

## DIABETES PERFORMANCE MEASURES AT THE PHYSICIAN LEVEL

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All insured patients in British Columbia with diabetes have been identified, based on a specific case definition<sup>1</sup> applied to administrative data bases. Those patients receiving certain diabetes related services during 1999/2000 were identified. In a recent report we showed performance measures grouped by the home address of the beneficiaries (*Teasing Management Information from Accounting Data*, October 2001). This analysis examines how performance might be reported at the level of the physician caring for the patient.

### Who is the physician responsible for the patients care?

There is no simple answer to this question. We have chosen to explore three different possible answers, although there are many ways that patients can be allocated to physicians. In each method we only considered general practitioner services and ignored all specialty or diagnostic services. The amount paid for general practitioner services during 1999/2000 were summed for each patient for each practitioner.

#### Method 1. Most responsible primary care provider.

The patient was allocated to:

- the physician who was paid for the largest amount of services to the patient;
- where two or more physicians were paid the same amount, the patient was allocated to the one who provided the last service in the fiscal year;
- where two or more physicians were paid the same amount, and the last services were provided by each physician on the same day, the patient was allocated to the physician with the higher practitioner number (only 16 records fell into this last category).

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<sup>1</sup> A beneficiary of the Medical Services Plan was considered to have diabetes if at least two medical visits were coded as diabetes within a twelve month period since 1991, and/or at least one hospital separation has been coded as diabetes (at any level) since 1991. Pharmacare data was not used in this analysis.

## **Method 2. Most responsible, or equally responsible, primary care provider.**

The patient was allocated to:

- the physician who was paid for the largest amount of services to the patient;
- where two or more physicians were paid the same amount, the patient was allocated to **both** physicians.

## **Method 3. All primary care providers.**

Patients were allocated to every physician who had provided general practice services to them during the year.

### **The results**

There were 162,536 beneficiaries meeting the case definition for diabetes in any year since 1991 up to 2000, and who were alive and registered with the Medical Services Plan on April 1, 1999. A total of 8,243 of these beneficiaries did not receive a general practitioner service billed to the Medical Services Plan during the year and so were not allocated in any of the methods.

There were 3,861 physicians identified as the 'most responsible physician' (method 1) for patients who did see a physician during 1999/2000. Restricting the analysis to doctors with 21 or more patients with diabetes gives 2,477 doctors who cared for 143,240 patients.

There were 3,955 physicians identified as the 'most or equally responsible physician' (method 2) for these patients. This method attributes some patients to more than one physician, resulting in 168,480 patient observations. Restricting the analysis to doctors with 21 or more patients with diabetes gives 2,552 doctors who cared for 148,834 patients.

There were 4,485 physicians identified as providing some care for these patients (method 3). As patients were often assigned to more than one physician there were 333,120 patient observations. Restricting the analysis to doctors with 21 or more patients with diabetes gives 3,597 doctors who cared for 326,569 patients.

<i>Number of patients per doctor</i>	<i>Number of doctors</i>		
	Method 1	Method 2	Method 3
Up to 10	912	920	610
11 to 20	472	483	278
21 to 50	1187	1216	879
51 to 100	1097	1133	1467
101 to 150	150	158	821
151 to 200	32	33	280
201 to 250	10	11	82
251 to 300	1	1	48
Over 300	0	0	20

### Results restricted to doctors with 21 or more patients

<i>Number of patients per doctor</i>	<i>Number of doctors</i>		
	Method 1	Method 2	Method 3
21 to 30	400	404	294
31 to 50	787	812	585
51 to 70	639	641	615
71 to 90	368	396	583
91 to 110	137	143	509
111 to 130	69	73	347
131 to 150	34	0	0
151 to 170	20	38	234
171 to 190	9	20	161
191 to 210	7	9	92
211 to 230	3	9	51
231 to 250	3	6	58
251 to 270	0	1	19
271 to 290	1	0	21
over 290		0	28

**At least one measurement of HbA1c within the year**

<i>Percentage of patients tested</i>	<i>Number of doctors</i>		
	Method 1	Method 2	Method 3
up to 10	0	0	0
11 to 20	11	12	4
21 to 30	34	34	19
31 to 40	91	95	63
41 to 50	218	245	207
51 to 60	422	471	790
61 to 70	683	705	1350
71 to 80	688	682	910
81 to 90	295	281	240
over 90	35	27	14

**At least one lipid test within the year**

<i>Percentage of patients tested</i>	<i>Number of doctors</i>		
	Method 1	Method 2	Method 3
up to 10	15	19	8
11 to 20	70	71	45
21 to 30	269	309	260
31 to 40	568	605	913
41 to 50	663	684	1232
51 to 60	476	462	757
61 to 70	291	286	302
71 to 80	98	93	69
81 to 90	25	20	6
over 90	2	3	5

**At least one test for micro albumen during the year**

<i>Percentage of patients tested</i>	<i>Number of doctors</i>		
	Method 1	Method 2	Method 3
up to 10	461	474	307
11 to 20	532	571	846
21 to 30	523	542	1152
31 to 40	402	415	749
41 to 50	281	297	377
51 to 60	179	162	127
61 to 70	77	71	34
71 to 80	20	18	4
81 to 90	2	2	1
over 90	0	0	0