



UNIVERSITY OF OTTAWA  
HEART INSTITUTE

INSTITUT DE CARDIOLOGIE  
DE L'UNIVERSITÉ D'OTTAWA

**OTTAWA MODEL**  
FOR SMOKING CESSATION

**MODÈLE D'OTTAWA**  
POUR L'ABANDON DU TABAC

## **Best Practices for Clinical Smoking Cessation in Canada**

The Ottawa Model for Smoking Cessation 2011-2012 Highlight Document

The University of Ottawa Heart Institute's Division of Prevention and Rehabilitation wishes to express our gratitude to the Ottawa Model for Smoking Cessation network partners and our exceptional staff. We would also like to thank the following organizations who have supported our smoking cessation programs and initiatives:





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Tobacco smoking is the leading cause of preventable disease, disability and death in Canada, resulting in nearly 40,000 premature deaths each year.

## A Message from the Ottawa Model for Smoking Cessation Co-founders

Once again, we are delighted to be able to partake in the publication of the Ottawa Model for Smoking Cessation program highlights, and to draw attention to the exceptional work being done in the area of clinical smoking cessation across Canada. It has been remarkable and extremely rewarding to have witnessed over the past several years such an enormous increase the number of hospitals, specialty clinics, primary care clinics, and other health care institutions implementing the Ottawa Model for Smoking Cessation and other clinical tobacco cessation programs across Canada, the United States, Europe, and beyond.

Healthcare is changing. In an era of rising health care costs and recognizing the need for budgetary restraint and evidence-based decision-making, many administrators are refocusing their attention on prevention as a means of controlling healthcare spending. The Ottawa Model has allowed us to systematically, practically and effectively enhance our abilities to assist with the difficult process of smoking cessation... the most powerful of all preventive interventions.

Tremendous thanks go out to our extraordinary staff at the University of Ottawa Heart Institute; our clinical, research, and outreach teams who, together, have helped to discover and disseminate new knowledge in order to inform and transform practices across Canada with regard to smoking cessation. And, thank you to our many health professional colleagues across Canada for your passion, dedication, and motivation with regard to enhancing smoking cessation efforts within the health care system.

We are fortunate to be able to work at an Institute that places such an emphasis on the prevention of disease. We have been purposefully assisting smokers with

cessation for over two decades and are thrilled to be able to use the approaches of the Ottawa Model to assist other Canadian healthcare practices in doing the same. We have had the opportunity to work with literally thousands of health professionals over the years in addressing this significant health issue and both have found this to be one of the most rewarding and impactful things that we've been involved with, both personally and professionally, throughout our careers. It is a delight to be able to share these efforts with so many of our hard working, dedicated friends and colleagues across Canada. We thank you for all you have done to help develop these programs and we look forward to welcoming you to one of our upcoming Annual Ottawa Conferences!

Sincerely,



Andrew Pipe, CM, MD  
Chief



Bob Reid, PhD, MBA  
Deputy Chief

Division of Prevention and Rehabilitation,  
University of Ottawa Heart Institute



## The Power of Smoking Cessation

Why should we, as health care professionals, practitioners, administrators, or policy-makers be concerned about smoking cessation? Isn't that someone else's job? The reality is that tobacco use continues to affect all of us in various ways. More than 5 million Canadians over the age of 15 smoke cigarettes daily. Depending on the setting, anywhere from 20-85% of patients visiting primary care clinics, hospitals, and specialty care clinics are current smokers.<sup>1</sup> Despite this, the uptake of systematic smoking cessation efforts in Canada remains remarkably low.

The good news is, smoking interventions work. The evidence demonstrating the benefits to quitting is overwhelming.

Smoking cessation leads to:

- Significant short- and long-term health improvements (including reduced cardiovascular and cancer risk and improved lung function and capacity)<sup>2,3,4</sup>
- Fewer admissions to hospital and shorter lengths of stay<sup>5</sup>
- Increases in life expectancy<sup>6</sup>
- Improvements in quality of life<sup>7</sup>
- Lower health care costs<sup>5</sup>
- Reduction in second hand smoke exposure and its consequences<sup>8</sup>

<sup>1</sup> Reid RD, et al. (2010). Smoking cessation for hospitalized smokers: an evaluation of the "Ottawa Model". Nicotine and Tobacco Research.

<sup>2</sup> Bullen C. (2008). Impact of tobacco smoking and smoking cessation on cardiovascular risk and disease. *Expert Rev Cardiovasc Ther.*

<sup>3</sup> Godtfredsen NS, et al. (2008). COPD-related morbidity and mortality after smoking cessation: status of the evidence. *Eur Respir J.*

<sup>4</sup> Peto R, et al. (2000). Smoking, smoking cessation, and lung cancer in the UK since 1950: combination of national statistics with two case-control studies. *BMJ.*

<sup>5</sup> Mohiuddin SM, et al. (2007). Intensive smoking cessation intervention reduces mortality in high-risk smokers with cardiovascular disease. *Chest.*

<sup>6</sup> Taylor DH, et al. (2002). Benefits of smoking cessation for longevity. *Am J Public Health.*

<sup>7</sup> Tillmann M and Silcock J. (1997). A comparison of smokers' and ex-smokers' health-related quality of life. *J Public Health Med.*

<sup>8</sup> Callinan JE, et al. (2010). Legislative smoking bans for reducing secondhand smoke exposure, smoking prevalence and tobacco consumption. *Cochrane Database Syst Rev*, 4



## Embedding Smoking Cessation within Clinical Practice — The Ottawa Model

Since 2006, the University of Ottawa Heart Institute has been assisting other healthcare organizations to integrate smoking cessation into routine clinical care. They have developed a step-by-step implementation plan based on principles of change management and evidence-based tobacco dependence treatments. The model enables healthcare organizations to adapt and implement the OMSC's processes and tools to their own unique clinical environments.

### OTTAWA MODEL OF SMOKING CESSATION'S EVIDENCE-BASED CLINICAL COMPONENTS

1. IDENTIFICATION AND DOCUMENTATION  
ascertainment of smoking status of every patient at every visit;  
recording of smoking status on all intake and history forms.
2. TREATMENT  
Pharmacotherapy – offer of first-line smoking cessation medication;  
Strategic Advice – brief counselling for all patients.
3. FOLLOW-UP  
automated follow-up support for 1 to 6 months; and/or,  
link to primary care; and/or,  
referral to community cessation programs.

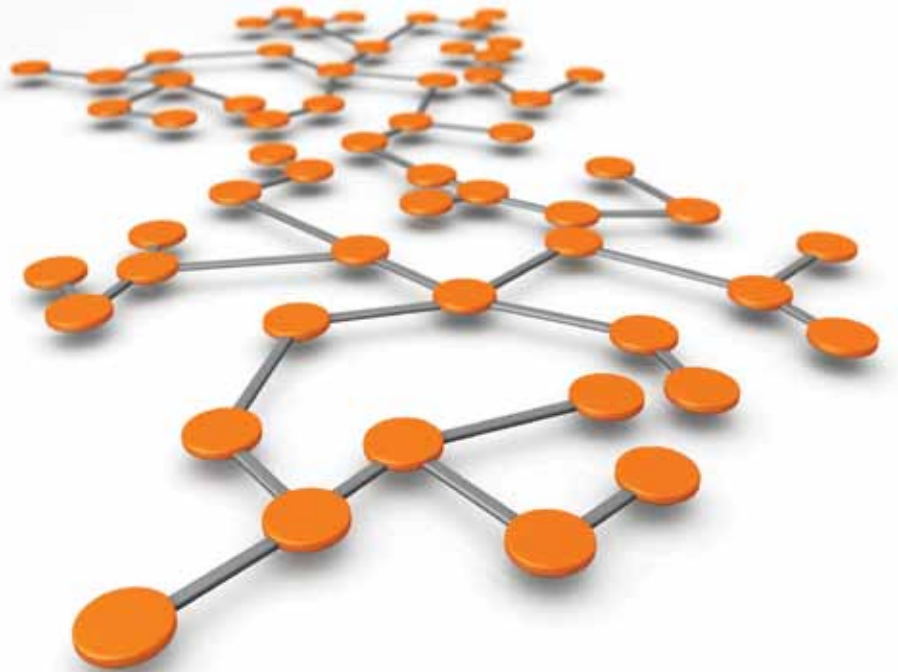
Offering support for cessation is a fundamental responsibility of all health professionals caring for patients who smoke.

### PHASES OF THE OTTAWA MODEL'S IMPLEMENTATION PLAN



## A Growing Community of Practice

In 2007, the University of Ottawa Heart Institute began partnering with Vancouver Coastal Health Authority and Horizon Health Network (New Brunswick) to establish western and eastern “Centres of Excellence” for clinical tobacco dependence treatment to more efficiently and effectively translate knowledge and expand program implementation across Canada. The OMSC has now been implemented in over 100 communities across Canada.



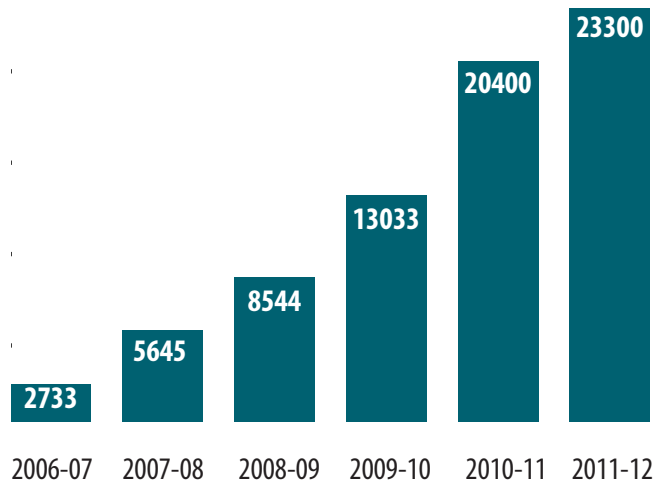
144 healthcare organizations have adopted the OMSC since 2006.

### Cities

Alexandria, Almonte, Arnprior, Athens, Baie Ste Anne, Bancroft, Barrie, Barry's Bay, Bathurst, Beachburg, Beamsville, Bella Coola, Blackville, Boiestown, Brampton, Brandon, Bridgewater, Brockville, Calgary, Cambridge, Campbellford, Campbellton, Carleton Place, Carp, Charlottetown, Chipman, Cornwall, Dalhousie, Dartmouth, Deep River, Doaktown, Edmonton, Fergus, Fredericton, Fredericton Junction, Gibsons, Guelph, Halifax, Hamilton, Hawkesbury, Kamloops, Kelowna, Kemptville, Kingston, Kirkland Lake, Kitchener, London, Manotick, Marysville, Minto, Miramichi, Mississauga, Moncton, Morrisburg, Nanaimo, Nepean, Newmarket, Niagara Falls, North Bay, North Vancouver, Oliver, Orleans, Oromocto, Ottawa, Parry Sound, Pembroke, Perth-Andover, Petawawa, Pickering, Picton, Plaster Rock, Port Elgin, Powell River, Prince George, Prince Rupert, Regina, Renfrew, Rexton, Richmond, Rogersville, Saint John, Salmon Arm, Sault Ste. Marie, Sechelt, Sharbot Lake, St. Fredericton, Stanley, Ste-Foy, Sudbury, Summerside, Sydney, Toronto, Vancouver, Victoria, Waterville, Williams Lake, Windsor, Winnipeg, Winchester.



As a result of the growing network of health care sites using systematic approaches, at least 75,000 smokers\* have been reached since 2006, resulting in approximately 23,000 quitters.



#### TOBACCO USERS REACHED

\*NOTE: These totals include only those smokers entered into the OMSC program database and considerably underestimate the actual number of smokers reached by programs across Canada.



By providing simple, systematic support to smokers within health care settings, we are able to significantly increase quit attempts and long term quitting among patients.

## Regional Highlights

### Champlain Region of Eastern Ontario

Several Champlain Local Health Integration Network (LHIN) hospitals have included OMSC activities and targets in their *Quality Improvement Plans*. The University of Ottawa Heart Institute works with 21 of 23 hospital sites in the Champlain LHIN to implement and adapt the program within both inpatient and outpatient services.

What is unique about the OMSC within Champlain region hospitals is that University of Ottawa Heart Institute Smoking Cessation Nurse Specialists provide the post hospital telephone follow-up care for all regional hospital smokers, a total of approximately 2500 smokers each year.

#### CHAMPLAIN REGIONAL INTEGRATED SMOKING CESSATION STRATEGY

As part of the Champlain Cardiovascular Disease Prevention Network's 2013-2016 strategic planning, Ottawa Public Health and the University of Ottawa Heart Institute co-chaired a multi-sector expert regional smoking cessation task group, representing stakeholders from primary care, hospitals, mental health, public health, community agencies and pharmacy. The group was tasked to develop a regional integrated smoking cessation strategy and joint action plan that would reach 15,000 smokers per year.

All Champlain hospitals will work towards a goal to ensure that the Ottawa Model of Smoking Cessation (OMSC) is provided to hospital and reaches 80% of inpatient smokers by March 31, 2013.

— Champlain LHIN 2012 Hospital Accountability Agreements (HAA)

# The Vision

More Champlain residents make an aided quit attempt using evidence-based cessation services.

## **The three-year Joint Action Plan will result in an integrated smoking cessation system in Champlain by 2016 which serves to:**

1. Encourage more tobacco users to make a quit attempt and promote cessation services
2. Offer choice in how to quit with support
3. Remove barriers to accessing cessation services
4. Address gaps in underserved populations
5. Create a skilled workforce of regional cessation service providers
6. Increase the availability of cost-free medications to smoker's willing to make a quit attempt
7. Actively engage worksites and health professionals in the delivery of cessation interventions
8. Improve information systems and gather high quality metrics on reach and efficacy of cessation services
9. Introduce system efficiencies

## **The recommended Joint Action Plan contains six strategy components:**

1. Improvement in Information Systems and Metrics
2. Development of a Cessation Service Delivery Network
3. Partnerships with Employers and Unions to deliver Innovative Worksite Smoking Cessation Programs
4. Expansion of Reach of OMSC in Champlain Hospitals and Outpatients Clinic
5. Expansion of Reach of OMSC in Primary Care
6. Development of a strategy for the mentally ill and vulnerable populations

## QSP QUIT PLAN

Set a quit date

Choose a quit smoking medication

Prepare for the quit date

Stay quit

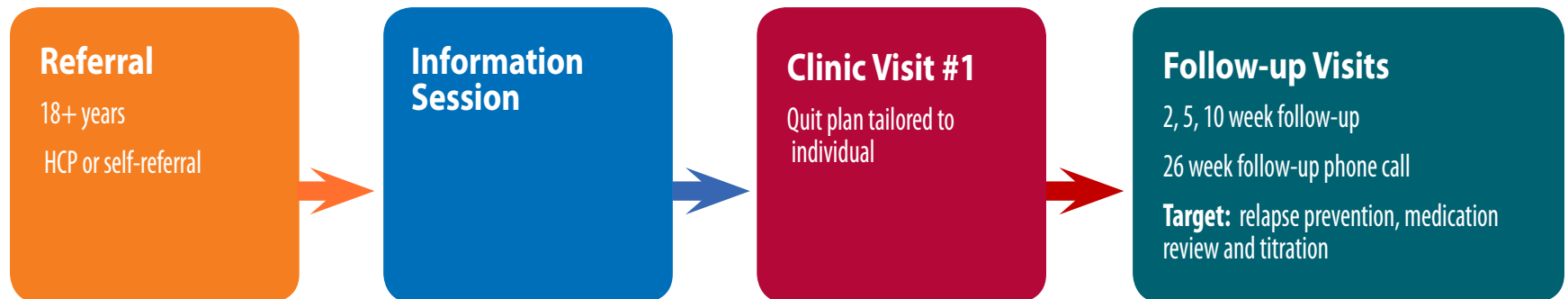
## The University of Ottawa Heart Institute's Quit Smoking Program

The Quit Smoking Program (QSP) is an intensive out-patient smoking cessation program that has been providing supportive, one-on-one cessation assistance to clients in the Champlain region since the early 1990s. Over the past six years, the program has completed over 6,400 appointments with smokers wanting to quit.

Patients can self refer or be referred by a health care professional. QSP registration can be completed by phone, fax, or in person through the UOHI Prevention and Wellness Centre.

For more information, visit [www.ottawaheart.ca/patients\\_family/quit-smoking-program](http://www.ottawaheart.ca/patients_family/quit-smoking-program) or call 613-761-5464.

The QSP sees over 400 unique patients per year.





More than 5 million Canadians over the age of 15 smoke cigarettes daily.

Health Canada Canadian Tobacco Use Monitoring Survey, Adult Smoking in Canada. 2009.



## Eastern Canada Centre of Excellence — Horizon Health Network

Since 2007, the Eastern Centre of Excellence has reached over 10,000 smokers (including hospital, community and Extra Mural Program patients within HHN). Over 3,000 healthcare professionals in Atlantic Canada have been provided with practical training and orientation in smoking cessation and over 50 presentations and information sessions have been given to various stakeholders about the OMSC program at HHN.

### PROGRAM HIGHLIGHTS

#### ACE-OMSC (Atlantic Canada Expansion — Ottawa Model for Smoking Cessation)

HHN received funding from Health Canada's Federal Tobacco Control Strategy in 2011 to lead a project that would expand clinical smoking cessation programs and knowledge translation throughout Atlantic Canada.

ACE-OMSC reached over 1,300 smokers (includes hospital, community and extra-mural [homecare] patients across three provinces).

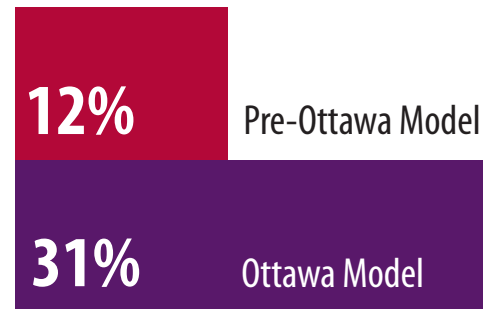
Nearly 1,700 HCPs were trained at intensive workshops or on-site practical training sessions.

#### NB Extra-Mural Program (OMSC Adaptation)

New Brunswick Extra-Mural Program (known by many as the “hospital without walls”) provides comprehensive home health care services to New Brunswickers in their homes and in their communities. The adapted OMSC tools are now used to counsel and follow individuals who use tobacco from the health care professionals providing comprehensive care right within their homes.

In an initial pilot of the program in an Extra-Mural Program, six month smoking abstinence rates increased by an absolute 18.5% (from 12.2% to 30.7%) after implementation of the OMSC.

### IMPROVEMENT IN QUIT RATES IN EXTRA-MURAL PROGRAM PILOT



#### OMSC in Diabetes Education Programs

HHN received funding to implement the OMSC in two diabetes education programs (DEP) in New Brunswick. This funding is intended to support roll out of the provincial diabetes strategy and include smoking cessation in the process.



## FUTURE DIRECTIONS

HHN obtained permanent staff funding for smoking cessation and will continue their partnership with the University of Ottawa Heart Institute and the expansion of the OMSC throughout all clinical practice settings within the health network including hospital, community health centres, diabetes education programs and extra mural programs (homecare).



HHN Smoking Cessation Team (left to right): Daniel Doherty, Kelly Hurley, David Arbeau

“Adapting the OMSC program to the daily routine at Rogersville Health Centre has been easily achieved. Smoking has become a vital sign and clients are often ready to take up the challenge of smoking cessation. I believe the key components to greater successes lie in having an easy-to-deliver program, as well as interested staff at all levels and the long-term view that a difficult tobacco addiction may require many efforts. I believe that each effort is part of a larger framework”.

— Dr. Basil Blanchard

## **Western Canada Centre of Excellence — Vancouver Coastal Health**

### **VANCOUVER COASTAL HEALTH/ PROVIDENCE HEALTH CARE CLINICAL SMOKING CESSATION PROGRAM**

The VCH/PHC Clinical Smoking Cessation Program started in 2007 as a partnership with the University of Ottawa Heart Institute and Health Canada. The program was highly successful in select wards in five hospitals. Over 4,000 smokers were assisted during the 3 ½ year inpatient program and a 6-month quit rate of 52% was achieved.

#### **PROGRAM HIGHLIGHTS**

##### **British Columbia Expansion**

As the Centre of Excellence for Clinical Tobacco Treatment in Western Canada, the VCH/PHC Clinical Smoking Cessation Program helped support three other B.C. health authorities to bring the Ottawa Model to their region (Vancouver Island Health Authority, Northern Health Authority, Interior Health Authority).



Left to right: Dr. Meena Dawar, Leah Hawirko, Ely Weston, Christina Tonella

##### **OMSC in All the Right Places**

Through the Health Canada-funded EXTENDS project, the program expanded to outpatient departments throughout the Vancouver area and was implemented in highly innovative ways. From working with clinics in Vancouver's Down Town East-side (Canada's poorest neighbourhood), to Diabetes clinics, Aboriginal Friendship Centres, Chronic Disease clinics, Respiratory Clinics and others, a tremendous impact was made on how VCH treats smokers and how patients heal.

##### **The Ultimate Commitment – Securing Ongoing Program Funding**

In July 2011, the PHC was granted \$500,000 per year for two years from VCH via the Senior Executive Team to continue with this program and expand Ottawa Model implementation to other areas, in addition to creating a hybrid model to increase sustainability.

##### **Partnering for Success**

In 2011/2012 a partnership was formed with the Registered Nurses Association of Ontario to implement a tobacco cessation model in regional Aboriginal Community health clinics.

##### **Bringing Cessation Support to a Vancouver Emergency Department**

A pilot program at PCH put them at the leading edge of tobacco cessation in BC, implementing the model in Vancouver General Hospital (VGH) emergency department (ED) in a partnership with the BC Ministry of Health and an ED physician who was already doing a pilot on the feasibility of screening patients and referring them to Quitnow Services. The VGH ED sees over 80,000 people, including 12,000 smokers per year.

##### **Nurses Prescribing NRT**

We are in the final stages of a new RNIA (Registered Nurse Initiated Action) which would allow nurses to prescribe nicotine replacement therapies. Once complete there will be a regional Tobacco Patient Care Guideline for all VCH facilities.

## Adaptation Leads to Adoption



Left to right: Mary Lewis, Mark Holland, and Robin Reece

“Through the Heart and Stroke Foundation’s partnership with the University of Ottawa Heart Institute, we are proud to see the systematic screening and intervention for smoking cessation expand beyond hospitals to primary care, community care and specialty clinics. We combined our efforts with the OMSC team to help more Canadians live smoke-free and to-date over 70,000 have been reached. Success will only continue as the community of practice, including hospitals, physicians, pharmacists, and health care workers, embraces the OMSC into their practices.”

While the Ottawa Model was first designed for and tested with hospital inpatients, it has since been applied to a variety of clinical settings including outpatient specialty care clinics, primary care clinics, community mental health and addictions programs, and home care programs.

Beginning in 2010, smoking cessation leaders and outreach facilitators from the Ottawa Heart Institute, Horizon Health Network, and Vancouver Coastal Health worked with sites across Canada to integrate smoking cessation programs and services for health providers and smokers across a spectrum of clinical environments (hospitals, specialty clinics, community health care centres, public health, and primary care settings) during a series of programs funded by Health Canada, Pfizer Canada, the Heart & Stroke Foundation and the Pfizer Foundation.

In 2010, a 15-month project entitled ExTENDS (Expanding Tobacco Treatment Excellence: A National Dissemination of Systems) evaluated the OMSC across 121 health-care settings in Canada. During that time, **24,985 smokers were provided the OMSC intervention** and 10,612 smartcards (“gift cards” worth \$110 toward the purchase of quit smoking medications — Sampling Technologies Inc., Halifax, NS) were redeemed by patients at local pharmacies.

The 6-month, 7-day point prevalence abstinence rate across all sites was 32.5%. Therefore, over 8,100 smokers became former-smokers as a result of the ExTENDS project.

Interviews with key contacts at participating healthcare organizations concluded that cost-free medication and regional outreach facilitation were two of the key facilitators of OMSC implementation and program sustainability.



On any given day in Canada, over 23,000 hospital beds are being occupied by current smokers.

Reid RD, et al. (2010). Smoking cessation for hospitalized smokers: an evaluation of the "Ottawa Model". *Nicotine and Tobacco Research*.

## Hospitals

Hospitalization presents a unique opportunity to initiate comprehensive tobacco cessation treatment. Smoke-free hospital policies require at least temporary abstinence from tobacco. Illness motivates smokers to try to quit. Hospital-based interventions have been shown to provide withdrawal support while in hospital and help patients remain abstinent over the long term.

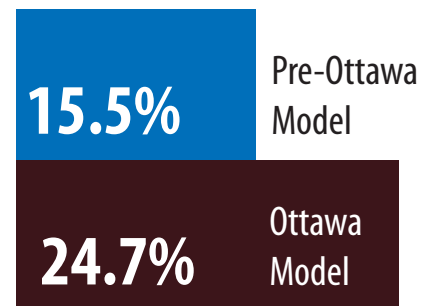
Furthermore, intensive smoking cessation treatment has been shown to significantly reduce re-hospitalization and all-cause mortality, potentially reducing wait times for several procedures. Not unlike other risk factors, there is a need for smoking to be identified and treated systematically as part of standard practice across the entire hospital.

### THE OTTAWA MODEL IS EFFECTIVE IN BRITISH COLUMBIA, ONTARIO, AND NEW BRUNSWICK HOSPITALS

Through our world leading database, on-going evaluations of the OMSC program have enabled our team to determine the effectiveness of implementing a clinical smoking cessation program in hospitals across several provinces. In an evaluation of the first nine Ontario, four New Brunswick, and three British Columbia hospitals to implement the OMSC, six-month continuous abstinence rates increased by an absolute 9.2%. Rates were determined using intent to treat analysis and the "Russell" standard whereby those who were not reached in follow up were considered smokers.

### OTTAWA MODEL EFFECTIVENESS IN 16 CANADIAN HOSPITALS

#### Six Month Smoking Abstinence Rates



**OR=1.78; 95% CI=1.30,2.45; Z=3.58; I<sup>2</sup>=0%; p<.001**





City of Ottawa, Ontario  
By-law No. 2001-148 prohibits smoking in all public places, including outdoor restaurants, bars, and food premise patios, market stands, outdoor areas on municipal properties including parks, playgrounds, beaches, sports fields, and outdoor areas around City facilities.



## SMOKE-FREE HOSPITAL PROPERTIES

Many Canadian health authorities and hospitals have passed smoking policies mandating smoke-free hospital properties, with the goals of reducing the exposure of workers, patients and visitors to tobacco smoke, and additionally reducing tobacco consumption of hospital staff and patients.<sup>9</sup>

### Hospitals Going Smoke Free — An Ontario Success Story

The Royal Ottawa Mental Health Centre in Ottawa specializes in mental health research and care. On January 3, 2012, the Royal became the **first** hospital in the region to adopt a 100% smoke-free premises policy in response to the *Smoke-free Ontario Act*. Shortly thereafter, during National Non-Smoking Week, Ottawa Public Health presented the Royal with the “Smoke-Free Champion Award” to recognize its efforts and successes in declaring its campus smoke-free. It is remarkable, given the ever prevailing culture of acceptance of tobacco-use within the mental health system, that the first and only hospital to have a completely smoke-free property in the city of Ottawa is its Mental Health Centre.

According to the President and CEO of the Royal, George Weber: “Quitting smoking is never easy, in particular when you are dealing with a severe illness, but the health risks associated with smoking and second-hand smoke are too high for us to ignore the issue at our health care facilities.”

Alongside this policy, the Royal implemented the Ottawa Model for Smoking Cessation in order to provide cessation support for patients and for staff while they adapt to the smoke-free environment.



<sup>9</sup> Schultz A, et al. (2011). A qualitative investigation of smoke-free policies on hospital property. *CMAJ*.

## Primary Care Clinics

The University of Ottawa Heart Institute, in collaboration with Heart and Stroke Foundation and Pfizer Canada, launched the OMSC in Primary Care: Ontario Expansion Program 2010-2013. The program builds on the success of a 2009 pilot program. The OMSC in Primary Care team has partnered with Family Health Teams (FHTs) in Ontario to deliver evidence-based tobacco treatments to their patients who smoke. The aim of the Ontario Expansion Program was to integrate the OMSC into 30 FHTs over three years and reach 30,000 smoking patients.

### **EXPANDING OUR REACH: THE OMSC NETWORK NOW INCLUDES 40 PARTNER FAMILY HEALTH TEAMS OR GROUP PRACTICES IN ONTARIO**

In 2011-2012, the Ontario OMSC Network of Primary Care partners grew to include 40 FHTs with 120 individual family medicine offices located in eight of Ontario's Local Health Integration Network's. Over **600** primary providers who have been trained to deliver the OMSC's Program.

### **The 3A'S — ASK, ADVISE, ACT — is used to operationalize the OMSC into the routines of busy primary care practices.**

Facilitators to adapt the program to the clinic's routines, integrate documentation into electronic medical records and monitor the program.

Each of the OMSC Partner Clinics work with one of the OMSC Outreach Facilitators to adapt the program to the clinic's routines, integrate documentation into electronic medical records and monitor the program.

Since 2010, OMSC Primary Care partner sites have delivered brief advice to more than 15,000 patients who smoke and have conducted over 6,200 "quit plan" visits.

More than 3,500 primary care patients ready to quit have been referred to the Heart Institute's Telephone Follow-up program. Over **50%** of patients that were reached were smoke-free at the two month follow-up assessment.



**Ask**

Triage Nurse  
**30 seconds**



**Advise**

MD/NP  
**2 minutes**



**Act**

Quit Plan Visit  
RN/NP/Pharmacist  
**20-30 minutes**

## High-risk Speciality Populations

Smokers with chronic diseases (e.g. respiratory diseases, cardiovascular diseases, diabetes, cancer, serious mental illness, and addictions) make extensive use of the health care system. Smoking prevalence in these groups is 5%-70% higher than in the general population. Mortality, morbidity and use of health care are reduced when patients quit smoking. As is the case in hospital, a visit to a specialty care clinic is an opportune time to initiate cessation treatment considering the high relevance of tobacco use to the disease and the short and long term benefits that are likely to occur once a patient with a chronic illness quits (e.g., improvements in blood pressure, insulin resistance, and lung function).

The OMSC has been adapted and adopted in several specialty care outpatient clinics across the country.

**Stroke Prevention Clinics**

**Diabetes Clinics**

**Community Diabetes Education Centres**

**Women's Health Centres**

**Aboriginal Health Centres (BC)**

**Cardiovascular Clinics and Cardiac Rehabilitation programs**

**Perinatal Clinics**

**Respiratory Clinics**

**Pre-surgical Units**

**Mental Health Agencies and Concurrent Disorder Programs**

## **SYSTEMATICALLY TREATING TOBACCO-USE IN PEOPLE WITH SERIOUS MENTAL ILLNESS, WHO MAY BE HOMELESS OR VULNERABLY HOUSED**

The Canada Mental Health Association (CMHA) — Ottawa Branch, along with Ottawa Inner City Health (OICH), began developing a relationship with the University of Ottawa Heart Institute in 2010, recognizing the need to address tobacco-use at its agency and the desire to ensure its practices were systematic and appropriate to the unique population that they serve.

In March 2012, CMHA, in partnership with the University of Ottawa Heart Institute and Ottawa Inner City Health, sponsored a community forum for health care practitioners to explore the relationship between tobacco and the mental health care system. Over 100 practitioners from hospital, community, primary health care, and mental health and addiction treatment sectors attended as well as individuals with lived experience. Feedback from participants at this event provided direction for pursuing further research and programming, including Project STRIKE (*Promoting Systematic Tobacco Reduction Interventions & Knowledge Exchange*), an initiative taking place in 2012 to develop, implement, and promote the Ottawa Model within two Ottawa-area community health agencies that serve individuals with severe mental illness who are homeless and/or vulnerably housed.

Approximately 85% of individuals with a serious mental illness continue to use tobacco products and 40% smoke more than forty cigarettes per day.

Harris GT, et al. (2007). Effects of a tobacco ban on long-term Psychiatric patients. *Journal of Behavioural Health Services & Research*.

Horsfall J, et al. (2009). Psychosocial treatment for people with co-occurring severe mental illnesses and substance use disorders (dual diagnosis): A review of Empirical Evidence. *Harvard Review of Psychiatry*.

Individuals with severe mental illness die an estimated twenty-five years earlier than the general population, with 60% of these deaths due to cardiovascular, pulmonary and infectious disease.

Parks, et al. (2006). Morbidity and mortality in people with serious mental illness. [www.nasmhpd.org](http://www.nasmhpd.org)



## Program Innovations

The Ottawa Model for Smoking Cessation has unique features in place to ensure success and maintenance of the program. From evidence based processes and protocols, to a highly innovative database, the OMSC program consists of world leading smoking cessation protocols.

### Ottawa Model for Smoking Cessation Program Management Database

The Smoking Cessation Program Management Database (SCPM), also known as the Interactive Voice Recognition (IVR) system (Telask Technologies, Ottawa, ON), is a dual purpose system that provides a revolutionary approach to the care and treatment of smokers and permits program tracking and evaluation through its world leading data set.

The SCPM provides automated follow up calls to patients after they are discharged from hospital or have completed a clinic visit. Individuals are offered up to eight automated calls over a six-month period to determine how they are doing with their quit attempt. The system acts as a triage and flags patients who indicate during the automated call that they have relapsed or that they are lacking confidence in their ability to stay smoke-free. Trained healthcare professionals and/or community supports, like the Canadian Cancer Society's *Smokers' Helpline* (SHL) Quit Coaches, monitor the system daily and call patients in need of additional support.





## INTEGRATING WITH EMRS

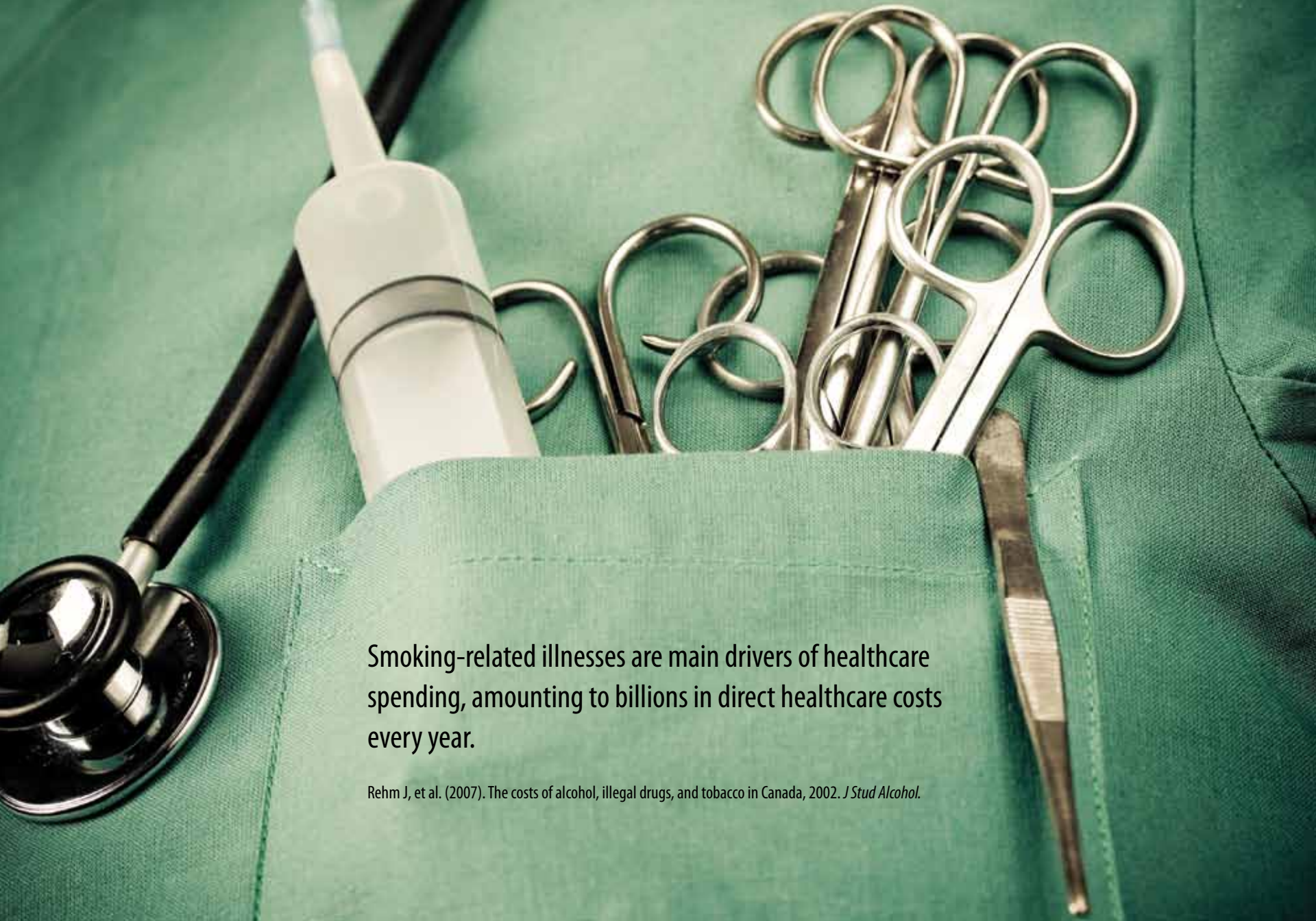
Whenever possible, the OMSC is integrated within the electronic medical record (EMR). Data from the EMR can be routinely and automatically uploaded into the SCPM. In Ontario, several EMR vendors have altered their system to integrate OMSC provider tools including provider flags to prompt the screening of smoking status of patients at regular intervals. Additional upgrades include crystal reports for program metrics, linking advice documentation to billing codes, and electronic flags for regular provider intervention.

## New Email Follow-up Support

Email follow-up is now available for patients. This customized option is a triage tool for clinicians and functions the same way as our telephone follow-up program — allowing counselors to assist patients throughout their quit attempt in innovative and contemporary ways.



Implementing sites receive regular feedback on program performance.



Smoking-related illnesses are main drivers of healthcare spending, amounting to billions in direct healthcare costs every year.

Rehm J, et al. (2007). The costs of alcohol, illegal drugs, and tobacco in Canada, 2002. *J Stud Alcohol*.

### Tracking Quality and Performance

Additionally, the SCPM functions as a central program database, allowing sites to track important program indicators, report on program quality and performance, and provide feedback to staff — all important factors contributing to the success and sustainability of such programs.

Dashboards for program related indicators allow administrators to track quality and performance of its clinical smoking cessation activities.

### Outreach Facilitation

The Ottawa Model approach uses outreach facilitation to deploy evidence-based smoking cessation systems of care across a spectrum of clinical environments. Outreach facilitators work implementing organizations to adapt, implement, and evaluate programs. Qualitative evaluations have consistently concluded that outreach facilitators are key to the adoption and sustainability clinical smoking cessation programs. OMSC facilitators not only assist in training and implementation of the model, they serve as consultants for troubleshooting, revising clinical protocols, and providing progress reports for participating institutions.



## Smoking Cessation — “We’ve got an App for that”

In Spring of 2012, Dr. Bob Reid and the Ottawa Heart Institute led a project in collaboration with the Centre for Addiction and Mental Health (CAMH) and the Canadian Cancer Society’s Smokers’ Helpline (SHL) to test the feasibility of implementing an innovative, technology-based solution to facilitate between-program communication, post-discharge follow-up, and access to pharmacotherapies for smokers identified in Ontario hospitals.

During this pilot dubbed “the Cloud” project, the team developed an Ottawa Model iPad application (BaseMetrics Inc., Ottawa, ON) for use at the bedside. Heart Institute nurse specialists and North Bay General Hospital respiratory therapists completed paperless, bedside smoking cessation consultations using their iPads and consultation data was automatically stored in the program’s central “cloud” server. Daily, pertinent data was seamlessly and securely transferred to the Ottawa Model’s automated telephone follow-up program and to CAMH’s ‘STOP’ program, whereby nicotine replacement therapy (NRT) was mailed to patients at no cost following their hospitalization. Heart Institute nurse specialists and SHL’s Quit Coaches monitored the follow up database and provided counseling calls to patients who were experiencing difficulty throughout their quit attempt. Overall, 93 inpatient smokers participated in the evaluation.

The continuous abstinence rate measured one month after hospital discharge was 34.8%.

This program is one of the first in Canada to test the use of an iPad for clinical assessment and consultation. We were able to demonstrate the feasibility of: 1) using an iPad, or other tablet, to collect patient information at the bedside, and 2) using a centralized cloud-based server to create a more integrated smoking cessation system linking smoker-patients to cessation services in Ontario. Having one point of registration appeared to reduce the burden for smokers seeking services post-hospitalization and removed duplicate efforts by service providers. This project was funded by the Health Promotion Division of the Ministry of Health and Long-term Care.







# 5<sup>th</sup> ANNUAL OTTAWA CONFERENCE

STATE OF THE ART CLINICAL APPROACHES TO  
**SMOKING CESSATION**

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MODÈLE D'OTTAWA  
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## Education and Knowledge Translation

### The Ottawa Conference: State of the Art Clinical Approaches to Smoking Cessation

Over the past five years, the Ottawa Conference has become a recognized national reference point for health professionals seeking knowledge in clinical smoking cessation — an important area of preventative health practice. Since 2009, nearly 1,000 healthcare professionals have attended this accredited event with participant numbers steadily increasing year after year. This forum allows national and international experts to share the latest concepts in clinical tobacco treatment, program development, and smoking cessation research with physicians nurses, pharmacists, other allied health professionals, researchers, policy-makers and other health care stakeholders. The conference features plenary and breakout sessions, panel discussions, poster displays, and networking opportunities. Visit our website [www.ottawamodel.ca](http://www.ottawamodel.ca) for more details and to register for our next event!

#### EDUCATION

The OMSC offers a variety of training options to further enhance smoking cessation skills and expertise.

### OMSC Workshops

Our training workshops provide health professionals with an overview of OMSC programs and the steps to successfully implement within any type of clinical setting. Other topics include: nicotine addiction, first-line quit smoking medications and guidelines for their use, behaviour change theories and various cessation support strategies. These workshops have taken place in Ottawa, Toronto, Fredericton, and Vancouver. Visit [www.ottawamodel.ca](http://www.ottawamodel.ca) for upcoming session dates.

### E-Learning

#### OMSC E-Courses

The OMSC has created five virtual e-learning courses to be made accessible on the OMSC website. Courses include:

1. Ottawa Model for Smoking Cessation Overview
2. Nicotine Addiction 101
3. Quit Smoking Medications
4. Strategic Advice, and
5. Completing a Smoking Cessation Consultation.

These e-courses are appropriate for any type of health care professional whether they are seeking initial orientation and training in tobacco cessation or looking for a “refresher course”. Tracking and certificates of completion will be available.

Over 16,000 health care professionals across Canada have been trained through Ottawa Model programs since 2006.



### **ESCAPE (Effective Smoking Cessation in Primary Care)**

Approximately 200,000 family physicians from across Canada are solo practitioners. The OMSC has developed the *Effective Smoking Cessation in Primary Care (ESCAPE)* program with an educational grant from Pfizer Canada Inc. ESCAPE is an accredited program available on DVD that includes a 40-minute program overview and six subsequent specialized modules.

### **Other Forms of Training and Education**

Practical smoking cessation education is also offered in many other formats to staff unable to attend workshops. OMSC training includes:

- Frontline training and orientation
  - In-services
  - Lunch and learn sessions
  - On ward trainings
- Management presentations and orientation
- Continuing medication education sessions and grand medical rounds
- Departmental/task committee meetings
- New staff orientation toolkits



## Ottawa Model in the News

The Ottawa Model for Smoking Cessation has made headlines over the past year:

Cardiologists Urged to Lead in Smoking Cessation

**May 5, 2012, Medpage Today (Dublin)**

Scourge of the Homeless — “Ottawa Model” to Quit Smoking Being Used across Canada

**April 19, 2012, The Ottawa Citizen**

Anti-smoking Groups Decry Cuts by Health Canada — Groups Say Health of Canadians at Risk

**April 17, 2012, CBC News**

Ottawa Docs Promote Stop-Smoking Model at Conference

**February 4th, 2012, CTV.ca**

Horizon Health Network to Expand Smoking Cessation Model throughout Atlantic Canada

**January 17th, 2012, Health Canada**

Province Showing Leadership in Smoking Cessation

**January 17th, 2012, The Government of Prince Edward Island**

Dr. Bob Reid on Quitting Smoking

**January 16th, 2012, CTV Morning Live**

Study: Smoking Doubles Risk for Stroke

**October 8, 2011, USA Today**

Yes You Can Quit Smoking!

**May 2011, Readers Digest**

The Ottawa Model: An Innovative Approach to Smoking Cessation that Is Being Adopted from Coast to Coast

**April 2011, Public Health Agency of Canada: Canadian Best Practices Portal**

## University of Ottawa Heart Institute Smoking Cessation Research

**OTTAWA, April 3, 2012** — A recent global ranking has just confirmed the undeniable research strength of the University of Ottawa Heart Institute (UOHI) by placing it in the top 2% of the best research institutions in the world. This comes as the most coveted international medical journal *The Lancet* gives its endorsement to the world's first bedside genetic test developed by UOHI researchers.

### Research in Progress

#### Integrating the “Ottawa Model” for smoking cessation into routine primary care practice: A Cluster Randomized Controlled Trial 2011-2013

Over the next year, twenty family medicine practices will participate in a study looking to establish gold-standard evidence regarding the Ottawa Model for Smoking Cessation in Primary Care's efficacy in influencing provider delivery of evidence-based treatments and improve patient quit attempts and quit rates.

**PIs:** Dr. Andrew Pipe,  
Dr. Sophia Papadakis

**Timeframe:** 2011-13

**Funding Agency:** Heart and Stroke Foundation of Canada

#### Self-Directed Titrated Nicotine Patch versus Standard Treatment for Smoking Cessation in Smokers Motivated to Quit (STEP Study)

The use of NRT is designed to provide patients with a dose of nicotine sufficient to approach nicotine levels obtained during smoking in order to alleviate symptoms of withdrawal, reduce cravings, and ease smokers in the transition to being smoke free. Research indicates that increasing the dose of transdermal nicotine patch improves cessation rates. The STEP study will evaluate the efficacy of titrating the dose of NRT based on smoking history compared to standard treatment in conjunction with behavioural counselling for smoking cessation.

**PI:** Dr. Andrew Pipe

**Timeframe:** 2010-13

**Funding Agencies:** Heart and Stroke Foundation of Canada  
Johnson and Johnson



## Interventions to Reduce Cardiovascular Disease: “Real-World” Effectiveness of Combined Pharmacotherapy and Behavioural Counseling for Smoking Cessation

Previous studies have demonstrated the effectiveness of pharmacological treatments and behavioural counselling for smoking cessation; however, they tend to be conducted in highly controlled settings and with restricted populations (e.g., excluding patients with severe health conditions and/or psychiatric co-morbidities). The Real-World study aims to investigate behavioural and pharmacological interventions that may be used in “real-world” clinical settings to increase abstinence rates, and will systematically track the prevalence of neuropsychiatric symptoms pre, during and post-target quit date.

**PI:** Dr. Heather Tulloch

**Timeframe:** 2009-14

**Funding Agency:** Heart and Stroke Foundation of Canada

## Efficacy and Cost-Effectiveness of Cost-Free Pharmacotherapy for Smoking Cessation for High-Risk Smokers with Cerebrovascular Disease (QUIT MED)

Smoking is a risk factor for recurrent stroke, and those who continue to smoke after stroke have double the risk of death compared to non-smokers and ex-smokers. The QUIT MED study aims to determine if providing cost-free smoking cessation medications increases quit rates among smokers who have experienced a TIA or stroke, and additionally, whether providing cost-free pharmacotherapy is a more cost-effective alternative to providing a prescription only for these medications in this high-risk population.

**PIs:** Dr. Bob Reid  
Dr. Mike Sharma

**Timeframe:** 2009-12

**Funding Agency:** Heart and Stroke Foundation of Canada

## Recently Completed Projects

### Smoking Cessation among Pregnant Women in the Baffin Region of Nunavut

Little is known about the experience of pregnant smokers in Nunavut concerning quitting smoking or the kinds of advice they receive from their health care providers. This pilot project was conducted to create a better description and explanation of smoking behaviors among pregnant smokers in the Baffin region of Nunavut and help build a knowledge base for future intervention strategies by better understanding the reasons behind smoking amongst pregnant women.

**PI:** Dr. Bob Reid  
**Timeframe:** 2008-10  
**Funding Agency:** Canadian Tobacco Control Research Initiative

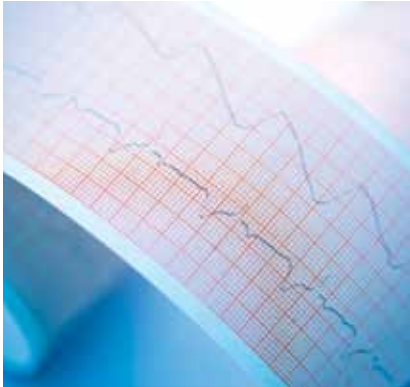


### An Interactive, Voice Response (IVR) Mediated, Follow-Up and Triage System for Smoking Cessation in Smokers with Coronary Heart Disease

Smokers with coronary heart disease (CHD) benefit from cessation counselling in hospital only if it continues after discharge. Interactive voice response (IVR)-mediated telephone follow-up uses natural language to place automated outgoing calls and allows patients to respond in their natural voice to questions posed regarding their smoking status and progress with smoking cessation. The current trial was conducted to determine if the IVR-mediated telephone follow-up system led to higher rates of cessation compared to standard care in smokers hospitalized with CHD.

**PI:** Dr. Bob Reid  
**Timeframe:** 2006-10  
**Funding Agency:** Heart and Stroke Foundation of Ontario





## Varenicline Versus Transdermal Nicotine Patches for Smoking Cessation in Patients with Coronary Heart Disease: A Pilot Randomized Trial

Smokers with coronary heart disease (CHD) who quit smoking reduce their relative risk of death and non-fatal re-infarction by 36% and 32%, respectively. Nicotine replacement therapy and varenicline are two first-line smoking cessation medications proven to increase the likelihood of a successful quit attempt. A pilot randomized trial was conducted to test the hypothesis that varenicline is more efficacious than transdermal nicotine patch alone for smoking cessation among smokers hospitalized with CHD.

**PI:** Dr. Andrew Pipe

**Timeframe:** 2008-10

**Funding Agency:** Heart and Stroke Foundation of Ontario

“I really benefited from this program and doubt that I could have quit smoking without it after 36 years of tobacco use. The support and expertise provided by my wonderful counsellor made the process of quitting a journey of self-discovery rather than an ordeal.”

— Michel Leclerc (smoke-free since October 4, 2010)



# Acknowledgements

We would like to thank our exceptional clinical and outreach staff at the University of Ottawa Heart Institute.



## **QUIT SMOKING PROGRAM**

(alphabetical)

Debbie Aitken  
Clinical Manager

Marta Klepcazek  
Smoking Cessation Nurse Specialist

Melissa Laroche  
Smoking Cessation Nurse Specialist

Anne Marie LaRue  
Smoking Cessation Nurse Specialist

Jocelyne Legault  
Smoking Cessation Nurse Specialist

Shaughna McDonald  
Administrative Assistant

Donna Pittman  
Smoking Cessation Nurse Specialist

Sara Saliba  
Data Entry



## **PRIMARY CARE**

(alphabetical)

Mustafa Coja  
Program Facilitator

Jo-Anne Gagnier  
Clinical Manager

Marie Gharib  
Evaluation Coordinator

Josh Hambleton  
Program Manager

Tamara Brown  
Program Facilitator

Sophia Papadakis  
Program Director

Kristina Straughton,  
Smoking Cessation Counsellor



## **HOSPITAL OUTREACH TEAM**

(alphabetical)

Pamela Heise  
Outreach Facilitator

Laura Jones  
Data Analyst

Jana Kocourek  
Project Coordinator

Lisa Mouchet  
Knowledge Transfer Coordinator

Kerri-Anne Mullen  
Program Manager

Manu Sandhu  
Administrative Assistant

Kate Walker  
Outreach Facilitator



Treating tobacco use is a fundamental responsibility of all health professionals caring for patients who smoke. By making small changes to our every day practices including the provision of practical advice, the offer of evidence-based treatments, and referral to follow up support, we can significantly enhance the lives of our patients and make an important difference in our communities.





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**Do you need more information on:**

Implementing the OMSC  
Training opportunities  
Conferences  
Consultation with OMSC

**Contact Information**

University of Ottawa Heart Institute  
The Ottawa Model for Smoking Cessation  
751 Parkdale Avenue, Suite 607, Ottawa, Ontario K1Y 4W7

Telephone 613-761-4034  
Toll free 1-888-761-OMSC (6672)  
Fax 613-761-4165

Email [OMSC@ottawaheart.ca](mailto:OMSC@ottawaheart.ca)  
Web [ottawamodel.ca](http://ottawamodel.ca)