUT BURN PROCEDURES	24	1.9449	0.3679	28.0000	5.7000	104	1.9449	0.3679	28.0000	5.7000	27	1.9449	0.3679	28.0000	5.7000
832	NON-EXTENSIVE BURNS WITH SKIN GRAFT	194	2.6690	0.1674	38.3660	13.9747	707	2.7544	0.1708	39.0509	13.2941	117	4.5439	0.1901	56.7863	24.0410
833	NON-EXTENSIVE BURNS WITH WOUND DEBRIDEMENT OR OTHER BURN PROCEDURES	141	1.2296	0.1498	30.9716	7.4064	131	1.2690	0.1498	33.1603	7.9542	16	1.5635	0.1498	62.8125	14.5688
834	NON-EXTENSIVE BURNS WITHOUT BURN PROCEDURES	818	0.7637	0.1674	13.2897	4.0691	1,272	0.7693	0.1679	13.8514	4.2501	187	1.6172	0.1710	21.9144	9.0882
840	OTHER ADMISSIONS WITH SURGERY	782	0.8164	0.1416	15.4910	4.7302	2,902	1.3907	0.1495	32.6902	8.6997	2,468	3.6950	0.0979	95.2107	28.4662
841	REHABILITATION	79	3.3538	0.1781	51.3797	14.6772	3,663	3.2123	0.1174	70.6994	19.0247	6,493	4.0354	0.1089	87.7637	28.0599
842	SIGNS AND SYMPTOMS	459	0.3918	0.1269	18.5904	2.4161	3,196	0.7365	0.1270	22.0970	4.9127	5,707	1.0348	0.1271	25.1757	7.0806
846	AFTERCARE FOLLOWING SURGERY OR TREATMENT	308	0.3990	0.1597	4.9286	1.4503	1,548	0.4383	0.1596	5.6751	1.8348	1,296	0.4863	0.1594	7.4259	2.3192
847	OTHER SPECIFIED AFTERCARE	101	0.4015	0.1678	28.8218	2.5347	7,959	1.6692	0.1676	37.1765	9.5788	8,610	2.0089	0.1673	39.6274	11.3476
849	MULTIPLE OR UNSPECIFIED CONGENITAL ANOMALIES	57	0.6476	0.1486	13.0000	3.7000	19	0.6476	0.1486	13.0000	3.7000	1	0.6476	0.1486	13.0000	3.7000
850	PERINATAL CONDITIONS AGE >28 DAYS	1,244	3.0980	0.1488	47.2050	9.3215	6	2.8915	0.1413	47.0000	8.6000	1	2.6140	0.1494	47.0000	8.6000
851	OTHER FACTORS CAUSING HOSPITALIZATION	1,667	0.3867	0.1186	14.4865	2.6513	7,875	0.5293	0.1183	18.9514	4.1293	11,538	1.2181	0.1176	28.9367	8.6756
852	PROCEDURES CANCELLED (MNRH)	863	0.1584	0.0999	3.0000	1.0219	5,236	0.1502	0.0982	3.0000	1.0099	1,849	0.1531	0.0990	3.0000	1.0153
880	AMPUTATION OF LOWER LIMB EXCEPT TOE WITH MAJOR VASCULAR SURGERY						328	8.3465	0.1388	117.5244	35.4799	362	8.6957	0.1372	123.5028	37.0251
881	AMPUTATION OF LOWER LIMB EXCEPT TOE	1	2.3395	0.1349	42.0000	12.2000	1,899	3.7423	0.1384	65.9810	20.0829	2,878	3.5258	0.1381	63.9013	19.4030
882	WOUND DEBRIDEMENT OR OTHER AMPUTATION WITH MAJOR VASCULAR SURGERY						395	4.8084	0.1503	54.5241	17.7008	388	4.9333	0.1503	56.7758	18.3168
883	WOUND DEBRIDEMENT AND GRAFTING OTHER THAN HAND	16	2.2240	0.1475	44.3750	11.8500	1,245	2.4561	0.1508	48.4337	13.3718	693	2.5233	0.1524	51.6017	14.3580
884	OTHER AMPUTATIONS INCLUDING TOE	3	1.1718	0.1305	24.0000	6.5000	916	1.6919	0.1430	31.3013	8.8481	748	1.6552	0.1431	31.3436	8.9174
885	AORTIC REPLACEMENT	37	2.9508	0.2530	18.7297	7.4027	2,771	3.2472	0.2536	20.7283	9.0318	3,874	3.9767	0.2193	27.1438	11.2239
887	VASCULAR BYPASS SURGERY	5	2.1491	0.1701	17.8000	6.8000	4,706	2.2688	0.1733	20.8451	7.6423	4,221	2.5234	0.1751	23.5826	9.1630
890	OTHER THORACO-ABDOMINAL PROCEDURES	14	1.5603	0.2057	25.7143	5.1286	566	2.4434	0.2065	30.0247	9.3357	557	3.2365	0.2085	36.5153	12.8759
891	VASCULAR REPAIR	53	1.8953	0.1857	20.3585	6.5925	1,727	1.9205	0.1859	20.2397	6.5545	1,961	1.9974	0.1876	21.5798	6.9415
892	OTHER VASCULAR PROCEDURES	120	0.6756	0.1300	5.3083	1.6575	1,623	0.8230	0.1383	8.0511	2.1990	971	0.8898	0.1421	9.5252	2.5046
893	VEIN LIGATION AND STRIPPING (MNRH)	7	0.5406	0.0948	3.0000	1.2000	3,609	0.5422	0.0948	3.1236	1.2190	287	0.5440	0.0948	3.3206	1.2502
895	DEEP VEIN THROMBOPHLEBITIS	98	0.7469	0.1292	18.6633	5.5245	7,649	0.8449	0.1292	19.2471	6.1505	5,757	0.9746	0.1294	21.0879	7.2616
898	PERIPHERAL VASCULAR DISEASE	280	0.4495	0.1432	12.2607	1.8389	3,598	0.7915	0.1443	16.2310	4.1696	4,659	0.9149	0.1448	18.4542	5.2106
900	EXTENSIVE UNRELATED O.R. PROCEDURES	211	2.9540	0.1610	44.3791	12.0569	1,782	3.7170	0.1639	56.1409	16.3420	2,265	5.3259	0.1674	69.8494	23.3298
901	NON-EXTENSIVE UNRELATED O.R. PROCEDURES	822	1.6190	0.1561	31.4489	7.8962	6,438	1.9917	0.1594	36.6193	9.6976	4,040	3.5348	0.1676	52.2869	16.8815
902	POST-OPERATIVE COMPLICATIONS WITH UNRELATED O.R. PROCEDURES	261	0.9859	0.1696	11.5096	2.8954	797	1.6155	0.1772	19.0489	6.1227	695	2.8547	0.1915	32.1986	12.5599
906	UNRELATED O.R. PROCEDURES (MNRH)	533	0.8397	0.1404	23.9418	3.4681	1,438	1.3437	0.1408	30.2942	6.9044	1,236	2.1853	0.1417	39.1861	12.3972
908	OTHER MAJOR PROCEDURES FOR GYNECOLOGICAL MALIGNANCY						115	1.1457	0.1493	10.6435	3.4652	28	1.1383	0.1493	14.3929	3.8321