



Maternal mortality: an important priority

We were pleased to read Donna Stewart's analysis of maternal mortality in Canada¹ and we fully agree that prevention of maternal mortality and morbidity requires a broad view. Dr. Stewart's concern about the limited knowledge of maternal deaths in Canada is echoed in our 2004 document on maternal mortality and severe morbidity in Canada.² The reported maternal mortality ratio of 6.1/100 000 live births consists of direct and indirect obstetric deaths, and excludes maternal deaths that occur beyond 42 days after the termination of the pregnancy and those that occur from "accidental or incidental causes."³ We gathered some information on deaths in these categories, but generally in Canada this information is not well captured. This leads to under-ascertainment of maternal deaths due to unintentional injury, violence and mental illness.

Through the Canadian Perinatal Surveillance System (CPSS), the Public Health Agency of Canada and the Society of Obstetricians and Gynaecologists of Canada are continuing to work with provincial and territorial governments to improve the surveillance and review of maternal deaths. The number of provincial, territorial or regional maternal death review committees is increasing. The CPSS and partners are working on measures to improve ascertainment of maternal deaths through the vital statistics system. In

addition, the implementation of ICD (*International Classification of Diseases*)-10, with its code of "late maternal death" for those direct and indirect obstetric deaths that occur between 42 days and one year after the end of the pregnancy, should improve ascertainment of these deaths.

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Diabetes and the proactive laboratory

Graham Woodward and associates¹ recently reported on poor adherence to the Canadian Diabetes Association

(CDA) guidelines in the general population of eastern Ontario. A similar situation in British Columbia in 2001² led the Medical Services Commission and the British Columbia Medical Association to ask their joint Guidelines and Protocols Advisory Committee to suggest ways to enhance the management of diabetes. This effort led to the creation of the Kelowna Diabetes Program (KDP), through which a community medical laboratory assists people with diabetes (and their physicians) to achieve many of the goals recommended by the CDA.

The program involves an appointment and reminder system for laboratory testing that is based on the CDA guidelines and standing orders received from primary care physicians. In addition to regular laboratory reports, physicians receive periodic reports summarizing their patients' participation. Patients receive their own test results, along with explanatory comments and target goals for glycosylated hemoglobin (HbA_{1c}), blood pressure, low-density lipoprotein cholesterol and risk ratio; they are also reminded of the importance of regular eye examinations. In addition to tests for variables typically associated with follow-up for diabetes (HbA_{1c}, lipids, creatinine, urine microalbumin), patients undergo automated blood pressure measurements at each visit and have a yearly check of their glucometers for accuracy.

The project was conceived to assist busy physicians and their patients in

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managing diabetes in accordance with current CDA guidelines, but it was also anticipated that it could materially affect outcomes as measured by laboratory data initially and by clinical outcomes later.

Initiated in January 2002, the project has been enthusiastically accepted. As of Oct. 31, 2005, 118 (96%) of 123 local family physicians were participating in the program, and 5723 (76%) of an estimated 7500 people with dia-

betes in the Central Okanagan had been registered. Of these, 3937 (69% of 5723) were active participants; reasons for nonparticipation after registration include advanced disease, age and patient disinterest. An additional 951 (13% of 7500) people with diabetes have been identified and are now being registered.

The project relies on the administrative structure and information systems of the laboratory. A sophisticated computer system allows generation of special reports, letters and analyses of the growing database. A physician advisory group of 7 local family practitioners guides the evolution of the project.

After more than 4 years of operation, the project appears to have had a number of positive effects. The majority of people with diabetes in the Kelowna area have been identified, and KDP participants have had greater success than nonparticipants (and all people with diabetes in the province) in meeting the schedule of testing recommended by the CDA (Table 1). Participants have also had greater success than nonparticipants in achieving the recommended metabolic targets (Table 2). This is of particular significance in light of the reported association between achieving targets and the prevention of the complications of diabetes,³ which could yield major cost savings in the provision of health services to this segment of the population over the long term.

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Table 1: Adherence to selected management guidelines for diabetes

Guideline	Year;* % of people with diabetes			
	2002	2003	2004	2005
<i>Two or more HbA1c tests/yr</i>				
Kelowna – KDP participants	65	74	81	79
Kelowna – KDP nonparticipants	0	30	44	42
BC total†	39	39	41	42
<i>Lipid testing</i>				
Kelowna – KDP participants	63	72	78	82
Kelowna – KDP nonparticipants	18	36	35	53
BC total†	75	78	80	82
<i>Urine microalbumin testing</i>				
Kelowna – KDP participants	63	72	77	75
Kelowna – KDP nonparticipants	12	25	25	39
BC total†	31	34	40	43

HbA_{1c} = glycosylated hemoglobin; KDP = Kelowna Diabetes Program.
*KDP year ends Dec. 31; Ministry of Health year (for BC data) ends Mar. 31.
†BC data courtesy H. Platt, Director, Medical Outcomes Improvement Branch, Ministry of Health Services, Victoria, BC (personal communication, Sept. 12, 2005).

Table 2: Results for key diabetes-related variables

Guideline	Year; % of tests			
	2002	2003	2004	2005
<i>HbA1c result ≤ 7%</i>				
Kelowna – KDP participants	56	60	64	60
Kelowna – KDP nonparticipants	58	63	57	50
<i>LDL cholesterol result ≤ 2.5 mmol/L</i>				
Kelowna – 1 KDP participants	33	38	49	53
Kelowna – KDP nonparticipants	35	30	38	41

HbA_{1c} = glycosylated hemoglobin; KDP = Kelowna Diabetes Program, LDL = low-density lipoprotein.

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