

# **British Columbia Ministry of Health Services and the General Practice Services Committee**

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## **Evaluation of the Full Service Family Practice Incentive Program and the Practice Support Program**

### **Final Report on the Chronic Disease Management Payment Incentives**

**Prepared by**

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## 1. INTRODUCTION

The General Practice Services Committee (GPSC) has contracted with Hollander Analytical Services Ltd. to conduct an evaluation of incentive payments instituted under the Full Service Family Practice Incentive Program (FSFPIP). As part of the project to evaluate the FSFPIP, a range of analyses have been conducted on administrative health data.

This report presents data on the Chronic Disease Management Incentives for Diabetes, CHF and Hypertension. The Hypertension fee incentive has only been in place for two years. Thus, it is not possible to do longitudinal analysis on this incentive. This report focuses primarily on a longitudinal analysis of diabetes and CHF from fiscal 2002/03 to fiscal 2007/08.

It should be noted that in this report we focus on people with somewhat higher care needs. Thus, the analyses in this report typically focus on people with a RUB level of 3 or higher. In addition, it is recognized that there may be some false positives, or very low care needs diabetics, on the diabetes registry. Thus, in order to ensure that our analysis is based on active patients, who need at least a modest amount of service, we have limited the patients in the analysis to those who have had at least five services in a given year. We have shaded the areas which represent what we have selected for our analyses. As can be seen, they represent by far, the majority of patients for each group.

**Table 1: Patients with Diabetes, CHF and Hypertension for April 2007 to March 2008**

	Number of Patients	Number of Patients						% of Patients					
		Resource Utilization Band						Resource Utilization Band					
		0	1	2	3	4	5	0	1	2	3	4	5
<b>ALL DIABETICS</b>	282,187	3,461	2,029	34,571	168,372	44,991	28,763	100.0	100.0	100.0	100.0	100.0	100.0
<b>GP Services</b>													
<b>0</b>	322	86	4	83	122	17	10	2.5	0.2	0.2	0.1	0.0	0.0
<b>01</b>	7,884	435	1,191	4,188	1,854	145	71	12.6	58.7	12.1	1.1	0.3	0.2
<b>02</b>	10,325	372	414	4,758	4,430	251	100	10.7	20.4	13.8	2.6	0.6	0.3
<b>03</b>	13,627	364	200	5,098	7,381	456	128	10.5	9.9	14.7	4.4	1.0	0.4
<b>04</b>	16,433	323	106	4,905	10,317	617	165	9.3	5.2	14.2	6.1	1.4	0.6
<b>05</b>	19,453	293	49	4,785	13,175	938	213	8.5	2.4	13.8	7.8	2.1	0.7
<b>06</b>	19,670	235	25	3,684	14,209	1,254	263	6.8	1.2	10.7	8.4	2.8	0.9
<b>07</b>	18,386	187	13	2,420	14,005	1,408	353	5.4	0.6	7.0	8.3	3.1	1.2
<b>08</b>	16,799	151	8	1,590	13,073	1,586	391	4.4	0.4	4.6	7.8	3.5	1.4
<b>09</b>	15,272	128	5	1,018	11,874	1,763	484	3.7	0.2	2.9	7.1	3.9	1.7
<b>10 or More</b>	144,016	887	14	2,042	77,932	36,556	26,585	25.6	0.7	5.9	46.3	81.3	92.4
<b>PATIENTS WITH DIABETES ONLY</b>	165,302	2,521	1,751	30,080	109,090	15,908	5,952	100.0	100.0	100.0	100.0	100.0	100.0
<b>GP Services</b>													
<b>0</b>	222	64	4	66	76	10	2	2.5	0.2	0.2	0.1	0.1	0.0
<b>01</b>	6,495	358	1,041	3,646	1,361	72	17	14.2	59.5	12.1	1.2	0.5	0.3
<b>02</b>	8,521	317	364	4,138	3,524	141	37	12.6	20.8	13.8	3.2	0.9	0.6
<b>03</b>	11,233	323	167	4,442	6,001	259	41	12.8	9.5	14.8	5.5	1.6	0.7
<b>04</b>	13,417	264	87	4,330	8,306	367	63	10.5	5.0	14.4	7.6	2.3	1.1
<b>05</b>	15,627	242	37	4,256	10,480	530	82	9.6	2.1	14.1	9.6	3.3	1.4
<b>06</b>	15,415	187	20	3,234	11,159	709	106	7.4	1.1	10.8	10.2	4.5	1.8
<b>07</b>	13,987	137	11	2,125	10,792	776	146	5.4	0.6	7.1	9.9	4.9	2.5
<b>08</b>	12,231	115	7	1,386	9,746	839	138	4.6	0.4	4.6	8.9	5.3	2.3
<b>09</b>	10,712	98	1	889	8,633	921	170	3.9	0.1	3.0	7.9	5.8	2.9
<b>10 or More</b>	57,442	416	12	1,568	39,012	11,284	5,150	16.5	0.7	5.2	35.8	70.9	86.5

**Table 1 (cont'd)**

	Number of Patients	Number of Patients						% of Patients					
		Resource Utilization Band						Resource Utilization Band					
		0	1	2	3	4	5	0	1	2	3	4	5
<b>CHF</b>	83,792	632	252	2,390	34,144	23,060	23,314	100.0	100.0	100.0	100.0	100.0	100.0
<b>GP Services</b>													
<b>0</b>	71	18	.	4	37	8	4	2.8	.	0.2	0.1	0.0	0.0
<b>01</b>	1,237	62	133	383	526	69	64	9.8	52.8	16.0	1.5	0.3	0.3
<b>02</b>	1,482	32	48	359	841	128	74	5.1	19.0	15.0	2.5	0.6	0.3
<b>03</b>	1,875	29	38	328	1,180	221	79	4.6	15.1	13.7	3.5	1.0	0.3
<b>04</b>	2,292	34	8	320	1,545	280	105	5.4	3.2	13.4	4.5	1.2	0.5
<b>05</b>	2,559	29	7	255	1,752	387	129	4.6	2.8	10.7	5.1	1.7	0.6
<b>06</b>	2,642	26	3	183	1,772	489	169	4.1	1.2	7.7	5.2	2.1	0.7
<b>07</b>	2,751	23	4	126	1,856	546	196	3.6	1.6	5.3	5.4	2.4	0.8
<b>08</b>	2,695	13	.	92	1,757	603	230	2.1	.	3.8	5.1	2.6	1.0
<b>09</b>	2,745	21	3	71	1,726	660	264	3.3	1.2	3.0	5.1	2.9	1.1
<b>10 or More</b>	63,443	345	8	269	21,152	19,669	22,000	54.6	3.2	11.3	61.9	85.3	94.4
<b>HYPERTENSION</b>	520,269	5,635	7,219	80,377	332,307	65,564	29,167	100.0	100.0	100.0	100.0	100.0	100.0
<b>GP Services</b>													
<b>0</b>	396	141	10	70	154	12	9	2.5	0.1	0.1	0.0	0.0	0.0
<b>01</b>	20,775	817	4,048	11,524	4,152	181	53	14.5	56.1	14.3	1.2	0.3	0.2
<b>02</b>	29,006	762	1,634	13,982	12,122	439	67	13.5	22.6	17.4	3.6	0.7	0.2
<b>03</b>	36,775	655	762	13,714	20,717	807	120	11.6	10.6	17.1	6.2	1.2	0.4
<b>04</b>	43,603	578	376	12,362	28,610	1,449	228	10.3	5.2	15.4	8.6	2.2	0.8
<b>05</b>	46,625	519	185	10,289	33,138	2,171	323	9.2	2.6	12.8	10.0	3.3	1.1
<b>06</b>	44,884	377	81	6,837	34,193	2,954	442	6.7	1.1	8.5	10.3	4.5	1.5
<b>07</b>	41,066	316	47	4,314	32,419	3,369	601	5.6	0.7	5.4	9.8	5.1	2.1
<b>08</b>	36,262	239	27	2,639	28,961	3,646	750	4.2	0.4	3.3	8.7	5.6	2.6
<b>09</b>	30,805	196	13	1,567	24,156	3,959	914	3.5	0.2	1.9	7.3	6.0	3.1
<b>10 or More</b>	190,072	1,035	36	3,079	113,685	46,577	25,660	18.4	0.5	3.8	34.2	71.0	88.0

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

## 2. YEAR OVER YEAR COMPARISONS

This section presents data on a year by year basis, that is, each year is separate and the data only pertain to the year in question. In this analysis we excluded:

- People who died in the year.
- People with hospital costs greater than \$100,000.
- People with billings for more than 25 payees.
- People with less than five GP services in the year.
- People who were in a long term care facility at the end of the 2006/07 fiscal year.

Table 2 presents the number of patients for each cell in the analysis to be included in this chapter. Table 3 presents data for all diabetics who met our inclusion criteria, while Table 4 does the same for people who only had diabetes (i.e., did not have CHF or any of the conditions for complex care). Table 5 presents a comparison of A1C tests for persons for whom an incentive was billed versus those for whom an incentive was not billed. Tables 6 and 7 present comparable data to that presented in Tables 3 and 4 but for CHF and hypertension patients.

The overall findings seem to indicate that the use of incentives appears to increase costs for the people with low to moderate care needs (i.e., RUB 3). The pattern, however, seems to change for RUBs four and five. This change appears to be the result of people having higher care needs and greater hospital costs. Thus, for example, for RUB 5, as with the other RUBs, there is an increase in medical costs (in large part due to billing the incentive payments) and drug costs. While hospital costs do appear to decrease across RUBs, the decrease for the higher RUBs is sufficient to counteract the increases in medical costs and drug costs, or, in the case of RUB 5, to actually reduce overall costs for patients who received incentives based care versus those who did not receive such care.

It is interesting to note that the cost differential between patients who did, and did not, receive guidelines based care is greater for CHF than diabetes patients. In general, analysis to date indicates that the cost differential between the two groups is greater as the level of care need increases.

**Table 2: Number of Patients by Various Groups by Year**

	Number of Patients					
	Year					
	200203	200304	200405	200506	200607	200708
<b>RUB 3</b>						
<b>Diabetes</b>	94,042	104,107	113,705	124,036	133,666	140,727
<b>Diabetes Only</b>	70,483	76,722	82,763	89,438	95,702	88,327
<b>CHF</b>	20,733	22,864	24,419	25,648	27,274	26,568
<b>Hypertension</b>	-	-	-	-	257,801	261,827
<b>RUB 4</b>						
<b>Diabetes</b>	22,732	25,246	27,454	30,438	32,734	40,678
<b>Diabetes Only</b>	11,595	12,712	13,531	14,932	16,013	14,222
<b>CHF</b>	12,593	14,201	14,866	15,890	16,144	18,794
<b>Hypertension</b>	-	-	-	-	53,837	59,686
<b>RUB 5</b>						
<b>Diabetes</b>	11,230	12,623	13,988	15,929	17,294	22,684
<b>Diabetes Only</b>	3,785	4,190	4,489	5,045	5,392	4,694
<b>CHF</b>	9,611	10,699	11,501	12,525	12,843	16,390
<b>Hypertension</b>	-	-	-	-	19,715	24,770

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 3: Average Annual Cost Summaries by Year For Patients with Diabetes (With or Without Other Conditions)**

Cost Components	Diabetes Incentive										
	No						Yes				
	Year						Year				
	200203	200304	200405	200506	200607	200708	200304	200405	200506	200607	200708
<b>RUB 3</b>											
Average GP Amount	366	362	359	353	353	417	435	427	420	461	607
Average MSP Amount* (includes GP Amount)	1,002	999	972	971	973	1,009	1,099	1,047	1,061	1,094	1,192
Average Pharmacare Costs	860	739	796	809	806	757	861	910	920	955	907
Average Hospital Costs	598	607	607	612	582	543	504	485	489	461	423
Average Total Costs	2,460	2,345	2,375	2,391	2,361	2,309	2,465	2,443	2,469	2,510	2,522
<b>RUB 4</b>											
Average GP Amount	631	640	627	612	613	755	726	701	682	716	1,009
Average MSP Amount* (includes GP Amount)	2,118	2,121	2,035	2,035	2,030	2,127	2,226	2,124	2,100	2,146	2,292
Average Pharmacare Costs	1,453	1,290	1,375	1,407	1,425	1,410	1,461	1,541	1,617	1,634	1,621
Average Hospital Costs	3,651	3,633	3,446	3,329	3,191	3,108	3,225	2,956	2,971	2,901	2,334
Average Total Costs	7,242	7,044	6,856	6,773	6,647	6,646	6,912	6,621	6,689	6,681	6,247
<b>RUB 5</b>											
Average GP Amount	999	1,061	1,025	1,020	1,025	1,216	1,131	1,083	1,057	1,114	1,463
Average MSP Amount* (includes GP Amount)	4,048	4,091	3,998	4,042	4,023	4,024	4,096	3,882	3,882	3,889	3,997
Average Pharmacare Costs	1,996	1,805	1,966	2,032	2,047	2,038	2,082	2,093	2,259	2,252	2,172
Average Hospital Costs	13,688	14,012	13,798	13,585	13,323	13,511	12,298	11,635	11,047	11,573	10,698
Average Total Costs	19,732	19,907	19,862	19,659	19,394	19,573	18,475	17,609	17,189	17,714	16,867

\*MSP Amount is the total of costs for GPs, Specialists and Diagnostic Services.

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.



**Table 4: Average Annual Cost Summaries by Year For Patients with Diabetes Only**

Cost Components	Diabetes Incentive										
	No						Yes				
	Year						Year				
	200203	200304	200405	200506	200607	200708	200304	200405	200506	200607	200708
<b>RUB 3</b>											
Average GP Amount	348	342	341	335	333	341	414	406	401	442	439
Average MSP Amount* (includes GP Amount)	920	911	889	888	887	869	1,009	968	976	1,013	960
Average Pharmacare Costs	675	577	615	620	606	537	694	715	723	744	640
Average Hospital Costs	476	478	490	497	474	480	384	383	388	388	367
Average Total Costs	2,071	1,966	1,995	2,015	1,968	1,886	2,086	2,066	2,087	2,146	1,967
<b>RUB 4</b>											
Average GP Amount	580	591	575	565	566	586	660	646	629	669	662
Average MSP Amount* (includes GP Amount)	1,855	1,856	1,793	1,795	1,787	1,821	1,942	1,882	1,841	1,929	1,887
Average Pharmacare Costs	1,068	925	1,005	991	998	926	1,052	1,145	1,179	1,243	1,121
Average Hospital Costs	2,663	2,737	2,674	2,601	2,422	2,734	2,399	2,146	2,147	2,280	2,246
Average Total Costs	5,586	5,518	5,471	5,388	5,207	5,480	5,394	5,173	5,168	5,452	5,254
<b>RUB 5</b>											
Average GP Amount	880	923	881	867	863	889	946	924	886	948	1,003
Average MSP Amount* (includes GP Amount)	3,136	3,248	3,089	3,133	3,112	3,119	3,143	3,025	3,054	3,151	3,068
Average Pharmacare Costs	1,489	1,325	1,459	1,490	1,358	1,343	1,401	1,496	1,677	1,625	1,618
Average Hospital Costs	9,842	10,286	9,972	9,915	9,767	10,816	8,929	7,721	8,006	8,206	8,719
Average Total Costs	14,466	14,859	14,519	14,538	14,237	15,279	13,473	12,242	12,737	12,982	13,404

\* MSP Amount is the total of costs for GPs, Specialists and Diagnostic Services.

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 5: Average Number of A1C Tests For Patients with Diabetes**

Average A1C Tests	Average Number of A1C Tests										
	Diabetes Incentive										
	No						Yes				
	Year						Year				
	200203	200304	200405	200506	200607	200708	200304	200405	200506	200607	200708
<b>RUB 3</b>											
<b>All Patients</b>	1.597	1.438	1.449	1.440	1.399	1.337	2.172	2.229	2.300	2.349	2.344
<b>Patients with Diabetes Only</b>	1.591	1.426	1.427	1.422	1.384	1.253	2.142	2.192	2.260	2.304	2.252
<b>RUB 4</b>											
<b>All Patients</b>	1.597	1.456	1.443	1.469	1.402	1.441	2.287	2.379	2.420	2.461	2.541
<b>Patients with Diabetes Only</b>	1.527	1.369	1.359	1.392	1.319	1.218	2.212	2.291	2.313	2.349	2.298
<b>RUB 5</b>											
<b>All Patients</b>	1.632	1.491	1.502	1.545	1.505	1.444	2.332	2.421	2.502	2.555	2.590
<b>Patients with Diabetes Only</b>	1.457	1.377	1.337	1.356	1.333	1.129	2.143	2.301	2.298	2.404	2.299

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 6: Average Annual Cost Summaries by Year For Patients with CHF**

Cost Components	Heart Failure Incentive										
	No						Yes				
	Year						Year				
	200203	200304	200405	200506	200607	200708	200304	200405	200506	200607	200708
<b>RUB 3</b>											
Average GP Amount	447	455	448	437	444	611	575	549	538	583	973
Average MSP Amount* (includes GP Amount)	1,295	1,301	1,259	1,260	1,263	1,403	1,483	1,345	1,391	1,396	1,781
Average Pharmacare Costs	1,335	1,150	1,253	1,287	1,325	1,293	1,137	1,215	1,239	1,283	1,348
Average Hospital Costs	1,419	1,372	1,295	1,215	1,089	1,038	1,258	1,154	1,228	997	990
Average Total Costs	4,049	3,823	3,807	3,762	3,677	3,734	3,878	3,714	3,858	3,676	4,119
<b>RUB 4</b>											
Average GP Amount	705	728	715	700	704	936	847	805	784	818	1,266
Average MSP Amount* (includes GP Amount)	2,288	2,363	2,245	2,241	2,253	2,408	2,336	2,204	2,183	2,208	2,583
Average Pharmacare Costs	1,620	1,405	1,528	1,605	1,662	1,672	1,329	1,439	1,481	1,454	1,574
Average Hospital Costs	5,551	5,328	5,074	4,897	4,742	4,347	4,662	4,212	4,103	3,781	3,390
Average Total Costs	9,459	9,096	8,847	8,743	8,657	8,427	8,327	7,855	7,767	7,443	7,547
<b>RUB 5</b>											
Average GP Amount	1,101	1,173	1,162	1,154	1,168	1,433	1,306	1,245	1,235	1,314	1,768
Average MSP Amount* (includes GP Amount)	4,210	4,272	4,201	4,213	4,259	4,349	4,315	3,984	4,028	4,054	4,279
Average Pharmacare Costs	1,861	1,708	1,813	1,964	2,012	2,004	1,742	1,742	1,845	1,950	1,908
Average Hospital Costs	16,588	16,414	16,260	15,781	16,161	16,130	14,864	13,884	13,543	13,801	12,970
Average Total Costs	22,659	22,394	22,274	21,958	22,432	22,483	20,921	19,610	19,416	19,805	19,157

\*MSP Amount is the total of costs for GPs, Specialists and Diagnostic Services.

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 7: Average Annual Cost Summaries by Year For Patients with Hypertension**

Cost Components	Hypertension				
	No			Yes	
	Year			Year	
	200506	200607	200708	200607	200708
<b>RUB 3</b>					
<b>Average GP Amount</b>	334	335	352	373	394
<b>Average MSP Amount* (includes GP Amount)</b>	843	868	873	877	876
<b>Average Pharmacare Costs</b>	408	400	386	414	383
<b>Average Hospital Costs</b>	515	522	539	434	418
<b>Average Total Costs</b>	1,766	1,790	1,798	1,725	1,677
<b>RUB 4</b>					
<b>Average GP Amount</b>	564	572	630	601	707
<b>Average MSP Amount* (includes GP Amount)</b>	1,769	1,824	1,838	1,811	1,825
<b>Average Pharmacare Costs</b>	770	749	780	790	771
<b>Average Hospital Costs</b>	2,544	2,601	2,597	2,281	2,041
<b>Average Total Costs</b>	5,083	5,174	5,215	4,882	4,637
<b>RUB 5</b>					
<b>Average GP Amount</b>	850	870	993	865	1,062
<b>Average MSP Amount* (includes GP Amount)</b>	3,070	3,196	3,208	3,099	3,003
<b>Average Pharmacare Costs</b>	1,158	1,170	1,191	1,082	1,090
<b>Average Hospital Costs</b>	8,808	9,275	9,664	7,889	7,016
<b>Average Total Costs</b>	13,036	13,641	14,063	12,070	11,109

\*MSP Amount is the total of costs for GPs, Specialists and Diagnostic Services.

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

### **3. LONGITUDINAL COMPARISONS**

Several attempts, using different approaches, were made to see if the diabetes incentive had a preventive effect. That is, did receiving the incentive over time result in lower costs, or a lower acceleration in costs, compared to patients who did not received incentive based care. The results to date indicate that the incentives do not appear to have a preventive effect *per se*. Nevertheless, we only conducted an initial set of analyses and, thus, further research is warranted.

### **4. MORE IN-DEPTH ANALYSIS**

In this section we present the same four tables for people with diabetes, diabetes only, chf and hypertension. The first table in each set presents a breakdown of patients by gender, age and RUB group. In addition to providing this patient data, the table shows the groupings we used to standardize costs by age, sex and RUB groups. Standardization was based on the total group of people who did, and did not, receive incentive based care for a given condition.

The second table provides a cost breakdown by each age and sex group within each RUB. The third table presents the age and sex standardized cost, within each RUB, for people who did, and did not, receive incentive based care. The fourth table provides the bottom line, age, sex and RUB standardized costs for people who did, and did not, receive incentive based care.

As can be seen, there is a consistent pattern of costs being lower, on a standardized basis, for people who received incentive based care. Not only is this pattern consistent across the four groups of patients, but it is also consistent across time. In addition to fiscal 2007/08, we went back one year for hypertension and back to fiscal 2003/04 for diabetes and chf. In all cases, except for diabetes only patients for fiscal 2006/07, the costs were lower for people who received incentive based care. The cost differentials were the smallest for the diabetes only group, and the largest for the chf group.

While further analysis is required to more accurately determine the true values for the cost differentials, and the causes of these differentials (are they attributable to the incentive themselves, or some other factor such as attachment to practice), it does appear that there is at least some degree of payback for the investment in the GPSC.

**Table 8: Patients by RUB, Gender, and Age Group for Diabetes Patients for April 2007 to March 2008**

		No of Patients				% of Patients
		RUB			All	
		3	4	5		
Gender	Age Group					
Females	0 - 44	7,471	2,400	448	10,319	5.1
	45 - 59	20,064	4,077	1,558	25,699	12.6
	60 - 69	18,251	4,397	2,091	24,739	12.1
	70 - 79	15,698	5,077	2,827	23,602	11.6
	80 and over	8,782	4,120	2,765	15,667	7.7
Males	0 - 44	6,089	1,151	426	7,666	3.8
	45 - 59	20,531	4,192	2,185	26,908	13.2
	60 - 69	20,687	5,502	3,209	29,398	14.4
	70 - 79	16,719	6,220	4,141	27,080	13.3
	80 and over	6,435	3,542	3,034	13,011	6.4
<b>Gender</b>						
Females		70,266	20,071	9,689	100,026	49.0
Males		70,461	20,607	12,995	104,063	51.0
<b>Age Group</b>						
0 - 44		13,560	3,551	874	17,985	8.8
45 - 59		40,595	8,269	3,743	52,607	25.8
60 - 69		38,938	9,899	5,300	54,137	26.5
70 - 79		32,417	11,297	6,968	50,682	24.8
80 and over		15,217	7,662	5,799	28,678	14.1
<b>All</b>		140,727	40,678	22,684	204,089	100.0

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 9: Average Annual Costs for Diabetes Patients by RUB, Gender, and Age Group for April 2007 to March 2008**

Gender and Age Groups		Total Cost					
		Resource Utilization Band					
		3		4		5	
		Diabetes Incentive		Diabetes Incentive		Diabetes Incentive	
		No Incentive	Incentive	No Incentive	Incentive	No Incentive	Incentive
Gender	Client Age Group						
Females	0 - 44	1,659	1,978	5,698	6,022	20,781	15,391
	45 - 59	1,802	2,075	6,007	5,992	18,676	16,839
	60 - 69	2,379	2,554	6,883	6,416	19,440	17,276
	70 - 79	2,963	3,259	7,464	6,812	20,290	17,478
	80 and over	3,365	3,578	8,284	7,301	20,633	17,685
Males	0 - 44	1,792	1,722	6,401	5,358	18,157	15,573
	45 - 59	1,796	1,784	5,920	5,513	19,071	15,229
	60 - 69	2,202	2,294	6,159	5,970	19,767	17,287
	70 - 79	2,849	3,152	6,712	6,208	20,048	17,229
	80 and over	2,963	3,104	6,676	5,963	18,055	15,755

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 10: Average Annual Costs for Diabetes Patients: Standardized for Gender, and Age Group within RUB for April 2007 to March 2008**

Cost Components	Resource Utilization Band					
	3		4		5	
	Diabetes Incentive		Diabetes Incentive		Diabetes Incentive	
	No Incentive	Incentive	No Incentive	Incentive	No Incentive	Incentive
<b>GP Amount</b>	421	604	761	1,001	1,215	1,463
<b>Specialist Amount</b>	276	252	769	691	1,917	1,637
<b>Diag Fac Amount</b>	321	329	605	595	902	887
<b>GP Specialist and Diag Fac Amounts</b>	1,017	1,186	2,135	2,286	4,034	3,988
<b>Hospital Costs</b>	549	419	3,129	2,329	13,528	10,670
<b>Pharmacy Costs</b>	766	902	1,421	1,619	2,015	2,187
<b>Total Cost</b>	2,331	2,507	6,685	6,235	19,578	16,844

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.



**Table 11: Average Annual Costs for Diabetes Patients: Standardized by RUB, Gender, and Age Group for April 2007 to March 2008**

Cost Components	Diabetes Incentive	
	No Incentive	Incentive
GP Amount	577	779
Specialist Amount	557	494
Diag Fac Amount	442	444
GP Specialist and Diag Fac Amounts	1,575	1,717
Hospital Costs	2,506	1,939
Pharmacy Costs	1,035	1,188
Total Cost	5,116	4,844

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 12: Patients by RUB, Gender, and Age Group For Patients Who Only Had Diabetes for April 2007 to March 2008**

		No of Patients				% of Patients
		RUB			All	
		3	4	5		
Gender	Age Group					
Females	0 - 44	5,579	1,597	173	7,349	6.9
	45 - 59	14,635	2,061	482	17,178	16.0
	60 - 69	12,783	1,893	586	15,262	14.2
	70 - 79	8,904	1,448	548	10,900	10.2
	80 and over	3,829	845	360	5,034	4.7
Males	0 - 44	4,672	709	205	5,586	5.2
	45 - 59	14,739	1,893	682	17,314	16.1
	60 - 69	12,691	1,785	679	15,155	14.1
	70 - 79	8,100	1,416	619	10,135	9.5
	80 and over	2,395	575	360	3,330	3.1
<b>Gender</b>						
Females		45,730	7,844	2,149	55,723	52.0
Males		42,597	6,378	2,545	51,520	48.0
<b>Age Group</b>						
0 - 44		10,251	2,306	378	12,935	12.1
45 - 59		29,374	3,954	1,164	34,492	32.2
60 - 69		25,474	3,678	1,265	30,417	28.4
70 - 79		17,004	2,864	1,167	21,035	19.6
80 and over		6,224	1,420	720	8,364	7.8
<b>All</b>		88,327	14,222	4,694	107,243	100.0

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 13: Average Annual Costs For Patients Who Only Had Diabetes by RUB, Gender, and Age Group for April 2007 to March 2008**

Gender and Age Groups		Total Cost					
		Resource Utilization Band					
		3		4		5	
		Diabetes Incentive		Diabetes Incentive		Diabetes Incentive	
		No Incentive	Incentive	No Incentive	Incentive	No Incentive	Incentive
Gender	Client Age Group						
Females	0 - 44	1,482	1,748	4,951	5,367	15,145	12,527
	45 - 59	1,567	1,763	5,076	4,944	14,242	10,982
	60 - 69	2,036	2,087	5,285	5,370	13,659	13,100
	70 - 79	2,507	2,644	6,523	5,921	17,167	15,644
	80 and over	2,656	2,853	7,879	7,139	18,167	14,754
Males	0 - 44	1,657	1,515	6,086	5,076	17,260	11,680
	45 - 59	1,522	1,490	4,485	4,729	15,339	11,567
	60 - 69	1,818	1,798	5,372	4,850	14,058	13,692
	70 - 79	2,201	2,444	5,447	5,044	15,008	14,396
	80 and over	2,462	2,418	5,620	5,615	14,563	15,088

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 14: Average Annual Costs for Diabetes Only Patients: Standardized for Gender, and Age Group within RUB for April 2007 to March 2008**

Cost Components	Resource Utilization Band					
	3		4		5	
	Diabetes Incentive		Diabetes Incentive		Diabetes Incentive	
	No Incentive	Incentive	No Incentive	Incentive	No Incentive	Incentive
<b>GP Amount</b>	341	440	583	667	886	1,011
<b>Specialist Amount</b>	251	234	729	728	1,547	1,383
<b>Diag Fac Amount</b>	279	286	501	501	693	665
<b>GP Specialist and Diag Fac Amounts</b>	871	961	1,813	1,896	3,125	3,058
<b>Hospital Costs</b>	481	368	2,722	2,264	10,778	8,724
<b>Pharmacy Costs</b>	536	643	936	1,122	1,332	1,627
<b>Total Cost</b>	1,887	1,972	5,471	5,281	15,235	13,410

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 15: Average Annual Costs for Diabetes Only Patients: Standardized by RUB, Gender, and Age Group for April 2007 to March 2008**

<b>Cost Components</b>	<b>Diabetes Incentive</b>	
	<b>No Incentive</b>	<b>Incentive</b>
<b>GP Amount</b>	397	495
<b>Specialist Amount</b>	371	350
<b>Diag Fac Amount</b>	326	331
<b>GP Specialist and Diag Fac Amounts</b>	1,094	1,176
<b>Hospital Costs</b>	1,229	985
<b>Pharmacy Costs</b>	624	750
<b>Total Cost</b>	2,947	2,911

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 16: Patients by RUB, Gender, and Age Group for CHF Patients for April 2007 to March 2008**

		No of Patients				% of Patients
		RUB			All	
		3	4	5		
Gender	Age Group					
Females	0 - 44	260	231	103	594	1.0
	45 - 59	1,120	587	477	2,184	3.5
	60 - 69	1,945	1,161	941	4,047	6.6
	70 - 79	3,569	2,403	1,981	7,953	12.9
	80 and over	6,018	4,561	3,981	14,560	23.6
Males	0 - 44	274	202	112	588	1.0
	45 - 59	1,711	986	823	3,520	5.7
	60 - 69	3,175	1,869	1,602	6,646	10.8
	70 - 79	4,436	3,258	2,853	10,547	17.1
	80 and over	4,060	3,536	3,517	11,113	18.0
<b>Gender</b>						
Females		12,912	8,943	7,483	29,338	47.5
Males		13,656	9,851	8,907	32,414	52.5
<b>Age Group</b>						
0 - 44		534	433	215	1,182	1.9
45 - 59		2,831	1,573	1,300	5,704	9.2
60 - 69		5,120	3,030	2,543	10,693	17.3
70 - 79		8,005	5,661	4,834	18,500	30.0
80 and over		10,078	8,097	7,498	25,673	41.6
<b>All</b>		26,568	18,794	16,390	61,752	100.0

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 17: Average Annual Costs For CHF Patients by RUB, Gender, and Age Group for April 2007 to March 2008**

Gender and Age Groups		Total Cost					
		Resource Utilization Band					
		3		4		5	
		Heart Failure Incentive		Heart Failure Incentive		Heart Failure Incentive	
Gender	Client Age Group	No Incentive	Incentive	No Incentive	Incentive	No Incentive	Incentive
Females	0 - 44	2,798	2,153	10,900	4,952	32,356	20,956
	45 - 59	3,400	3,699	9,058	6,386	26,019	21,344
	60 - 69	3,828	4,112	8,735	7,668	24,340	23,175
	70 - 79	4,057	4,668	8,983	7,921	23,564	20,436
	80 and over	3,943	4,329	8,960	7,982	21,192	17,847
Males	0 - 44	3,129	2,469	10,962	6,366	22,725	24,052
	45 - 59	3,075	2,971	8,469	7,719	23,068	19,353
	60 - 69	3,390	4,111	8,114	7,475	24,711	21,847
	70 - 79	3,990	4,293	7,742	7,802	23,306	20,681
	80 and over	3,587	3,865	7,483	6,790	19,894	16,869

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 18: Average Annual Costs for CHF Patients: Standardized for Gender, and Age Group within RUB for April 2007 to March 2008**

Cost Components	Resource Utilization Band					
	3		4		5	
	Heart Failure Incentive		Heart Failure Incentive		Heart Failure Incentive	
	No Incentive	Incentive	No Incentive	Incentive	No Incentive	Incentive
<b>GP Amount</b>	613	961	940	1,251	1,437	1,756
<b>Specialist Amount</b>	335	307	762	631	1,933	1,593
<b>Diag Fac Amount</b>	456	505	699	700	958	980
<b>GP Specialist and Diag Fac Amounts</b>	1,404	1,774	2,401	2,582	4,328	4,329
<b>Hospital Costs</b>	1,042	978	4,337	3,364	16,098	13,101
<b>Pharmacy Costs</b>	1,293	1,350	1,661	1,585	1,982	1,950
<b>Total Cost</b>	3,739	4,101	8,398	7,531	22,408	19,380

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.



**Table 19: Average Annual Costs for CHF Patients: Standardized by RUB, Gender, and Age Group for April 2007 to March 2008**

<b>Cost Components</b>	<b>Heart Failure Incentive</b>	
	<b>No Incentive</b>	<b>Incentive</b>
<b>GP Amount</b>	931	1,260
<b>Specialist Amount</b>	889	747
<b>Diag Fac Amount</b>	663	690
<b>GP Specialist and Diag Fac Amounts</b>	2,483	2,698
<b>Hospital Costs</b>	6,041	4,922
<b>Pharmacy Costs</b>	1,588	1,581
<b>Total Cost</b>	10,112	9,200

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 20: Patients by RUB, Gender and Age Group for Hypertension Patients for April 2007 to March 2008**

		No of Patients				All	% of Patients
		Resource Utilization Band					
		3	4	5			
Gender	Client Age Group						
Females	0 - 44	12,645	4,033	406	17,084	4.9	
	45 - 59	45,770	6,714	1,885	54,369	15.7	
	60 - 69	39,608	6,984	2,230	48,822	14.1	
	70 - 79	34,018	8,326	3,461	45,805	13.2	
	80 and over	23,401	8,288	4,656	36,345	10.5	
Males	0 - 44	9,604	1,548	455	11,607	3.4	
	45 - 59	33,096	5,229	2,109	40,434	11.7	
	60 - 69	28,904	6,226	2,596	37,726	10.9	
	70 - 79	23,383	7,248	3,686	34,317	9.9	
	80 and over	11,398	5,090	3,286	19,774	5.7	
<b>Gender</b>							
Females		155,442	34,345	12,638	202,425	58.5	
Males		106,385	25,341	12,132	143,858	41.5	
<b>Client Age Group</b>							
0 - 44		22,249	5,581	861	28,691	8.3	
45 - 59		78,866	11,943	3,994	94,803	27.4	
60 - 69		68,512	13,210	4,826	86,548	25.0	
70 - 79		57,401	15,574	7,147	80,122	23.1	
80 and over		34,799	13,378	7,942	56,119	16.2	
<b>All</b>		261,827	59,686	24,770	346,283	100.0	

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 21: Average Annual Costs for Hypertension Patients by RUB, Gender and Age Group for April 2007 to March 2008**

Gender and Age Group		Total Cost					
		Resource Utilization Band					
		3		4		5	
		Hypertension Incentive		Hypertension Incentive		Hypertension Incentive	
		No	Yes	No	Yes	No	Yes
Gender	Client Age Group						
Females	0 - 44	1,310	1,131	5,335	4,715	15,844	9,191
	45 - 59	1,394	1,233	4,341	3,816	12,742	10,438
	60 - 69	1,765	1,653	4,817	4,654	13,530	10,077
	70 - 79	2,348	2,178	5,513	5,070	13,732	11,360
	80 and over	2,740	2,425	6,530	5,438	14,994	11,624
Males	0 - 44	1,257	1,002	4,731	3,135	16,617	10,287
	45 - 59	1,364	1,145	4,869	3,873	13,745	10,640
	60 - 69	1,722	1,508	4,950	4,446	14,599	11,101
	70 - 79	2,163	2,029	5,351	4,722	13,779	11,686
	80 and over	2,343	2,135	5,126	4,457	13,703	10,868

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 22: Average Annual Costs for Hypertension Patients: Standardized for Gender, and Age Group within RUB for April 2007 to March 2008**

Cost Components	Resource Utilization Band					
	3		4		5	
	Hypertension Incentive		Hypertension Incentive		Hypertension Incentive	
	No	Yes	No	Yes	No	Yes
<b>GP Amount</b>	354	391	631	699	998	1,050
<b>Specialist Amount</b>	251	217	677	610	1,450	1,230
<b>Diag Fac Amount</b>	277	258	530	509	748	721
<b>GP Specialist and Diag Fac Amounts</b>	882	866	1,838	1,818	3,197	3,001
<b>Hospital Costs</b>	551	407	2,610	2,025	9,683	6,971
<b>Pharmacy Costs</b>	394	369	792	750	1,178	1,092
<b>Total Cost</b>	1,828	1,642	5,241	4,593	14,058	11,064

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.

**Table 23: Average Annual Costs for Hypertension Patients 2007/08: Standardized by RUB, Gender, and Age Group for April 2007 to March 2008**

Cost Components	Hypertension Incentive	
	No	Yes
GP Amount	448	491
Specialist Amount	410	357
Diag Fac Amount	354	334
GP Specialist and Diag Fac Amounts	1,212	1,183
Hospital Costs	1,560	1,155
Pharmacy Costs	519	487
Total Cost	3,291	2,825

Source: British Columbia Ministry of Health Services, Primary Care Data Repository, June 2009.