

SMBG Casebook



Knowledge Exchange Casebook: *Café Scientifique* Events on SMBG

The methodology and impact of a series of *Café Scientifique* events across Canada to exchange the knowledge generated by CADTH's study into self-monitoring of blood glucose by people with type 2 diabetes not using insulin



Canadian Agency for
Drugs and Technologies
in Health

The Canadian Agency for Drugs and Technologies in Health

The Canadian Agency for Drugs and Technologies in Health (CADTH) is an independent agency funded by Canada's federal, provincial and territorial governments. Our mandate is to deliver reliable, timely, evidence-based information to Canada's health care leaders about the effectiveness and efficiency of drugs, devices, and other health technologies. Decision-makers depend on CADTH to help them use technologies appropriately, optimize their investment in health care, and generate the best outcomes for patients and for the health care system as a whole.

CADTH does not make decisions on what medications and technologies governments should fund. Rather, we provide impartial, evidence-based guidance that informs decisions across Canada. We are also dedicated to broadly sharing the knowledge gained from our research so we can generate a meaningful impact on our health care system and the health of Canadians.

The Case

CADTH's Research into Self-Monitoring of Blood Glucose

In Canada, 90% of people with diabetes have type 2 diabetes—a form of the disease that occurs when the pancreas does not produce enough insulin or the body does not effectively use the insulin it produces. Since diabetes is a chronic disease and the number of Canadians living with it is growing rapidly, the impact of diabetes on individuals and on Canada's health care system is substantial.

Among diabetes management topics CADTH looked at was the use of test strips to monitor blood glucose levels. It's an important topic because in the past 12 years the overall utilization of blood glucose test strips has increased by 250%. And despite widespread use, the benefits of self-monitoring of blood glucose (SMBG) were unknown, especially in patients with type 2 diabetes not using insulin. In fact, in 2006 Canada's public and private drug plans spent an estimated \$188 million on test strips for patients not using insulin (more than 50% of the total spent in Canada every year).

CADTH undertook a systematic review and meta-analysis of clinical studies evaluating the efficacy of SMBG and developed an economic model to address the cost effectiveness of SMBG in Canada. We also included an assessment of current blood glucose test strip utilization and focus groups with care providers and people living with diabetes to better understand the factors which influence how SMBG is practised in Canada. A committee of experts, including family physicians, pharmacists, health economists, public members, and diabetes specialists, considered the evidence and developed the recommendations.

“The information will challenge me in my practice to consider why I recommend a specific type of self-monitoring and understand how it will impact the “bigger picture”

HALIFAX

The analysis revealed that patients with type 2 diabetes not using insulin, who tested themselves frequently (more than seven times a week) reduced their hemoglobin A_{1c} levels by only 0.25 per cent, which fell short of what the committee considered clinically significant. In addition, the long-term impact of routine testing on health outcomes for patients (i.e., reduction in rates of myocardial infarction or stroke) was found to be negligible. Key messages from this work include:

- Most patients with type 2 diabetes not using insulin do not have to test as much as they do now, and this will not affect their health in a negative way.
- However, more frequent testing may be appropriate for patients taking medication that puts them at risk of developing hypoglycemia. More frequent testing may also be needed when patients are sick, changing medications, or when glucose levels are poorly controlled.
- It is important for people with diabetes to consider more than blood sugar results in the self-management of their disease. Heart health, medication adherence, blood pressure, diet, weight-management, and exercise are all essential to achieving a healthy balance.

For more detailed information on these messages and the research, please visit www.cadth.ca/smbg.

Project Goals

Recognizing that this guidance was a departure from the current practice of care providers and patients, CADTH emphasized knowledge exchange to help influence the behaviour change and support implementation of the recommendations. The *Café Scientifique* events described throughout this casebook were a tool that CADTH used to ensure that the SMBG findings reached policy makers, frontline health care professionals, and patients. The project aimed to “change the diabetes management story” and initiate thoughtful reflection and peer-to-peer discussion about the role of SMBG in overall diabetes management.



In the long-term, this project aimed to promote the following changes:

- Potential improvement in quality of life, self-efficacy, treatment satisfaction in the setting of more judicious test strip use and attention to non-glycemic self-management behaviours
- Potential improvement in knowledge and attitudes about the role of SMBG and other non-glycemic activities in diabetes self-management
- More time allocated to formal diabetes self-management education delivered by health care providers in addressing and supporting non-glycemic self-management behaviours
- More effective use of SMBG results by patients and health care providers as a result of more judicious test strip use
- A heightened awareness by both patients and health care providers of deriving the best value from diabetes self-management investments

This topic proved to be provocative, underlying the need for open and honest communication at the grass-roots level.

“Excellent presentation and opportunity for discussion”
OTTAWA



The Events

Café Scientifique

The idea for *Café Scientifique* events emerged in Europe in the late 1990s as people looked for new ways to bring the public and university researchers together to share research findings and promote dialogue. In Canada, the Canadian Institutes for Health Research was among the first organizations to use this kind of event and continues to host a number of Cafés across the country.

The Canadian approach remains much the same: bring people together in a comfortable location and have them engage in conversations with one another and with experts on a particular topic. The events are designed to be informal, informative and open to the public. Typically, a Café event includes a brief presentation by one or more subject matter experts, followed by small group discussions on the topic and a session that brings together the expert and the public for questions and discussion.

As CADTH set about sharing the results of its SMBG research, the *Café Scientifique* approach offered a number of advantages:

- The approach brings together people with different perspectives to discuss and debate CADTH's recommendations.

- It allows us to bring together two key audiences: people living with type 2 diabetes and their family members, as well as health professionals who care for patients. Reaching both groups and encouraging them to have a conversation on the topic of “how much is enough” when it comes to SMBG was a key outcome for the project.
- It brings together panels of experts in diabetes management to describe CADTH's perspective and add their own clinical experience to the discussion.
- Finally, it includes a knowledgeable facilitator to keep conversations focused yet open enough to ensure everyone's voice was heard.

With these advantages in mind, CADTH secured funding from the Public Health Agency of Canada for a pan-Canadian series of *Café Scientifique* events involving both Canadians living with type 2 diabetes and the health care professionals who provide them with care and support.

Our Approach

CADTH organized a total of twelve *Café Scientifique* events in cities across Canada. In each city, CADTH Liaison Officers reached out to health care institutions, professional associations and consumer groups to promote the event. In addition, advertising was purchased in local newspapers to build the visibility of the event and a website was created for potential

“Information was well presented in order for me to help my wife manage her diabetes”

PEI

Table 1 | *Café Scientifique Attendance*

Jurisdiction	City	Date	Public	Health Care Providers
Nova Scotia	Halifax	February 17, 2010	20	—
Nova Scotia	Halifax	February 18, 2010	—	40
Saskatchewan	Regina	March 2, 2010	19	—
Saskatchewan	Regina	March 3, 2010	—	55
Prince Edward Island	Charlottetown	September 21, 2010	12	24
New Brunswick	Moncton	September 23, 2010	10	31
Alberta	Edmonton	October 26, 2010	33	37
British Columbia	Vancouver	October 28, 2010	20	38
Ontario	Ottawa	November 30, 2010	51	38
Ontario	Toronto	December 1, 2010	24	21
British Columbia	Surrey	February 28, 2011	71	32
Newfoundland and Labrador	St. John's	March 8, 2011	44	13
Total Participation			304	329

participants to get more information. Our target was for a total attendance of between 40 and 80 people—an ideal audience size that keeps the event informal and avoids the feel of a lecture. As the Table 1 shows, we met that target in nearly every group.

CADTH staff in Ottawa and the Liaison Officers in each jurisdiction worked together to identify the ideal experts to sit on our panel. We looked primarily for health professionals with recognized expertise in diabetes care and management. We ensured that one member of each panel was a member of the expert review committee that developed CADTH's recommendations so that he or she could bring first-hand knowledge of the process and the outcomes to the session. In the end, the roster of pharmacists, family physicians, endocrinologists, diabetes educators and health reporters was impressive and was fundamental to the success of the events.

The *Café Scientifique* events lasted approximately two and one-half hours and followed a similar format:

- Participants arrive, eat, drink, mingle and review CADTH literature available on all tables.
- The facilitator welcomes participants, explains the format and introduces the expert panellists.
- Each panellist presents informally for five to ten minutes on their particular perspective on SMBG.

- During a breakout period, participants discuss the three presentations with others at their table for 10 to 20 minutes. Two key discussion points are handed out before the break to help prompt comments. Participants formulate questions and comments for the expert panellists.
- Panellists and participants take part in an open discussion for 45 to 60 minutes. They exchange comments, questions and observations, assisted by the facilitator.
- The three panellists briefly share their final observations and reflections on the evening with participants.

- Participants are invited to complete an evaluation questionnaire and participate in a draw for a gift card.

The project aimed to “change the diabetes management story” and initiate thoughtful reflection and peer-to-peer discussion about the role of SMBG in overall diabetes management.



The Results

The Partners

A number of organizations came together to support the *Café Scientifique* series. Not only did they promote the event and help ensure strong participation, their visible support contributed to the credibility of the events and of the research findings and recommendations upon which those events were built.

“It’s a very open format that really allowed a lot of people to talk about their concerns about restrictions with testing, research behind the testing.”

Sandra Janicijevic, Diabetes Nurse Educator and panellist at the Vancouver, British Columbia Café

The list of partners in each city is extensive, but it includes the following types of organizations in each province:

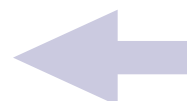
- Pharmacy associations and colleges
- Nursing associations and colleges
- Medical associations
- Long-term care organizations and associations
- Local chapters of Dietitians of Canada
- Regional health authorities
- Faculties of medicine, pharmacy, nursing, and nutrition in local universities
- Nursing, nutrition, and pharmacy technician programs in local community colleges
- Patient advocacy and/or support associations
- Chapters of the Canadian Diabetes Association
- Community organizations such as the YMCA, Royal Canadian Legion, Knights of Columbus, Seniors Associations, local community centres etc.

“Excellent presentation. I’m glad that sessions like this are happening to educate the public as well as professionals.”

EDMONTON

Table 2 | Panel of Experts

Name	Title	Café Locations
Dr. Lenley Adams	General Internist, Queen Elizabeth Hospital Medical Director, PEI Provincial Diabetes Program	Charlottetown, PEI
Dr. Ann Colbourne	Professor of Medicine, Division Director-General Internal Medicine, Department of Medicine, University of Alberta	Edmonton, AB Regina, SK St. John's, NL
Dr. Anar Dossa	Certified Diabetes Educator, Outpatient Diabetes and Kidney Clinics Pharmacist, Vancouver Hospital and Health Sciences Centre	Vancouver, BC
Dr. Mike Evans	Family Physician Member of CADTH's Expert Review Committee	Halifax, NS Toronto, ON
Dr. Merrilee Fullerton	Family Physician President, Academy of Medicine Ottawa	Ottawa, ON
Dr. Adam B. Gruszczynski	Family Physician, Regina General Hospital and Assistant Professor, University of Saskatchewan	Regina, SK
Sandra Janicijevic	Diabetes Nurse Educator, iConnect Health Centre New Westminster, Diabetes and Respiratory Clinics	Vancouver, BC
Susie Jin	Community Pharmacist, Certified Diabetes Educator	Toronto, ON
Dr. Jeffrey A. Johnson	Professor, School of Public Health, University of Alberta Canada Research Chair in Diabetes Health Outcomes	Edmonton, AB
Shelley L. Jones	Community Diabetes Nurse, Certified Diabetes Educator, Diabetes Education Centre, Horizon Health Network	Moncton, NB
Dr. Susan M. King	Community Family Physician	St. John's, NL
Karen McDermaid	Pharmacist, Certified Diabetes Educator and Manager of Rural Pharmacy Practice, Regina Qu'Appelle Health Region	Regina, SK
Dr. Jeanne McNeill	Medical Director, Family Practice, Geriatrics, Palliative Care, Horizon Health Network	Moncton, NB
André Picard	Public Health Report, Globe and Mail	Ottawa, ON Toronto, ON
Rick Siemens	Certified Diabetes Educator, Certified Insulin Pump Trainer, Pharmacy Manager, London Drugs, Lethbridge	Edmonton, AB
Dr. Parmjit Sohal	Family Physician, Surrey, BC Clinical Associate Professor, Department of Family Practice, University of British Columbia	Surrey, BC
Martha St. Pierre	Registered Nurse, Provincial Diabetes Clinical Leader, Health PEI, Primary Care Division	Charlottetown, PEI
Dr. Ehud Ur	Head, Division of Endocrinology, Vancouver Hospital and St. Paul's Hospital Professor of Medicine, University of British Columbia	Vancouver, BC Ottawa, ON
Dr. Adil Virani	Director of Pharmacy Services, Fraser Health Authority, Vancouver Coastal Health, Providence Health Care, and Provincial Health Services Authority Associate Professor, Faculty of Pharmaceutical Sciences, University of British Columbia	Vancouver, BC Surrey, BC Moncton, NB Charlottetown, PEI
Sioban Whalley	Diabetes Nurse Educator, Certified Diabetes Education, Ridge Meadows Diabetes Education Centre	Surrey, BC
Dr. Stephanie Young	Assistant Professor, School of Pharmacy, Memorial University	St. John's, NL



3.0 The Impact

To help evaluate the impact of the *Café Scientifique* events, we distributed questionnaires to all participants, with a unique version for patients/caregivers and for care providers. At each event, a high percentage of attendees

completed the questionnaires, providing a clear picture of how they assessed the event and its impact on their attitudes about SMBG.

Table 3 | Title

Participant Type	Total Participants	Total Completed Questionnaires	Response Rate (%)
Patients and family	304	242	79.6
Care Providers	329	291	88.4
TOTAL	633	533	84.2

Note that response to all questions was not mandatory so that the total number of respondents to some questions does not equal the totals above.

Table 4 | Event Feedback

Aspects of Program (Rated on a scale of 1–5, where 5 is “agree strongly”)	Patients and Family Average	Care Providers Average
The program was well organized	4.38	4.50
The speakers' knowledge of the subject matter was appropriate	4.38	4.63
The information was presented clearly	4.24	4.47
There was adequate opportunity for audience participation	4.34	4.67
My expectations of the program were met	4.02	4.30
The information was presented in a fair and objective manner	4.24	4.30
The program was free from commercial bias	4.38	4.50
The event facility was adequate	4.50	4.50

We asked participants to evaluate each of the two key messages presented during the event and the extent to which the messages confirmed what they already

new and influenced their future behaviour. The results suggest both patients and family, and care providers were receptive to the messages.

“I really enjoyed this session — the fiery conversation inspired by debate is well worth coming out on a night off! Finally — we are looking at why we do things rather than just doing what we always have”

VANCOUVER





“I think it was a wonderful interaction. We had people from so many different backgrounds and I think people felt very comfortable asking their questions and sharing their experiences. I think we all learned a little bit from everybody, so I think it was a very positive experience.”

Susie Jin, community pharmacist and panellist at the Toronto Café.

Table 5 | Attendee Statements

Theme	Statement	Patients and Family				Care Providers			
		Yes	No	Unsure	NA	Yes	No	Unsure	NA
<i>Routine self-monitoring of blood glucose is not required for most patients with type 2 diabetes not treated by insulin.</i>	Confirmed what I already knew	51	28	27	6	90	76	30	23
	Gave me useful information	101	5	12	6	197	10	7	20
	I agree with this theme	80	10	22	7	155	18	34	24
	Confirmed how I already manage	51	29	16	28	58	70	35	53
	Will change how I manage	58	24	11	21	107	40	33	28
<i>Effective self-management of diabetes involves consideration of more than just blood glucose results.</i>	Confirmed what I already knew	107	5	6	7	208	1	2	16
	Gave me useful information	94	10	6	7	170	25	7	21
	I agree with this theme	107	2	5	5	201	3	6	22
	Confirmed how I already manage	83	14	8	9	158	8	19	40
	Will change how I manage	52	29	18	10	77	75	17	33

We also asked participants about their attitudes towards SMBG at the close of the questionnaire, as a measure of the extent to which the key messages were received. We asked care providers, “In your opinion, how important is SMBG to the health of patients with type

2 diabetes who are not using insulin?” The response suggests the guidance from CADTH has been well received by health care providers, with most rating it as only somewhat important and reflecting most of the comments of our panellists.

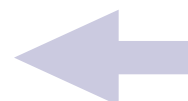
Table 6 | SMBG Importance

Response	Total
Very important	16
Important	90
Only somewhat important	135
Not important at all	11
Did not answer	5



“Thank you for a thought provoking evening.”

OTTAWA





Similarly, we asked patients and family members, “Given what you learned at this event, how likely are you to speak to your health care provider about how often you should be monitoring?” Here again, the strong number of participants who indicated they would likely speak

to their health care provider on the topic far outweighs those who indicated they likely would not. This suggests the guidance and the key messages were well received by the public.

Table 7 | Further Discussions

Answer	Total
Very likely	68
Somewhat likely	31
Not very likely	9
Not at all likely	5
Not Applicable	22
Did not answer	17

“I think a lot of the questions reiterate the need for consistent messaging and education of the public and health care providers to send the same message about diabetes. Whether that is what diabetes is, how often to test, or what medications to take. People are looking for that knowledge and I think that people did to some degree get the message that routine testing isn’t necessary for most type 2 diabetics, but there’s still going to be some sceptics out there.”

Dr. Lenley Adams, General Internist and panellist at the Charlottetown, PEI Café

“It is very important for people to have access to this type of information. So it is great that these meetings/discussions are being held.”

PEI

4.0 Conclusion

We were very pleased with the successful delivery of the Cafés, and their contribution to the achievement of our primary and long-term goals. This topic proved to be provocative, underlying the need for open and honest communication at the grass-roots level. Though not all participants agreed with the guidance at the end of the event, it was clear from their comments and their response to the evaluation questionnaire that they appreciated the opportunity for an exchange of information and a dialogue on an important topic.

Results from these forums will be used to inform the planning and execution of future forums. They may also help inform and build upon the work of other researchers in the field of public health and knowledge translation in the case of scientific publication.

CADTH has published numerous research reports and information tools to its website. You can access these at www.cadth.ca/smbg.

Presentation and production of materials for the *Café Scientifique* events has been made possible through a financial contribution from the Public Health Agency of Canada (PHAC). The views expressed at this event do not necessarily represent the views of PHAC. CADTH's research on self-monitoring of blood glucose was funded by Health Canada.



“I’m thrilled that it seemed to go as well as it did. Before coming into it, I wasn’t quite sure how it would work or if we would be able to engage the participants. But I think they were very engaged, there were lots of great questions and I hope that everyone went away having learned something.”

Dr. Jeanne McNeill, Medical Director
and panellist at the Moncton,
New Brunswick Café