

Chronic Disease Management



Ministry of Health Services

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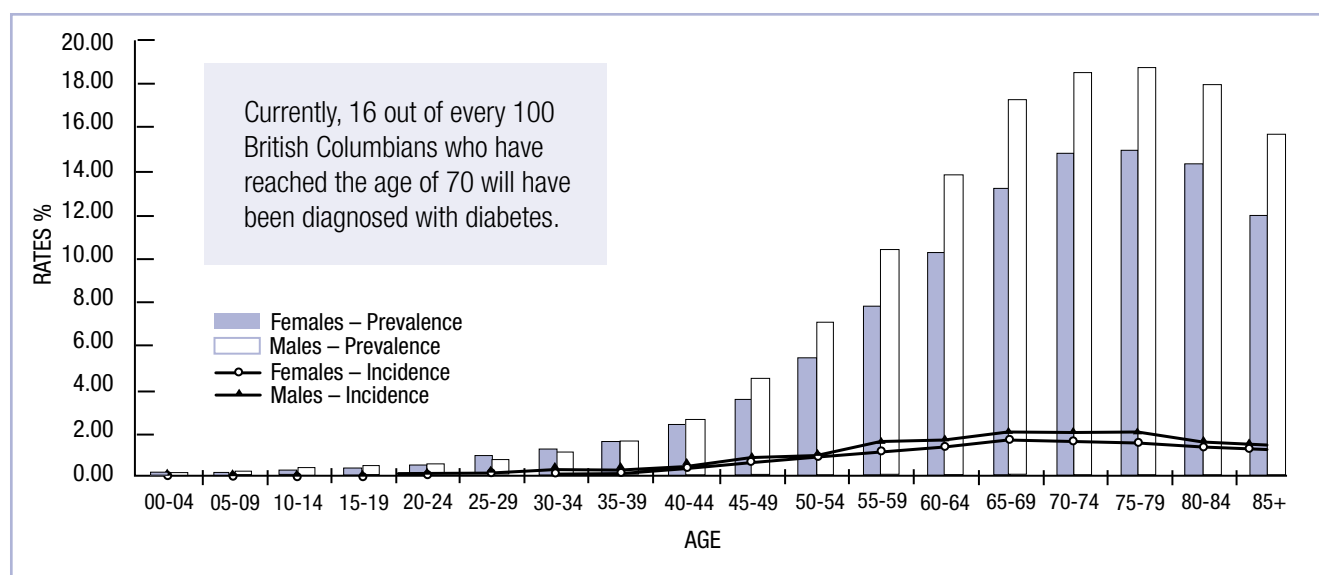
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A Snapshot of Diabetes Care in British Columbia 2000/2001

This snap shot provides information on the number of people in British Columbia who have diabetes, the burden it places on them, and how the care they received compares with recommended care. Promising research on preventing new cases of diabetes is also discussed.

In 2000/2001, approximately 175,000 British Columbians were living with diabetes. Diabetes afflicts people of all ages. It most frequently occurs in people 65 years and older.

Figure 1 Diabetes Incidence and Prevalence, Age-Specific Rates, by Gender, B.C. 2000/01



Notes:

- (1) Incidence is the rate at which new cases are identified in the population.
- (2) Prevalence is the rate of both newly and previously identified cases living in the population.
- (3) Unidentified persons with diabetes could include people with Type 2 diabetes who:
 - (a) are under the Pharmacare deductible limit; or
 - (b) do not meet the case definition; or
 - (c) have not been medically ascertained.
- (4) The case definition is met by any of:
 - (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 at any diagnostic level.
 - (c) Pharmacare – receiving drug therapy for diabetes or using diabetes test strips.
- (5) Cases with unknown gender excluded.
- (6) Cases for 2000/2001 are slightly under-estimated due to incomplete follow-up (12 months) of MSP component of the incident case definition.

The Burden of Diabetes In British Columbia (2000/2001)

Using Medical Services Plan administrative data, the Ministry of Health Services and Ministry of Health Planning have developed a profile of British Columbians diagnosed with diabetes. While still a work in progress,

the goal of this profile is to identify patients with apparent need for diabetes care, and ultimately to assist in improving patient outcomes.

Although people with diabetes comprise a little over 4% of the population, they represent a much larger proportion of people receiving care for serious problems.

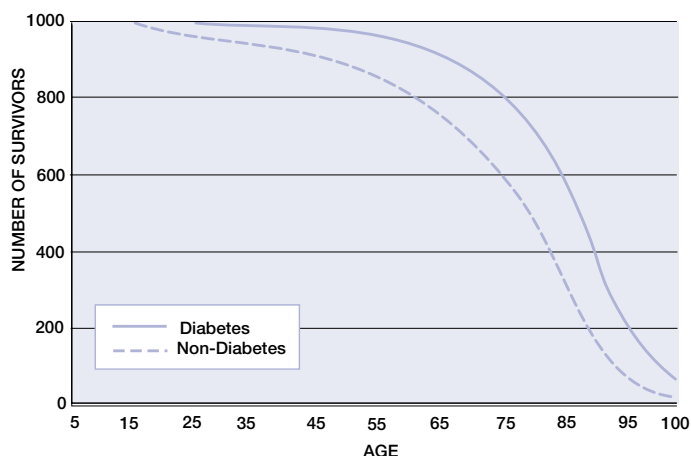
***Table 1:**

Care Provided In 2001/2002	People With Diabetes	Entire Province
Number of People	175,000	4,055,000
Surgery for disorders of the retina	3,907	6,516
Toes, feet or lower limbs amputated	390	703
Surgery for cataracts	5,311	27,358
Coronary artery bypass surgery	775	2,390
Coronary angioplasties	1,122	4,370
Dialysis for any reason	1,075	2,727

*On average, people with diabetes are much older than the general population. In the absence of age-specific breakdowns, any comparisons of the diabetes cohort with the entire province should be interpreted with caution.

Based on age-specific mortality rates, Figure 2 below compares the projected life expectancy of people with diabetes versus the general population. As shown, people with diabetes are more likely to die younger.

Figure 2: Constructed Survival Curves¹ for People with Diabetes and General Population



¹Survival curves were constructed by applying the 2000/2001 age and gender-specific mortality rates to a hypothetical cohort of 1000 individuals. The mortality rates for 2000/2001 are assumed to be constant throughout the individuals' lifetimes.

Diabetes Care in British Columbia in 2000/2001

Medical studies have shown that many of the complications of diabetes can be delayed or even prevented by providing good clinical care. Good care includes control of glycemia, lipids and blood pressure; early detection and treatment of retinal problems, disease or abnormality of the kidney and foot disease; and influenza and pneumococcal vaccines. Research has also shown that although most of these treatments are effective, the provision of good clinical care varies.

Diabetes care guidelines recommend that 80% to 100% of a practice's diabetes patient population should receive certain services on a regular basis. Many of B.C.'s family physicians provide optimal diabetes care and achieve good results. On a province-wide basis, however, there is room for improvement (See Table 2).

Recommended care includes:

- At least two HbA_{1c} tests within the year
- At least one eye exam within two years
- At least one microalbumin test per year
- At least one lipid test within three years

Table 2: People with Diabetes and Proportion Receiving Recommended Services 2000/2001

Without intervention, the number of people who develop serious illnesses as a complication of diabetes will continue to increase, resulting in significant human and economic costs.

Health services area of patient	Number of people with diabetes	TESTS			
		HbA _{1c}	Eye Exam	Microalbumin	Lipid
11 - East Kootenay	2,953	37%	55%	30%	71%
12 - Kootenay/Boundary	3,441	37%	58%	36%	70%
13 - Okanagan	13,815	36%	50%	28%	67%
14 - Thompson/Cariboo	9,281	34%	50%	42%	70%
21 - Fraser Valley	11,192	35%	46%	27%	71%
22 - Simon Fraser	22,302	40%	47%	26%	74%
23 - South Fraser	26,403	37%	46%	30%	73%
31 - Richmond	7,494	46%	44%	33%	80%
32 - Vancouver	25,959	40%	42%	29%	75%
33 - North Shore/Coast Garibaldi	8,956	37%	51%	28%	72%
41 - South Vancouver Island	17,369	47%	51%	30%	71%
42 - Central Vancouver Island	11,329	38%	49%	25%	70%
43 - North Vancouver Island	2,295	41%	42%	30%	69%
51 - Northwest	3,242	28%	50%	39%	78%
52 - Northern Interior	5,847	37%	45%	36%	78%
53 - Northeast	2,001	28%	40%	34%	53%
Unknown	942	25%	29%	19%	60%
Total	174,821	39%	47%	30%	72%

Notes:

Beneficiaries insured under the Medical Services Plan (MSP) during 2000/01 were assumed to have diabetes if: they had received two or more services (on different dates) paid by MSP over any two year period since 1992, where the ICD-9 diagnostic code given included the first three digits 250 (diabetes mellitus); or they had one or more hospital discharges where an ICD-9 code given included the first three digits 250; or they had received one Pharmacare service [i.e., glucose testing strips, oral hypoglycaemics, or insulin].

Data are limited to medical claims for BC patients receiving services from BC doctors only with specialties 00 to 21, 23, 24, 28, 29, 33, 44, 47, or 48 and service codes between 1 and 9, 22 and 30, 40 and 49, 71, 89 and 98. The health region for each patient is based on the patient's residential postal code reported at the time of service.

MSP fee items used: HbA_{1c} 91745; Lipid 91375, 91780, 92350; Microalbumin: 92396, 91985; Eye examination performed by an ophthalmologist: 02010, 02011, 02015; 02040, 02039; or performed by an optometrist: 2898, 2899.

Research indicates that Type 2 diabetes can be delayed or prevented

Experts predict that within the next few years, the number of people with diabetes will increase by as much as 90%. However, major medical studies have now shown that through modest exercise and proper nutrition, the onset of Type 2 diabetes among people with impaired glucose tolerance or impaired fasting glucose can be reduced by about 58%.

Screening people for impaired glucose tolerance/fasting glucose during office visits, and initiating lifestyle intervention, could dramatically reduce the incidence of new cases of diabetes (i.e., only 7 out of every 100 British Columbians reaching the age of 70 will be diagnosed with diabetes).

Ministry of Health Services/Planning Diabetes-Related Resources

The B.C. Medical Service Commission Guidelines available at:
<http://www.healthservices.gov.bc.ca/msp/protoguides>

The Ministry's Utilization Management Branch and the Business Planning, Surveillance and Epidemiology Branch have developed a diabetes registry which, through further refinement, will assist in the delivery of optimal diabetes care in B.C. (e.g., allow tracking of diabetes incidence rates, monitor quality of patient care, assist with patient recall to ensure that patients with diabetes are seen at appropriate times).

The Ministry's chronic disease management web site contains diabetes information of interest to physicians and other health professionals (Business Case for the B.C. Diabetes Initiative, utilization data, performance information), patients (general information and diabetes resources), and the general public and health administrators (research, reports, and work being done in B.C.) See <http://www.healthservices.gov.bc.ca/cdm>

Basic information on diabetes can be found in the *BC HealthGuide* and web site at:
<http://bchealthguide.org>

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