

# **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 Relationship of Attachment to Practice and Costs**

**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. In conducting these analyses, an interesting relationship emerged which seemed to indicate that patients with a higher level of attachment to their GP actually had lower costs than patients who were less attached. Several analyses were conducted in regard to this finding. Clearly, one possible explanation could be that our finding was an artifact of some other factor. The most likely factor would be the overall care needs of individuals as there is a strong relationship between care needs and care responses, and the costs of these care responses. For medical services, there is a classification system developed by John Hopkins University that stratifies people according to the complexity of their care, or care need, called Resource Utilization Bands (RUBs). The classification system goes from 0 to 5. It appears that the inverse relationship between cost and attachment to practice pertains to those with a moderate to high level of need for health services (i.e., RUBs 3 to 5).

What is interesting, and critical, to the validity of the inverse relationship between attachment to practice and costs is that the same inverse pattern exists within the higher level RUB categories. Thus, the lower cost for patients who have a high attachment to practice is not due to the fact that the patients have lower care needs (i.e., the inverse relationship between costs and attachment to practice continues to hold across different levels of care need, or RUB groups).

Another finding was that the inverse relationship pertained primarily to people who had higher level care needs, such as people with chronic conditions. It generally did not pertain to people with no, or fairly modest, care needs (i.e., RUBs groups 0, 1 and 2).

Analysis is required to determine if, in fact, the inverse relationship is a valid relationship or if it is a “spurious” relationship, that is, a false relationship because the findings can be explained by some other factor(s). For example, age and income are known to relate to overall health care costs. Thus, could the age variable account for the perceived inverse relationship, that is, is the relationship simply an artifact of different age distributions such that all of the more costly patients are older? If this was the case then the perceived inverse relationship between attachment and cost would simply be an artifact of older people, who cost more, having a lower attachment to practice.

The way to determine if the perceived relationship is a valid relationship is to consider attachment to practice in competition with all other variables which are also related to health care costs. This was done in a separate analysis. The bottom line finding was that the inverse relationship between attachment and cost does, indeed, appear to be a valid relationship, and is actually stronger than other factors such as age. This finding is critical to the work of the GPSC as it shows that good quality primary care can contribute to lower costs in our health care system. Furthermore, it helps to validate the overall purpose of the GPSC to promote better primary care,

at least in regard to health care costs, as it demonstrates the increased value-for-money contribution which can be made with full service family practice.

## **2. METHODS**

The groups we selected for our analysis consisted of people on the appropriate registries, such as diabetes. We then narrowed these groups down using the following parameters:

- We limited the analysis to people who were categorized as RUB 3, 4 or 5 to control for the effects of differences in care needs;
- We limited the analysis to people who had at least five GP services, that is, somewhat heavier care needs patients;
- We excluded people who died as they would have skewed the data as health care costs are usually quite high for people who die;
- We excluded people who were in a long term care facility at the end of the previous fiscal year as our focus was on community based primary care;
- We excluded people who had hospital costs of over \$100,000 as our focus was on community based clients;
- We defined a practice as a payee number. Thus, this included solo GPs, GPs in groups, drop in clinics, and emergency departments. People have a range of patterns in seeking medical care. There was discussion about emergency departments (actually the payee number of GPs or groups which do a high level of their care in emergencies) but it was determined that we would leave the patterns open to the range of ways people access medical care;
- We excluded patients with services by more than 25 payees in a year.

## **3. REVIEW OF ATTACHMENT TO PRACTICE AND ATTACHMENT TO PRACTITIONER**

As noted above, there seems to be an inverse relationship between attachment to practice and costs, that is, the higher the attachment the lower the cost. While there is relatively little literature on the continuity of the care provider, and the difference between attachment to practice and attachment to provider, Barbara Starfield has indicated that attachment to a provider is more important than attachment to a place where care is provided. Thus, there was a need for some further exploration of attachment to a practice and attachment to a provider.

Tables 1 and 2 present data on attachment to provider. As can be seen, there is less of a clear differential in regard to cost for each level of attachment particularly in the mid- to high levels of attachment (e.g., \$4,438 to \$3,910) than when one considers attachment to practice (see Tables 6 and 7 where the same levels of attachment to practice ranged from \$5,213 to \$4,303). In

addition, most of the patients are at the intermediate level of attachment. For example, in Table 1, some 84,695 diabetic patients, out of 202,790 patients, had an attachment of 75% to 84% in fiscal 2006/07 (more patients were at the highest level of attachment [85% or more] for attachment to practice). Fiscal 2006/07 is the last year of clean data on costs as in 2007/08 costs are confounded with costs related to complex care as diabetes and CHF are two of the seven conditions which are included in complex care.

This finding prompted further analysis. Tables 3 and 4 present data on what could be defined as “regular” GPs, that is, GPs who are the Majority Source of Care for at least 50 patients. It can be seen that the relationship between attachment and cost is significantly reduced. Nevertheless, it does appear that there are clear cost differentials between “regular” GPs and other GPs.

**Table 1: Indicators for Selected Patients April 2006 to March 2007 By General Practitioner Characteristics For Patients with Diabetes (RUB 3 to RUB 5 Minimum 5 Services)**

| Averages   | Number of GPs | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Home Services Costs | Average Total Costs |
|--|---------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|-----------------------------|---------------------|
| <b>All</b>   | 4,282         | 202,790                  | 47.4                       | 478              | 1,462             | 1,025                    | 2,656                  | 153                         | 5,143               |
| <b>Number of Patients per GP</b>                     |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 10</b>                                   | 1,086         | 3,982                    | 3.7                        | 464              | 1,538             | 920                      | 4,300                  | 189                         | 6,759               |
| <b>2. 10-24</b>                                      | 624           | 10,426                   | 16.7                       | 491              | 1,465             | 1,043                    | 2,792                  | 76                          | 5,300               |
| <b>3. 25 or more</b>                                 | 2,572         | 188,382                  | 73.2                       | 481              | 1,429             | 1,065                    | 1,929                  | 157                         | 4,424               |
| <b>Attachment to GP</b>                              |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 40</b>                                   | 510           | 2,316                    | 4.5                        | 531              | 1,808             | 988                      | 7,263                  | 318                         | 10,059              |
| <b>2. 40% - 59%</b>                                  | 888           | 14,321                   | 16.1                       | 454              | 1,451             | 872                      | 2,771                  | 94                          | 5,093               |
| <b>3. 60% - 74%</b>                                  | 1,162         | 55,073                   | 47.4                       | 486              | 1,424             | 1,065                    | 1,949                  | 106                         | 4,438               |
| <b>4. 75% - 84%</b>                                  | 1,172         | 84,695                   | 72.3                       | 472              | 1,400             | 1,119                    | 1,803                  | 198                         | 4,321               |
| <b>5. 85% or more</b>                                | 550           | 46,385                   | 84.3                       | 468              | 1,371             | 1,025                    | 1,515                  | 100                         | 3,910               |
| <b>No. of Diabetes Incentives Claimed as Main GP</b> |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. No Incentives</b>                              | 830           | 8,978                    | 10.8                       | 381              | 1,369             | 870                      | 3,247                  | 118                         | 5,486               |
| <b>2. 1 - 24</b>                                     | 2,020         | 66,346                   | 32.8                       | 505              | 1,520             | 1,050                    | 2,965                  | 160                         | 5,535               |
| <b>3. 25 - 100</b>                                   | 1,323         | 108,483                  | 82.0                       | 498              | 1,441             | 1,085                    | 1,908                  | 174                         | 4,434               |
| <b>4. 100 or more</b>                                | 109           | 18,983                   | 174.2                      | 495              | 1,343             | 1,022                    | 1,516                  | 37                          | 3,880               |
| <b>Number of MSOC Patients (Profiles)</b>            |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>2. 1 - 49</b>                                     | 1,020         | 6,783                    | 6.7                        | 502              | 1,720             | 963                      | 5,404                  | 177                         | 8,087               |
| <b>3. 50 - 99</b>                                    | 249           | 2,991                    | 12.0                       | 450              | 1,318             | 941                      | 1,633                  | 123                         | 3,892               |
| <b>4. 100 - 249</b>                                  | 502           | 11,695                   | 23.3                       | 482              | 1,400             | 1,069                    | 1,937                  | 152                         | 4,406               |
| <b>5. 250 or more</b>                                | 2,511         | 181,321                  | 72.2                       | 471              | 1,383             | 1,050                    | 1,786                  | 147                         | 4,219               |
| <b>Percentage MSOC Patients (Profiles)</b>           |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>00 - 09%</b>                                      | 1,466         | 17,659                   | 12.0                       | 476              | 1,568             | 931                      | 4,180                  | 147                         | 6,679               |
| <b>10 - 24%</b>                                      | 964           | 44,930                   | 46.6                       | 493              | 1,397             | 1,094                    | 1,997                  | 128                         | 4,489               |
| <b>25 - 49%</b>                                      | 1,366         | 93,178                   | 68.2                       | 470              | 1,408             | 1,073                    | 1,835                  | 192                         | 4,317               |
| <b>50 - 100%</b>                                     | 486           | 47,023                   | 96.8                       | 479              | 1,420             | 1,038                    | 1,677                  | 112                         | 4,135               |

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

**Table 2: Indicators for Selected Patients April 2006 to March 2007 By General Practitioner Characteristics For Patients with Congestive Heart Failure (RUB 3 to RUB 5 Minimum 5 Services)**

| Averages  | Number of GPs | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmicare Costs | Average Hospital Costs | Average Home Services Costs | Average Total Costs |
|---|---------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|-----------------------------|---------------------|
| <b>All</b>                                      | 3,727         | 59,676                   | 16.0                       | 657              | 2,151             | 1,529                    | 5,517                  | 597                         | 9,197               |
| <b>Number of Patients per GP</b>                |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 10</b>                              | 1,611         | 6,381                    | 4.0                        | 636              | 2,175             | 1,513                    | 6,160                  | 692                         | 9,848               |
| <b>2. 10-24</b>                                 | 1,246         | 20,474                   | 16.4                       | 665              | 2,130             | 1,559                    | 5,044                  | 606                         | 8,732               |
| <b>3. 25 or more</b>                            | 870           | 32,821                   | 37.7                       | 684              | 2,135             | 1,518                    | 5,004                  | 409                         | 8,657               |
| <b>Attachment to GP</b>                         |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 40</b>                              | 349           | 1,220                    | 3.5                        | 781              | 2,563             | 1,680                    | 11,759                 | 1,399                       | 16,002              |
| <b>2. 40% - 59%</b>                             | 727           | 5,748                    | 7.9                        | 676              | 2,213             | 1,402                    | 6,203                  | 635                         | 9,818               |
| <b>3. 60% - 74%</b>                             | 1,114         | 18,522                   | 16.6                       | 654              | 2,119             | 1,523                    | 4,925                  | 440                         | 8,567               |
| <b>4. 75% - 84%</b>                             | 1,031         | 23,497                   | 22.8                       | 637              | 2,084             | 1,581                    | 4,548                  | 560                         | 8,213               |
| <b>5. 85% or more</b>                           | 506           | 10,689                   | 21.1                       | 590              | 1,983             | 1,516                    | 3,503                  | 411                         | 7,001               |
| <b>No. of CHF Incentives Claimed as Main GP</b> |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. No Incentives</b>                         | 1,969         | 19,731                   | 10.0                       | 616              | 2,125             | 1,538                    | 5,722                  | 719                         | 9,384               |
| <b>2. 1 - 24</b>                                | 1,696         | 36,159                   | 21.3                       | 701              | 2,186             | 1,529                    | 5,330                  | 472                         | 9,045               |
| <b>3. 25 - 100</b>                              | 60            | 3,509                    | 58.5                       | 728              | 2,025             | 1,278                    | 4,223                  | 175                         | 7,526               |
| <b>4. 100 or more</b>                           | 2             | 277                      | 138.5                      | 599              | 1,434             | 1,011                    | 981                    | 0                           | 3,426               |
| <b>Number of MSOC Patients (Profiles)</b>       |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>2. 1 - 49</b>                                | 591           | 2,512                    | 4.3                        | 733              | 2,495             | 1,523                    | 9,870                  | 879                         | 13,888              |
| <b>3. 50 - 99</b>                               | 192           | 685                      | 3.6                        | 645              | 2,163             | 1,443                    | 5,514                  | 746                         | 9,120               |
| <b>4. 100 - 249</b>                             | 451           | 3,548                    | 7.9                        | 640              | 2,031             | 1,585                    | 4,665                  | 693                         | 8,280               |
| <b>5. 250 or more</b>                           | 2,493         | 52,931                   | 21.2                       | 643              | 2,089             | 1,528                    | 4,639                  | 502                         | 8,256               |
| <b>Percentage MSOC Patients (Profiles)</b>      |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>00 - 09%</b>                                 | 978           | 5,045                    | 5.2                        | 681              | 2,294             | 1,458                    | 7,956                  | 850                         | 11,708              |
| <b>10 - 24%</b>                                 | 911           | 13,812                   | 15.2                       | 665              | 2,066             | 1,560                    | 4,741                  | 455                         | 8,368               |
| <b>25 - 49%</b>                                 | 1,354         | 27,813                   | 20.5                       | 639              | 2,110             | 1,573                    | 4,734                  | 536                         | 8,417               |
| <b>50 - 100%</b>                                | 484           | 13,006                   | 26.9                       | 640              | 2,133             | 1,492                    | 4,241                  | 527                         | 7,865               |

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



**Table 3: Indicators for Selected Patients April 2006 to March 2007 By General Practitioner Characteristics For Patients with Diabetes For GPs with a Minimum of 50 MSOC Patients (RUB 3 to RUB 5 Minimum 5 Services)**

| Averages   | Number of GPs | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Home Services Costs | Average Total Costs |
|--|---------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|-----------------------------|---------------------|
| <b>All</b>   | 3,262         | 196,007                  | 60.1                       | 471              | 1,381             | 1,045                    | 1,797                  | 146                         | 4,223               |
| <b>Number of Patients per GP</b>                     |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 10</b>                                   | 234           | 1,267                    | 5.4                        | 468              | 1,367             | 946                      | 1,783                  | 215                         | 4,096               |
| <b>2. 10-24</b>                                      | 502           | 8,634                    | 17.2                       | 447              | 1,322             | 992                      | 1,677                  | 42                          | 3,991               |
| <b>3. 25 or more</b>                                 | 2,526         | 186,106                  | 73.7                       | 476              | 1,394             | 1,064                    | 1,823                  | 160                         | 4,281               |
| <b>Attachment to GP</b>                              |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 40</b>                                   | 43            | 270                      | 6.3                        | 454              | 1,312             | 709                      | 2,368                  | 1,104                       | 4,389               |
| <b>2. 40% - 59%</b>                                  | 467           | 11,375                   | 24.4                       | 455              | 1,302             | 919                      | 1,772                  | 72                          | 3,994               |
| <b>3. 60% - 74%</b>                                  | 1,068         | 53,652                   | 50.2                       | 483              | 1,404             | 1,059                    | 1,914                  | 103                         | 4,377               |
| <b>4. 75% - 84%</b>                                  | 1,148         | 84,366                   | 73.5                       | 470              | 1,398             | 1,109                    | 1,803                  | 200                         | 4,310               |
| <b>5. 85% or more</b>                                | 536           | 46,344                   | 86.5                       | 464              | 1,372             | 1,014                    | 1,529                  | 103                         | 3,916               |
| <b>No. of Diabetes Incentives Claimed as Main GP</b> |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. No Incentives</b>                              | 259           | 7,251                    | 28.0                       | 393              | 1,266             | 1,015                    | 1,481                  | 129                         | 3,762               |
| <b>2. 1 - 24</b>                                     | 1,583         | 62,299                   | 39.4                       | 462              | 1,372             | 1,019                    | 1,834                  | 131                         | 4,225               |
| <b>3. 25 - 100</b>                                   | 1,311         | 107,474                  | 82.0                       | 495              | 1,418             | 1,084                    | 1,839                  | 176                         | 4,340               |
| <b>4. 100 or more</b>                                | 109           | 18,983                   | 174.2                      | 495              | 1,343             | 1,022                    | 1,516                  | 37                          | 3,880               |
| <b>Number of MSOC Patients (Profiles)</b>            |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>3. 50 - 99</b>                                    | 249           | 2,991                    | 12.0                       | 450              | 1,318             | 941                      | 1,633                  | 123                         | 3,892               |
| <b>4. 100 - 249</b>                                  | 502           | 11,695                   | 23.3                       | 482              | 1,400             | 1,069                    | 1,937                  | 152                         | 4,406               |
| <b>5. 250 or more</b>                                | 2,511         | 181,321                  | 72.2                       | 471              | 1,383             | 1,050                    | 1,786                  | 147                         | 4,219               |
| <b>Percentage MSOC Patients (Profiles)</b>           |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>00 - 09%</b>                                      | 474           | 11,073                   | 23.4                       | 435              | 1,267             | 897                      | 1,626                  | 78                          | 3,790               |
| <b>10 - 24%</b>                                      | 945           | 44,772                   | 47.4                       | 488              | 1,381             | 1,083                    | 1,900                  | 129                         | 4,364               |
| <b>25 - 49%</b>                                      | 1,360         | 93,149                   | 68.5                       | 469              | 1,407             | 1,074                    | 1,827                  | 193                         | 4,308               |
| <b>50 - 100%</b>                                     | 483           | 47,013                   | 97.3                       | 477              | 1,420             | 1,033                    | 1,682                  | 113                         | 4,134               |

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

**Table 4: Indicators for Selected Patients April 2006 to March 2007 By General Practitioner Characteristics For Patients with Congestive Heart Failure For GPs with a Minimum of 50 MSOC Patients (RUB 3 to RUB 5 Minimum 5 Services)**

| Averages   | Number of GPs | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Home Services Costs | Average Total Costs |
|--|---------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|-----------------------------|---------------------|
| <b>All</b>   | 3,136         | 57,164                   | 18.2                       | 642              | 2,086             | 1,531                    | 4,697                  | 544                         | 8,313               |
| <b>Number of Patients per GP</b>                                     |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 10</b>   | 1,077         | 5,082                    | 4.7                        | 607              | 2,109             | 1,510                    | 4,662                  | 570                         | 8,281               |
| <b>2. 10-24</b>  | 1,200         | 19,804                   | 16.5                       | 651              | 2,084             | 1,557                    | 4,706                  | 615                         | 8,348               |
| <b>3. 25 or more</b>   | 859           | 32,278                   | 37.6                       | 674              | 2,059             | 1,519                    | 4,726                  | 414                         | 8,304               |
| <b>Attachment to GP</b>  |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 40</b>   | 77            | 231                      | 3.0                        | 682              | 1,981             | 1,872                    | 5,619                  | 2,495                       | 9,472               |
| <b>2. 40% - 59%</b>  | 506           | 4,666                    | 9.2                        | 668              | 2,138             | 1,464                    | 5,291                  | 598                         | 8,892               |
| <b>3. 60% - 74%</b>  | 1,046         | 18,140                   | 17.3                       | 659              | 2,114             | 1,531                    | 4,963                  | 412                         | 8,608               |
| <b>4. 75% - 84%</b>  | 1,019         | 23,470                   | 23.0                       | 639              | 2,082             | 1,581                    | 4,579                  | 563                         | 8,242               |
| <b>5. 85% or more</b>  | 488           | 10,657                   | 21.8                       | 582              | 1,995             | 1,440                    | 3,610                  | 424                         | 7,045               |
| <b>No. of Congestive Heart Failure Incentives Claimed as Main GP</b> |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. No Incentives</b>  | 1,491         | 18,505                   | 12.4                       | 603              | 2,078             | 1,537                    | 4,769                  | 635                         | 8,384               |
| <b>2. 1 - 24</b>   | 1,583         | 34,873                   | 22.0                       | 676              | 2,095             | 1,535                    | 4,651                  | 473                         | 8,282               |
| <b>3. 25 - 100</b>   | 60            | 3,509                    | 58.5                       | 728              | 2,025             | 1,278                    | 4,223                  | 175                         | 7,526               |
| <b>4. 100 or more</b>  | 2             | 277                      | 138.5                      | 599              | 1,434             | 1,011                    | 981                    | 0                           | 3,426               |
| <b>Number of MSOC Patients (Profiles)</b>                            |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>3. 50 - 99</b>  | 192           | 685                      | 3.6                        | 645              | 2,163             | 1,443                    | 5,514                  | 746                         | 9,120               |
| <b>4. 100 - 249</b>  | 451           | 3,548                    | 7.9                        | 640              | 2,031             | 1,585                    | 4,665                  | 693                         | 8,280               |
| <b>5. 250 or more</b>  | 2,493         | 52,931                   | 21.2                       | 643              | 2,089             | 1,528                    | 4,639                  | 502                         | 8,256               |
| <b>Percentage MSOC Patients (Profiles)</b>                           |               |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>00 - 09%</b>  | 408           | 2,581                    | 6.3                        | 611              | 2,043             | 1,407                    | 5,111                  | 773                         | 8,561               |
| <b>10 - 24%</b>  | 899           | 13,786                   | 15.3                       | 663              | 2,044             | 1,549                    | 4,667                  | 457                         | 8,261               |
| <b>25 - 49%</b>  | 1,348         | 27,798                   | 20.6                       | 640              | 2,108             | 1,568                    | 4,746                  | 538                         | 8,422               |
| <b>50 - 100%</b>   | 481           | 12,999                   | 27.0                       | 639              | 2,136             | 1,495                    | 4,262                  | 530                         | 7,892               |

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

Above, we have presented data on GPs *per se*. Given some of the differences between GPs (as defined by the Practitioner Number) and practices (as defined by the Payee Number), questions were raised about the distribution of physicians and patients across different types of payee numbers. It looked like one way to interpret the data was to think that a large part of the inverse relationship between attachment to practice and costs was due to drop in clinics. This was not the case, as is shown in Table 5 which is based on complex care.

It turns out that most of the payees are solo GPs, or GPs who practice in small or medium sized groups. Also, most of the patients in this analysis were seen by GPs in these groups. Table 5 presents data on the number of GPs associated with a payee number. If the practice only consisted of one GP who did not receive assistance from other GPs, he or she would be in the group called “Single Practice”. If a solo GP had two locums who assisted for part of the time, the practice would have three GPs and be in the 2-4 GPs group. It was assumed that most drop in clinics would be in the “Over 9 GPs” group. As can be seen in Table 5, only 164 out of 3,171 practices were in the Over 9 GPs Group. This group accounted for some 25,838 out of 216,667 patients. Thus, it is clear that most practices as defined by the payee number are solo or group practices of GPs. Also, while the patterns of attachment and cost are mixed, the overall pattern for complex care patients is a clear inverse relationship between attachment and cost.

**Table 5: Indicators for Complex Care Patients April 2007 to March 2008 By Payee Characteristics (RUB 3 to RUB 5, Minimum 5 GP Services)**

| Averages                  |                               | Number of Payees              | Total Number of Patients | Average Number of Patients | Attachment to Practice | Average Age | Average RUB | Average MSP Costs | Average Total Costs |
|---------------------------|-------------------------------|-------------------------------|--------------------------|----------------------------|------------------------|-------------|-------------|-------------------|---------------------|
| Size of Payee Group       | Attachment to Practice        |                               |                          |                            |                        |             |             |                   |                     |
| <b>1. Single Practice</b> | <b>1. Under 40</b>            | 81                            | 515                      | 6.4                        | 32.0                   | 60.1        | 4.1         | 2,962             | 14,996              |
|                           | <b>2. 40% - 59%</b>           | 340                           | 4,322                    | 12.7                       | 50.7                   | 64.0        | 3.7         | 2,293             | 9,399               |
|                           | <b>3. 60% - 74%</b>           | 335                           | 13,209                   | 39.4                       | 67.8                   | 67.1        | 3.7         | 2,142             | 7,693               |
|                           | <b>4. 75% - 84%</b>           | 379                           | 24,385                   | 64.3                       | 80.6                   | 67.9        | 3.7         | 1,968             | 6,879               |
|                           | <b>5. 85% or more</b>         | 363                           | 29,090                   | 80.1                       | 89.2                   | 68.8        | 3.6         | 1,975             | 5,794               |
|                           | <b>All</b>                    | 1,498                         | 71,521                   | 47.7                       | 70.4                   | 66.6        | 3.7         | 2,136             | 7,809               |
|                           | <b>2. 2 - 4 GPs</b>           | <b>Attachment to Practice</b> |                          |                            |                        |             |             |                   |                     |
| <b>1. Under 40</b>        |                               | 11                            | 27                       | 2.5                        | 30.2                   | 43.2        | 3.7         | 1,784             | 14,663              |
| <b>2. 40% - 59%</b>       |                               | 98                            | 1,661                    | 16.9                       | 52.5                   | 63.9        | 3.6         | 1,746             | 5,874               |
| <b>3. 60% - 74%</b>       |                               | 129                           | 5,201                    | 40.3                       | 68.5                   | 66.8        | 3.6         | 1,839             | 6,246               |
| <b>4. 75% - 84%</b>       |                               | 313                           | 22,638                   | 72.3                       | 80.8                   | 68.8        | 3.6         | 1,952             | 6,283               |
| <b>5. 85% or more</b>     |                               | 428                           | 44,026                   | 102.9                      | 89.3                   | 70.4        | 3.6         | 1,992             | 5,823               |
| <b>All</b>                |                               | 979                           | 73,553                   | 75.1                       | 79.5                   | 68.5        | 3.6         | 1,932             | 6,130               |
| <b>3. 5 - 9 GPs</b>       | <b>Attachment to Practice</b> |                               |                          |                            |                        |             |             |                   |                     |
|                           | <b>1. Under 40</b>            | 6                             | 14                       | 2.3                        | 32.7                   | 53.5        | 3.3         | 1,636             | 3,809               |
|                           | <b>2. 40% - 59%</b>           | 44                            | 1,120                    | 25.5                       | 52.8                   | 62.8        | 3.7         | 2,008             | 7,456               |
|                           | <b>3. 60% - 74%</b>           | 81                            | 4,215                    | 52.0                       | 68.6                   | 63.2        | 3.7         | 2,000             | 7,513               |
|                           | <b>4. 75% - 84%</b>           | 187                           | 16,015                   | 85.6                       | 80.6                   | 68.3        | 3.6         | 1,946             | 6,055               |
|                           | <b>5. 85% or more</b>         | 213                           | 24,480                   | 114.9                      | 88.7                   | 69.6        | 3.6         | 2,019             | 6,011               |
|                           | <b>All</b>                    | 531                           | 45,844                   | 86.3                       | 79.1                   | 67.4        | 3.7         | 1,985             | 6,350               |
| <b>4. Over 9 GPs</b>      | <b>Attachment to Practice</b> |                               |                          |                            |                        |             |             |                   |                     |
|                           | <b>1. Under 40</b>            | 4                             | 14                       | 3.5                        | 30.6                   | 48.3        | 3.8         | 2,054             | 4,399               |
|                           | <b>2. 40% - 59%</b>           | 59                            | 3,691                    | 62.6                       | 53.5                   | 59.8        | 3.7         | 2,003             | 10,630              |
|                           | <b>3. 60% - 74%</b>           | 28                            | 1,984                    | 70.9                       | 66.2                   | 61.4        | 3.7         | 1,773             | 7,803               |
|                           | <b>4. 75% - 84%</b>           | 37                            | 4,469                    | 120.8                      | 80.2                   | 64.1        | 3.7         | 1,854             | 6,485               |
|                           | <b>5. 85% or more</b>         | 36                            | 15,724                   | 436.8                      | 88.7                   | 68.6        | 3.7         | 1,983             | 6,216               |
|                           | <b>All</b>                    | 164                           | 25,882                   | 157.8                      | 68.9                   | 62.7        | 3.7         | 1,927             | 8,091               |

**Table 5 (cont'd)**

| Averages |                        | Number of Payees | Total Number of Patients | Average Number of Patients | Attachment to Practice | Average Age | Average RUB | Average MSP Costs | Average Total Costs |
|----------|------------------------|------------------|--------------------------|----------------------------|------------------------|-------------|-------------|-------------------|---------------------|
| All      | Attachment to Practice |                  |                          |                            |                        |             |             |                   |                     |
|          | 1. Under 40            | 102              | 570                      | 5.6                        | 31.8                   | 57.4        | 4.0         | 2,721             | 13,886              |
|          | 2. 40% - 59%           | 541              | 10,794                   | 20.0                       | 51.5                   | 63.4        | 3.7         | 2,139             | 8,737               |
|          | 3. 60% - 74%           | 573              | 24,609                   | 42.9                       | 68.0                   | 66.2        | 3.7         | 2,035             | 7,347               |
|          | 4. 75% - 84%           | 916              | 67,507                   | 73.7                       | 80.6                   | 68.1        | 3.6         | 1,953             | 6,492               |
|          | 5. 85% or more         | 1,040            | 113,320                  | 109.0                      | 89.1                   | 69.6        | 3.6         | 1,991             | 5,865               |
|          | All                    | 3,172            | 216,800                  | 68.3                       | 74.6                   | 67.1        | 3.7         | 2,037             | 7,061               |

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

#### 4. FINDINGS

This chapter presents data in regard to attachment to practice and costs for diabetes, CHF, hypertension and complex care. Data for diabetes and CHF are presented for fiscal 2006/07 and 2007/08. This is done because 2006/07 was the last year in which one could have a clean look at this data. The complex care incentive was introduced in fiscal 2007/08 and includes diabetes and CHF as two of the seven conditions related to complex care. Thus, this may have some impact on the data for diabetes and CHF in fiscal 2007/08. One of the clear findings from our analysis is that the heavier the care needs, the clearer the relationship between attachment and cost. Tables 6 and 7 present data on diabetes and CHF for fiscal 2006/07 for people who were categorized as RUB 3 to RUB 5. Tables 8 and 9 present the same data for fiscal 2007/08. Tables 6 and 7 show that the overall cost is greater for CHF, and the differentials between levels of attachment are greater. This reflects the point made above that the inverse relationship is stronger for heavier care needs clients. Typically, CHF clients have heavier care needs than diabetes clients.

The fact that the inverse relationship becomes stronger as care needs increase is demonstrated in Tables 10 to 12 which show data for RUB 3, RUB 4 and RUB 5 separately for diabetes patients for fiscal 2007/08. The same pattern also held for each of the other conditions discussed in this report.

Finally, Tables 13 and 14 present data for RUBs 3 to 5 for fiscal 2007/08 for hypertension and for complex care.

**Table 6: Indicators for Selected Patients April 2006 to March 2007 By Payee Characteristics For Patients with Diabetes (RUB 3 to RUB 5, Minimum 5 Services)**

| Averages                                  | Number of Payees | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Home Services Costs | Average Total Costs |
|---|------------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|-----------------------------|---------------------|
| <b>All</b>                                | 3,153            | 183,694                  | 58.3                       | 538              | 1,597             | 1,154                    | 2,542                  | 134                         | 5,293               |
| <b>Number of Patients per Payee</b>       |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 10</b>                        | 548              | 1,919                    | 3.5                        | 658              | 1,976             | 1,321                    | 4,279                  | 103                         | 7,577               |
| <b>2. 10-24</b>                           | 432              | 7,461                    | 17.3                       | 515              | 1,537             | 1,103                    | 2,279                  | 134                         | 4,919               |
| <b>3. 25 or more</b>                      | 2,173            | 174,314                  | 80.2                       | 513              | 1,513             | 1,122                    | 2,157                  | 141                         | 4,791               |
| <b>Attachment to Practice</b>             |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 40</b>                        | 93               | 303                      | 3.3                        | 745              | 2,321             | 962                      | 5,760                  | 138                         | 9,043               |
| <b>2. 40% - 59%</b>                       | 508              | 9,202                    | 18.1                       | 595              | 1,887             | 1,078                    | 4,432                  | 128                         | 7,397               |
| <b>3. 60% - 74%</b>                       | 610              | 23,864                   | 39.1                       | 541              | 1,591             | 1,148                    | 2,474                  | 100                         | 5,213               |
| <b>4. 75% - 84%</b>                       | 921              | 60,770                   | 66.0                       | 518              | 1,513             | 1,243                    | 2,148                  | 139                         | 4,903               |
| <b>5. 85% or more</b>                     | 1,021            | 89,555                   | 87.7                       | 508              | 1,465             | 1,132                    | 1,706                  | 151                         | 4,303               |
| <b>No. of Diabetes Incentives Claimed</b> |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. No Incentives</b>                   | 238              | 1,084                    | 4.6                        | 700              | 2,198             | 1,329                    | 5,667                  | 115                         | 9,193               |
| <b>2. 1 - 24</b>                          | 1,036            | 19,407                   | 18.7                       | 561              | 1,703             | 1,187                    | 2,906                  | 121                         | 5,797               |
| <b>3. 25 - 99</b>                         | 1,577            | 106,577                  | 67.6                       | 508              | 1,477             | 1,128                    | 2,021                  | 149                         | 4,626               |
| <b>4. 100 or more</b>                     | 302              | 56,626                   | 187.5                      | 495              | 1,384             | 1,036                    | 1,555                  | 112                         | 3,975               |

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

**Table 7: Indicators for Selected Patients April 2006 to March 2007 By Payee Characteristics For Patients with Congestive Heart Failure (RUB 3 to RUB 5, Minimum 5 Services)**

| Averages  | Number of Payees | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Home Services Costs | Average Total Costs |
|---|------------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|-----------------------------|---------------------|
| <b>All</b>  | 2,910            | 56,261                   | 19.3                       | 687              | 2,226             | 1,574                    | 5,227                  | 532                         | 9,027               |
| <b>Number of Patients per Payee</b>                       |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 10</b>  | 1,055            | 4,432                    | 4.2                        | 685              | 2,293             | 1,589                    | 5,593                  | 611                         | 9,475               |
| <b>2. 10-24</b>   | 1,068            | 17,714                   | 16.6                       | 674              | 2,187             | 1,576                    | 4,875                  | 528                         | 8,637               |
| <b>3. 25 or more</b>                                      | 787              | 34,115                   | 43.3                       | 709              | 2,187             | 1,552                    | 5,215                  | 432                         | 8,955               |
| <b>Attachment to Practice</b>                             |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 40</b>  | 66               | 278                      | 4.2                        | 938              | 3,192             | 1,664                    | 11,448                 | 896                         | 16,304              |
| <b>2. 40% - 59%</b>                                       | 456              | 3,634                    | 8.0                        | 770              | 2,495             | 1,527                    | 7,359                  | 662                         | 11,381              |
| <b>3. 60% - 74%</b>                                       | 590              | 8,857                    | 15.0                       | 728              | 2,303             | 1,598                    | 5,964                  | 517                         | 9,865               |
| <b>4. 75% - 84%</b>                                       | 864              | 18,432                   | 21.3                       | 660              | 2,141             | 1,630                    | 4,654                  | 467                         | 8,426               |
| <b>5. 85% or more</b>                                     | 934              | 25,060                   | 26.8                       | 630              | 2,054             | 1,524                    | 3,812                  | 512                         | 7,390               |
| <b>No. of Congestive Heart Failure Incentives Claimed</b> |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. No Incentives</b>                                   | 338              | 1,235                    | 3.7                        | 787              | 2,635             | 1,572                    | 7,985                  | 776                         | 12,191              |
| <b>2. 1 - 24</b>  | 2,167            | 32,962                   | 15.2                       | 669              | 2,190             | 1,584                    | 4,890                  | 472                         | 8,663               |
| <b>3. 25 - 99</b>   | 391              | 18,384                   | 47.0                       | 700              | 2,070             | 1,531                    | 4,698                  | 648                         | 8,299               |
| <b>4. 100 or more</b>                                     | 14               | 3,680                    | 262.9                      | 786              | 2,249             | 1,404                    | 5,700                  | 666                         | 9,352               |

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

**Table 8: Indicators for Selected Patients April 2007 to March 2008 By Payee Characteristics For Patients with Diabetes (RUB 3 to RUB 5, Minimum 5 Services)**

| Averages                                  | Number of Payees | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Home Services Costs | Average Total Costs |
|---|------------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|-----------------------------|---------------------|
| <b>All</b>                                | 3,168            | 204,089                  | 64.4                       | 684              | 1,720             | 1,140                    | 2,700                  | 0                           | 5,560               |
| <b>Number of Patients per Payee</b>       |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 10</b>                        | 562              | 1,981                    | 3.5                        | 703              | 1,934             | 1,264                    | 4,615                  | 0                           | 7,813               |
| <b>2. 10-24</b>                           | 374              | 6,330                    | 16.9                       | 643              | 1,717             | 1,077                    | 2,553                  | 0                           | 5,347               |
| <b>3. 25 or more</b>                      | 2,232            | 195,778                  | 87.7                       | 686              | 1,667             | 1,119                    | 2,242                  | 0                           | 5,028               |
| <b>Attachment to Practice</b>             |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 40</b>                        | 87               | 326                      | 3.7                        | 790              | 2,324             | 988                      | 5,644                  | 0                           | 8,956               |
| <b>2. 40% - 59%</b>                       | 522              | 8,607                    | 16.5                       | 679              | 1,928             | 1,000                    | 4,980                  | 0                           | 7,907               |
| <b>3. 60% - 74%</b>                       | 579              | 24,356                   | 42.1                       | 690              | 1,769             | 1,201                    | 2,916                  | 0                           | 5,885               |
| <b>4. 75% - 84%</b>                       | 894              | 62,091                   | 69.5                       | 661              | 1,610             | 1,158                    | 2,037                  | 0                           | 4,805               |
| <b>5. 85% or more</b>                     | 1,086            | 108,709                  | 100.1                      | 694              | 1,636             | 1,172                    | 1,799                  | 0                           | 4,608               |
| <b>No. of Diabetes Incentives Claimed</b> |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. No Incentives</b>                   | 232              | 944                      | 4.1                        | 782              | 2,259             | 1,086                    | 6,131                  | 0                           | 9,477               |
| <b>2. 1 - 24</b>                          | 964              | 17,263                   | 17.9                       | 655              | 1,767             | 1,190                    | 3,178                  | 0                           | 6,135               |
| <b>3. 25 - 99</b>                         | 1,553            | 107,478                  | 69.2                       | 689              | 1,652             | 1,133                    | 2,173                  | 0                           | 4,959               |
| <b>4. 100 or more</b>                     | 419              | 78,404                   | 187.1                      | 678              | 1,565             | 1,079                    | 1,653                  | 0                           | 4,297               |

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



**Table 9: Indicators for Selected Patients April 2007 to March 2008 By Payee Characteristics For Patients with Congestive Heart Failure (RUB 3 to RUB 5, Minimum 5 Services)**

| Averages  | Number of Payees | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Home Services Costs | Average Total Costs |
|---|------------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|-----------------------------|---------------------|
| <b>All</b>  | 2,891            | 61,752                   | 21.4                       | 934              | 2,491             | 1,599                    | 5,526                  | 0                           | 9,615               |
| <b>Number of Patients per Payee</b>                       |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 10</b>  | 982              | 4,168                    | 4.2                        | 856              | 2,496             | 1,595                    | 5,883                  | 0                           | 9,974               |
| <b>2. 10-24</b>   | 1,000            | 16,718                   | 16.7                       | 924              | 2,471             | 1,628                    | 5,256                  | 0                           | 9,356               |
| <b>3. 25 or more</b>                                      | 909              | 40,866                   | 45.0                       | 1,031            | 2,507             | 1,570                    | 5,436                  | 0                           | 9,513               |
| <b>Attachment to Practice</b>                             |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 40</b>  | 75               | 301                      | 4.0                        | 1,100            | 3,610             | 1,270                    | 12,824                 | 0                           | 17,704              |
| <b>2. 40% - 59%</b>                                       | 400              | 3,403                    | 8.5                        | 929              | 2,762             | 1,487                    | 8,007                  | 0                           | 12,257              |
| <b>3. 60% - 74%</b>                                       | 556              | 9,055                    | 16.3                       | 929              | 2,483             | 1,722                    | 6,060                  | 0                           | 10,265              |
| <b>4. 75% - 84%</b>                                       | 843              | 19,308                   | 22.9                       | 930              | 2,409             | 1,643                    | 5,071                  | 0                           | 9,123               |
| <b>5. 85% or more</b>                                     | 1,017            | 29,685                   | 29.2                       | 931              | 2,374             | 1,563                    | 4,096                  | 0                           | 8,033               |
| <b>No. of Congestive Heart Failure Incentives Claimed</b> |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. No Incentives</b>                                   | 284              | 988                      | 3.5                        | 952              | 2,755             | 1,564                    | 7,982                  | 0                           | 12,302              |
| <b>2. 1 - 24</b>  | 2,106            | 32,984                   | 15.7                       | 905              | 2,457             | 1,611                    | 5,288                  | 0                           | 9,356               |
| <b>3. 25 - 99</b>   | 480              | 22,881                   | 47.7                       | 1,048            | 2,484             | 1,566                    | 5,084                  | 0                           | 9,133               |
| <b>4. 100 or more</b>                                     | 21               | 4,899                    | 233.3                      | 1,078            | 2,521             | 1,577                    | 6,248                  | 0                           | 10,347              |

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

**Table 10: Indicators for Selected Patients April 2007 to March 2008 By Payee Characteristics For Patients with Diabetes (RUB 3 Only, Minimum 5 GP Services)**

| Averages                                  | Number of Payees | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Home Services Costs | Average Total Costs |
|---|------------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|-----------------------------|---------------------|
| <b>All</b>                                | 3,047            | 140,727                  | 46.2                       | 525              | 1,169             | 877                      | 725                    | 0                           | 2,770               |
| <b>Number of Patients per Payee</b>       |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 10</b>                        | 577              | 2,090                    | 3.6                        | 535              | 1,336             | 1,022                    | 1,573                  | 0                           | 3,931               |
| <b>2. 10-24</b>                           | 514              | 8,762                    | 17.0                       | 482              | 1,145             | 786                      | 703                    | 0                           | 2,634               |
| <b>3. 25 or more</b>                      | 1,956            | 129,875                  | 66.4                       | 534              | 1,125             | 857                      | 480                    | 0                           | 2,463               |
| <b>Attachment to Practice</b>             |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 40</b>                        | 60               | 108                      | 1.8                        | 524              | 1,499             | 796                      | 2,452                  | 0                           | 4,747               |
| <b>2. 40% - 59%</b>                       | 400              | 4,013                    | 10.0                       | 493              | 1,260             | 779                      | 1,421                  | 0                           | 3,460               |
| <b>3. 60% - 74%</b>                       | 511              | 13,331                   | 26.1                       | 508              | 1,134             | 783                      | 944                    | 0                           | 2,861               |
| <b>4. 75% - 84%</b>                       | 758              | 34,523                   | 45.5                       | 510              | 1,135             | 889                      | 540                    | 0                           | 2,564               |
| <b>5. 85% or more</b>                     | 1,318            | 88,752                   | 67.3                       | 550              | 1,158             | 939                      | 456                    | 0                           | 2,554               |
| <b>No. of Diabetes Incentives Claimed</b> |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. No Incentives</b>                   | 195              | 558                      | 2.9                        | 567              | 1,478             | 816                      | 2,215                  | 0                           | 4,509               |
| <b>2. 1 - 24</b>                          | 1,155            | 18,607                   | 16.1                       | 497              | 1,180             | 915                      | 853                    | 0                           | 2,948               |
| <b>3. 25 - 99</b>                         | 1,509            | 87,313                   | 57.9                       | 543              | 1,133             | 863                      | 481                    | 0                           | 2,477               |
| <b>4. 100 or more</b>                     | 188              | 34,249                   | 182.2                      | 514              | 1,057             | 817                      | 348                    | 0                           | 2,222               |

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

**Table 11: Indicators for Selected Patients April 2007 to March 2008 By Payee Characteristics For Patients with Diabetes (RUB 4 Only, Minimum 5 GP Services)**

| Averages                                  | Number of Payees | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Home Services Costs | Average Total Costs |
|---|------------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|-----------------------------|---------------------|
| <b>All</b>                                | 2,895            | 40,678                   | 14.1                       | 858              | 2,231             | 1,481                    | 3,000                  | 0                           | 6,712               |
| <b>Number of Patients per Payee</b>       |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 10</b>                        | 1,313            | 5,936                    | 4.5                        | 809              | 2,222             | 1,421                    | 3,306                  | 0                           | 6,948               |
| <b>2. 10-24</b>                           | 1,204            | 18,834                   | 15.6                       | 894              | 2,255             | 1,524                    | 2,852                  | 0                           | 6,632               |
| <b>3. 25 or more</b>                      | 378              | 15,908                   | 42.1                       | 916              | 2,187             | 1,551                    | 2,409                  | 0                           | 6,147               |
| <b>Attachment to Practice</b>             |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 40</b>                        | 87               | 190                      | 2.2                        | 829              | 2,440             | 926                      | 4,414                  | 0                           | 7,779               |
| <b>2. 40% - 59%</b>                       | 437              | 2,401                    | 5.5                        | 822              | 2,240             | 1,363                    | 4,353                  | 0                           | 7,956               |
| <b>3. 60% - 74%</b>                       | 631              | 6,898                    | 10.9                       | 840              | 2,246             | 1,459                    | 3,372                  | 0                           | 7,076               |
| <b>4. 75% - 84%</b>                       | 865              | 13,368                   | 15.5                       | 860              | 2,220             | 1,646                    | 2,763                  | 0                           | 6,630               |
| <b>5. 85% or more</b>                     | 875              | 17,821                   | 20.4                       | 891              | 2,206             | 1,447                    | 2,150                  | 0                           | 5,803               |
| <b>No. of Diabetes Incentives Claimed</b> |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. No Incentives</b>                   | 264              | 674                      | 2.6                        | 826              | 2,395             | 1,286                    | 4,682                  | 0                           | 8,363               |
| <b>2. 1 - 24</b>                          | 2,387            | 28,068                   | 11.8                       | 855              | 2,221             | 1,496                    | 2,912                  | 0                           | 6,629               |
| <b>3. 25 - 99</b>                         | 238              | 10,533                   | 44.3                       | 926              | 2,152             | 1,550                    | 2,031                  | 0                           | 5,733               |
| <b>4. 100 or more</b>                     | 6                | 1,403                    | 233.8                      | 903              | 2,217             | 1,322                    | 2,455                  | 0                           | 5,994               |

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

**Table 12: Indicators for Selected Patients April 2007 to March 2008 By Payee Characteristics For Patients with Diabetes (RUB 5 Only, Minimum 5 GP Services)**

| Averages                                  | Number of Payees | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Home Services Costs | Average Total Costs |
|---|------------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|-----------------------------|---------------------|
| <b>All</b>                                | 2,662            | 22,684                   | 8.5                        | 1,280            | 3,950             | 2,124                    | 11,579                 | 0                           | 17,653              |
| <b>Number of Patients per Payee</b>       |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 10</b>                        | 1,902            | 8,112                    | 4.3                        | 1,249            | 3,969             | 2,126                    | 11,867                 | 0                           | 17,961              |
| <b>2. 10-24</b>                           | 655              | 9,178                    | 14.0                       | 1,350            | 3,857             | 2,135                    | 10,428                 | 0                           | 16,420              |
| <b>3. 25 or more</b>                      | 105              | 5,394                    | 51.4                       | 1,398            | 4,188             | 2,034                    | 13,537                 | 0                           | 19,759              |
| <b>Attachment to Practice</b>             |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. Under 40</b>                        | 100              | 287                      | 2.9                        | 1,415            | 4,395             | 1,632                    | 17,053                 | 0                           | 23,080              |
| <b>2. 40% - 59%</b>                       | 511              | 3,162                    | 6.2                        | 1,316            | 4,099             | 2,392                    | 13,710                 | 0                           | 20,201              |
| <b>3. 60% - 74%</b>                       | 843              | 6,880                    | 8.2                        | 1,303            | 3,975             | 2,208                    | 12,129                 | 0                           | 18,311              |
| <b>4. 75% - 84%</b>                       | 792              | 8,432                    | 10.6                       | 1,264            | 3,865             | 2,064                    | 10,358                 | 0                           | 16,287              |
| <b>5. 85% or more</b>                     | 416              | 3,923                    | 9.4                        | 1,185            | 3,770             | 1,861                    | 8,854                  | 0                           | 14,485              |
| <b>No. of Diabetes Incentives Claimed</b> |                  |                          |                            |                  |                   |                          |                        |                             |                     |
| <b>1. No Incentives</b>                   | 326              | 783                      | 2.4                        | 1,270            | 4,092             | 1,999                    | 13,801                 | 0                           | 19,893              |
| <b>2. 1 - 24</b>                          | 2,275            | 18,066                   | 7.9                        | 1,278            | 3,933             | 2,145                    | 11,254                 | 0                           | 17,332              |
| <b>3. 25 - 99</b>                         | 57               | 2,946                    | 51.7                       | 1,391            | 3,775             | 2,024                    | 11,549                 | 0                           | 17,348              |
| <b>4. 100 or more</b>                     | 4                | 889                      | 222.3                      | 1,545            | 4,275             | 1,990                    | 15,869                 | 0                           | 22,134              |

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

**Table 13: Indicators for Hypertension Patients April 2007 to March 2008 By Payee Characteristics (RUB 3 to RUB 5, Minimum 5 GP Services)**

| Averages   | Number of Payees | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Total Costs |
|--|------------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|---------------------|
| <b>All</b>   | 3,333            | 346,283                  | 103.9                      | 500              | 1,332             | 549                      | 2,065                  | 3,946               |
| <b>Number of Patients per Payee</b>                |                  |                          |                            |                  |                   |                          |                        |                     |
| <b>1. Under 10</b>                                 | 560              | 1,753                    | 3.1                        | 626              | 1,793             | 701                      | 4,573                  | 7,067               |
| <b>2. 10-24</b>                                    | 222              | 3,652                    | 16.5                       | 567              | 1,512             | 723                      | 2,727                  | 4,962               |
| <b>3. 25 or more</b>                               | 2,551            | 340,878                  | 133.6                      | 466              | 1,215             | 500                      | 1,456                  | 3,172               |
| <b>Attachment to Practice</b>                      |                  |                          |                            |                  |                   |                          |                        |                     |
| <b>1. Under 40</b>                                 | 109              | 398                      | 3.7                        | 766              | 2,136             | 372                      | 6,321                  | 8,829               |
| <b>2. 40% - 59%</b>                                | 639              | 15,242                   | 23.9                       | 543              | 1,584             | 422                      | 3,712                  | 5,718               |
| <b>3. 60% - 74%</b>                                | 670              | 49,552                   | 74.0                       | 505              | 1,346             | 603                      | 2,200                  | 4,149               |
| <b>4. 75% - 84%</b>                                | 1,028            | 127,617                  | 124.1                      | 464              | 1,211             | 604                      | 1,278                  | 3,093               |
| <b>5. 85% or more</b>                              | 887              | 153,474                  | 173.0                      | 473              | 1,181             | 557                      | 1,165                  | 2,903               |
| <b>Size of Payee Group</b>                         |                  |                          |                            |                  |                   |                          |                        |                     |
| <b>1. Single Practice</b>                          | 1,637            | 113,133                  | 69.1                       | 525              | 1,466             | 595                      | 2,610                  | 4,671               |
| <b>2. 2 - 4 GPs</b>                                | 989              | 115,587                  | 116.9                      | 464              | 1,177             | 494                      | 1,297                  | 2,968               |
| <b>3. 5 - 9 GPs</b>                                | 542              | 73,809                   | 136.2                      | 484              | 1,219             | 528                      | 1,408                  | 3,155               |
| <b>4. Over 9 GPs</b>                               | 165              | 43,754                   | 265.2                      | 515              | 1,302             | 491                      | 3,416                  | 5,209               |
| <b>No. of Patients with Hypertension Incentive</b> |                  |                          |                            |                  |                   |                          |                        |                     |
| <b>1. No Incentives</b>                            | 285              | 1,298                    | 4.6                        | 666              | 1,966             | 707                      | 5,642                  | 8,315               |
| <b>2. 1 - 24</b>                                   | 65               | 766                      | 11.8                       | 478              | 1,157             | 373                      | 1,944                  | 3,474               |
| <b>3. 25 - 99</b>                                  | 1                | 39                       | 39.0                       | 452              | 1,176             | 388                      | 703                    | 2,266               |
| <b>4. 100 or more</b>                              | 2,982            | 344,180                  | 115.4                      | 484              | 1,275             | 538                      | 1,726                  | 3,539               |

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

**Table 14: Indicators for Complex Care Patients April 2007 to March 2008 By Payee Characteristics (RUB 3 to RUB 5, Minimum 5 GP Services)**

| Averages   | Number of Payees | Total Number of Patients | Average Number of Patients | Average GP Costs | Average MSP Costs | Average Pharmacare Costs | Average Hospital Costs | Average Total Costs |
|--|------------------|--------------------------|----------------------------|------------------|-------------------|--------------------------|------------------------|---------------------|
| <b>All</b>   | 3,172            | 216,800                  | 68.3                       | 789              | 2,037             | 1,318                    | 3,707                  | 7,061               |
| <b>Number of Patients per Payee</b>                |                  |                          |                            |                  |                   |                          |                        |                     |
| <b>1. Under 10</b>                                 | 568              | 1,966                    | 3.5                        | 731              | 2,159             | 1,443                    | 5,602                  | 9,205               |
| <b>2. 10-24</b>                                    | 393              | 6,588                    | 16.8                       | 729              | 1,975             | 1,343                    | 3,511                  | 6,829               |
| <b>3. 25 or more</b>                               | 2,211            | 208,246                  | 94.2                       | 815              | 2,017             | 1,281                    | 3,255                  | 6,552               |
| <b>Attachment to Practice</b>                      |                  |                          |                            |                  |                   |                          |                        |                     |
| <b>1. Under 40</b>                                 | 102              | 570                      | 5.6                        | 855              | 2,721             | 1,736                    | 9,429                  | 13,886              |
| <b>2. 40% - 59%</b>                                | 541              | 10,794                   | 20.0                       | 743              | 2,139             | 1,160                    | 5,438                  | 8,737               |
| <b>3. 60% - 74%</b>                                | 573              | 24,609                   | 42.9                       | 770              | 2,035             | 1,430                    | 3,882                  | 7,347               |
| <b>4. 75% - 84%</b>                                | 916              | 67,507                   | 73.7                       | 769              | 1,953             | 1,376                    | 3,162                  | 6,492               |
| <b>5. 85% or more</b>                              | 1,040            | 113,320                  | 109.0                      | 835              | 1,991             | 1,245                    | 2,628                  | 5,865               |
| <b>Size of Payee Group</b>                         |                  |                          |                            |                  |                   |                          |                        |                     |
| <b>1. Single Practice</b>                          | 1,498            | 71,521                   | 47.7                       | 786              | 2,136             | 1,348                    | 4,325                  | 7,809               |
| <b>2. 2 - 4 GPs</b>                                | 979              | 73,553                   | 75.1                       | 795              | 1,932             | 1,318                    | 2,880                  | 6,130               |
| <b>3. 5 - 9 GPs</b>                                | 531              | 45,844                   | 86.3                       | 802              | 1,985             | 1,295                    | 3,070                  | 6,350               |
| <b>4. Over 9 GPs</b>                               | 164              | 25,882                   | 157.8                      | 743              | 1,927             | 1,104                    | 5,060                  | 8,091               |
| <b>No. of Incentives Claimed</b>                   |                  |                          |                            |                  |                   |                          |                        |                     |
| <b>1. No Incentives</b>                            | 275              | 1,342                    | 4.9                        | 795              | 2,518             | 1,514                    | 7,970                  | 12,001              |
| <b>2. 1 - 24</b>                                   | 600              | 7,786                    | 13.0                       | 734              | 1,995             | 1,400                    | 3,864                  | 7,258               |
| <b>3. 25 - 99</b>                                  | 809              | 33,457                   | 41.4                       | 736              | 1,970             | 1,284                    | 3,314                  | 6,568               |
| <b>4. 100 or more</b>                              | 1,488            | 174,215                  | 117.1                      | 840              | 2,002             | 1,266                    | 3,069                  | 6,337               |
| <b>No. of Patients with Complex Care Incentive</b> |                  |                          |                            |                  |                   |                          |                        |                     |
| <b>1. No Incentives</b>                            | 330              | 1,953                    | 5.9                        | 795              | 2,404             | 1,468                    | 7,179                  | 11,050              |
| <b>2. 1 - 24</b>                                   | 1,154            | 30,574                   | 26.5                       | 734              | 1,999             | 1,351                    | 3,651                  | 7,001               |
| <b>3. 25 - 99</b>                                  | 1,364            | 114,494                  | 83.9                       | 797              | 1,974             | 1,270                    | 3,087                  | 6,331               |
| <b>4. 100 or more</b>                              | 324              | 69,779                   | 215.4                      | 946              | 2,065             | 1,247                    | 2,980                  | 6,291               |

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