


Chronic Disease Management



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A Snapshot of Diabetes Care in British Columbia 2003/04

Since our first snapshot in Oct. 2002, the number of people with diabetes has grown as expected. Care for the health problems associated with diabetes continues to place large demands on our health system.

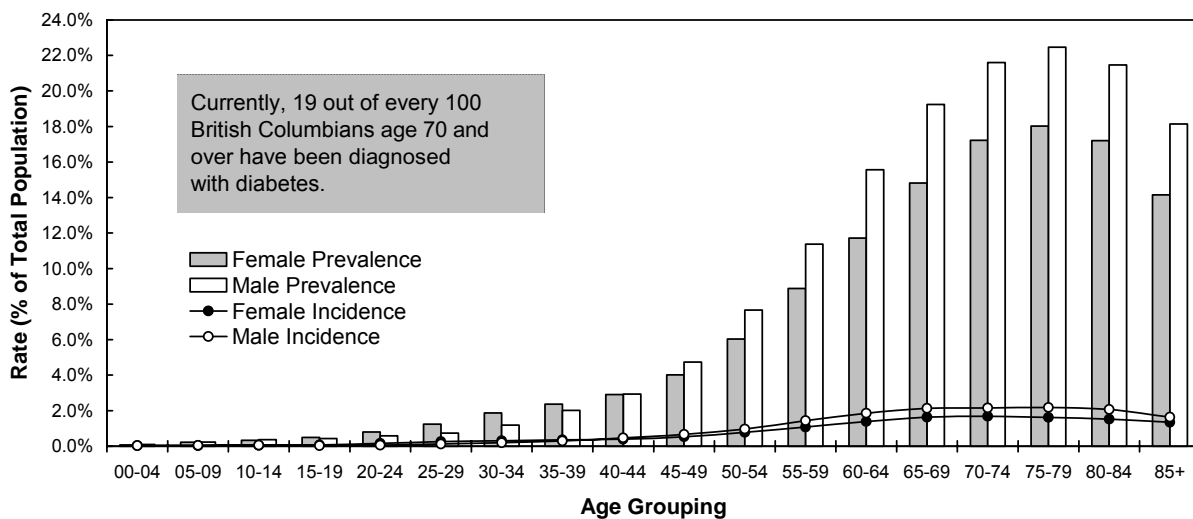
In 2004, 5.4 per cent of the total population, or 228,013 patients, were diagnosed with diabetes. By 2010, it is estimated that the

prevalence of diabetes will increase to about 325,000 patients.

As the majority of new cases occur in people over 45 (see Figure 1), prevention for this age group remains the greatest challenge.

The good news is that today, more doctors are providing guideline-based care for their patients.

Figure 1: Age and gender rates for diabetes incidence and prevalence in B.C. (2003/04)



Notes:

- (1) Prevalence is the rate of both newly and previously identified cases living in the population.
- (2) Incidence is the average rate of new cases over one year.
- (3) Unidentified persons with diabetes could include people with Type 2 diabetes who:
 - a. are under the PharmaCare deductible limit;
 - b. do not meet the case definition; or
 - c. have not yet been diagnosed with diabetes.
- (4) Cases with unknown gender excluded.
- (5) The case definition is met by any of the following:
 - a. MSP – at least 2 physician visits coded as diabetes within a 12-month period.
 - b. Hospital – at least 1 hospital separation coded as diabetes.
 - c. PharmaCare – receiving oral hypoglycemics, insulin or glucose testing strips.
- (6) Cases for 2000/01 are slightly underestimated due to incomplete follow-up (12 months) of MSP component of the incident case definition.

COSTS OF ASSOCIATED HEALTH PROBLEMS

Diabetes is associated with a cluster of serious complications that include coronary heart disease and kidney, nerve or retinal damage, which can lead, ultimately, to premature death. With early detection, patients stand a better chance of avoiding complications and the corresponding treatments such as coronary bypass, angioplasty, kidney dialysis, retinal surgery and lower limb amputation.

Table 1: Utilization rates for diabetes patients over the age of 50 (2003/04)

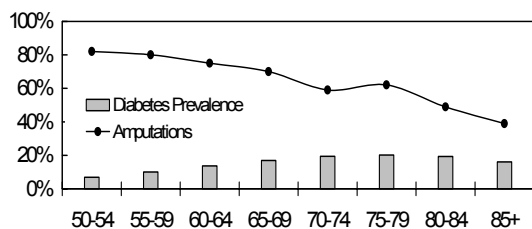
Care Provided in 2003/04	Entire Province 50 years+	Percent with Diabetes 50 years+
Number of People	1,298,810	14%
Retinal Surgeries	5,443	63%
Amputations	631	61%
Dialysis	2,627	48%
CABGs	2,452	39%
Angioplasties	5,046	31%
Cataract Surgeries	30,353	23%

Total diabetes patients over the age of 50 in British Columbia: 183,403 (14% of the population).

Notes: Population data was limited to patients 50 years of age and above to allow for more meaningful comparison of care.

In 2003/04, diabetes patients made up 14 per cent of the population aged 50 years and older. In contrast, this population consumes a high percentage of the province's surgical and medical services (see Table 1).

Figure 2: Percentage of amputations performed on patients with diabetes by age category (2003/04)



The number of amputations performed on patients with diabetes varies considerably among the age groups (see Figure 2). For example, in 2003/04, while patients with diabetes aged 50-54 represented just seven per cent of the population, this group accounted for 82 per cent of all diabetes-associated amputations.

RECOMMENDED MEDICAL GUIDELINES FOR PROACTIVE DIABETES MANAGEMENT

The joint MOHS/BCMA Guidelines and Protocols Advisory Committee (GPAC) recommends evidence-based practices. Not only does this approach improve health outcomes for patients, it also supports projected economic benefits to the health care system by lowering long-term utilization.

More doctors getting better results

As a result of these medical guidelines, an increasing number of doctors are managing patients according to evidenced-based best practices. In 2003/04, this can be seen in the number of doctors providing patients with the recommended eye, A1C, microalbumin (Ma) and lipid tests (see Table 2).

Table 2: Number of physicians providing the recommended services to their patients (by percentage) in 2003/04.

Patients Tested	Number of Physicians			
	A1C	Lipid	Ma	Eye
<10%	30	9	91	1
10-19%	147	10	267	19
20-29%	393	3	367	118
30-39%	613	3	483	575
40-49%	676	17	563	1018
50-59%	576	53	540	814
60-69%	290	227	344	231
70-79%	76	657	141	37
80-89%	14	1097	20	3
≥90%	1	740	0	0

Notes:

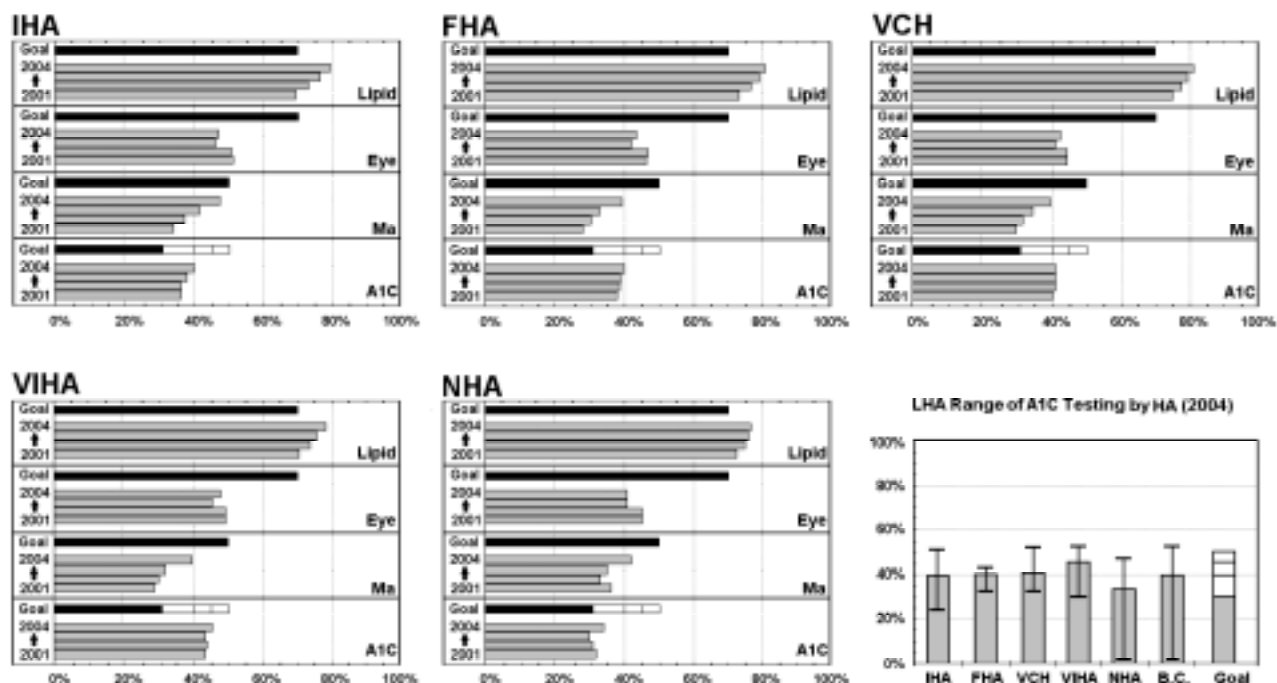
(1) Only doctors with 20 or more patients with diabetes are included (total: 2816)

(2) Services for fiscal 2003/04 include those paid to March 31, 2004.

(3) Data are limited to medical claims for B.C. patients receiving services from B.C. doctors with specialties 00 to 21, 23, 24, 28 29, 33, 44, 47 or 48; and service codes between 1-9, 22-30, 40, or 89 and 98.

(4) MSP fee items used – A1C 91375; Lipid: 91375, 91780, 92350; Microalbumin: 92396, 91985; Eye exam performed by an ophthalmologist: 02010, 02011, 02040, 02039; or performed by an optometrist: 2898, 2899.

Figure 3: Performance measures for recommended care by Health Authority (2001-2004)



Notes:

Recommended diagnostic care goals set by the BC Diabetes Collaborative include: Lipid: >90% at least one per year, or as recommended; Eye: >70% at least one examination every year; and Ma (Microalbumin): >50% at least one test per year.

A1C target goals set by the 2004/05-2006/07 Ministry of Health Service Plan: 2 tests per year for 30% of patients in 2004. Future targets of 40% in 2005, 45% in 2006, and 50% in 2007 are indicated white boxes.

IHA = Interior Health; FHA = Fraser Health; VCH = Vancouver Coastal Health; VIHA = Vancouver Island Health; and NHA = Northern Health. Range is determined by plotting the highest and lowest performing Local Health Area (LHA) for each Health Authority (HA).

DIABETES MANAGEMENT WITHIN EACH HEALTH AUTHORITY

In 2004, the BC Diabetes Collaborative, composed of representatives from the BCMA, provincial health authorities, and the Ministry of Health Services, identified ambitious “stretch goals” for eye, A1C, microalbumin and lipid tests.

Figure 3 depicts the trends of recommended care in each health authority over the four preceding years. Lipid testing had shown improvements in each of the four years and exceeded the target goal of 70 per cent. Microalbumin (Ma) testing also has increased since 2001; however, it was still below the 50 per cent benchmark. Eye examination rates have fallen throughout the province.

A1C Testing

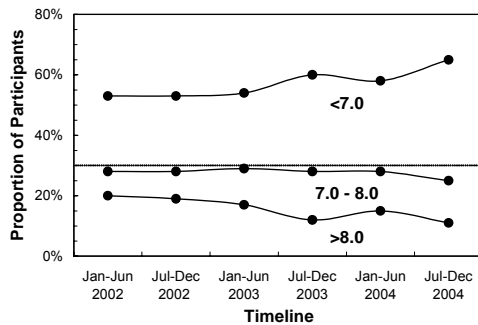
In 2004, the Ministry of Health Services established progressive A1C testing goals of 30 per cent for 2004, 40 per cent for 2005, 45 per cent for 2006, and 50 per cent for 2007 in the Health Services Plan. This value is more

conservative than the BC Collaborative goal of 90 per cent, which is not included in Figure 3. In 2004, the provincial average met the target in the Health Services Plan, with the highest levels of A1C testing in the Vancouver Island Health region. The lowest and highest levels for A1C monitoring are also indicated for each Local Health Area (LHA) in comparison with health authority averages. Low values may reflect inconsistencies with administrative data.

Results from Kelowna

A pilot project administered by Valley Medical Labs within Interior Health has made important steps towards developing functional and productive relationships between patients with diabetes and their practitioners. Over time, a higher proportion of patients participating in the program have achieved desirable A1C levels, and the proportion with undesirably high levels has declined (see Figure 4).

Figure 4: Valley Medical Labs Trial Program proportion of participants by level of A1C (2002-2004)



EXPANDING SELF-MANAGEMENT TRAINING

Simple lifestyle changes aimed at reducing weight (5 to 10 lbs) and increasing levels of physical exercise (150 minutes of moderate aerobic exercise each week) will lower the chance of diabetes onset by over 50 per cent and reduce comorbidity rates.

B.C. is offering a chronic disease self-management program to help meet these goals. This program is led by Dr. Patrick McGowan at the University of Victoria Center on Aging. It offers patients and programs educational courses in the fundamental principles of self-management. This program provides patients with the emotional support, knowledge and skills required to live a more active, healthy lifestyle. Since 2001, 835

leaders have been trained, and over 4,200 patients have taken the course.

In addition to simple diet changes and an increase in physical activity, patients are encouraged to work in partnership with their family practitioners to monitor performance measures such as eye health and A1C, blood cholesterol, and microalbumin levels.

Table 3: Total number of participants in the Chronic Disease Self-Management Program (CDSMP) by Health Authority (2003/04)

CDSMP Totals 2000-2004				
HA	Leader Training Courses	Leaders Trained	Courses Delivered	Total Participants
IHA	19	223	98	1066
FHA	6	59	31	381
VCH	28	315	210	2150
VIHA	15	154	48	447
NHA	9	84	20	184
Total	77	835	407	4228

Notes: Course participants include patients suffering from a chronic disease, which may or may not include diabetes, people at risk for chronic disease and patient supporters.

HELPFUL LINKS AND RESOURCES

- BC Medical Services Commission Guidelines <http://www.healthservices.gov.bc.ca/msp/protoguides/>
- BC Ministry Health Services and Planning Chronic Disease Management CDM website <http://www.healthservices.gov.bc.ca/cdm>
- BC HealthGuide <http://bchealthguide.org>
- Canadian Diabetes Association <http://www.diabetes.ca>
- The Diabetes Self-Management Program: Project evaluation. <http://www.healthservices.gov.bc.ca/cdm/research/cdsmppeval2003.pdf>
- Health Canada <http://www.hc-sc.gc.ca/english/diseases/diabetes.html>
- UKPDS Risk Engine – provides estimates of cardiovascular risk for patients with diabetes <http://www.dtu.ox.ac.uk/index.html?maindoc=/riskengine/>

KEY REFERENCES

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