Pharmacist-run smoking cessation programs produce results

Pharmacists help smokers quit by providing behavioural counselling, creating quit plans, recommending nicotine replacement therapy and scheduling follow-up visits. The effectiveness of pharmacist-run smoking cessation therapy is highlighted in this issue of the Translator:

- Pharmacists are effective in providing a smoking cessation program and contributing to patient quit rates
- Employer-sponsored smoking cessation program helps Canadians quit smoking
- Pharmacists help patients with diabetes and kidney disease quit smoking
- A review of smoking cessation interventions delivered by pharmacists

Pharmacists are effective in providing a smoking cessation program and contributing to patient quit rates


Issue: According to the World Health Organization (WHO), smoking cigarettes remains the leading cause of preventable death worldwide and is estimated to kill more than 5 million people every year. Additionally, smoking is a risk factor for many disease states and its adverse effects contribute to cancer, lung disease, cardiovascular disease and other health risks. As frontline health care professionals, pharmacists need to emphasize the importance and health benefits associated with quitting smoking.

A solution: Pharmacists have the potential to be the most accessible health care professional. They play an important role in educating their patients about the health effects of smoking, and in the process can encourage them to quit. In this randomized controlled trial, patients assigned to the treatment group received 3 face-to-face group sessions delivered by a pharmacist team, whereas patients assigned to the control group received a single 5–10 minute standard care session over the telephone. Patients set a quit date and both groups were offered their choice of using the nicotine patch or immediate-release bupropion. The pharmacist ordered the medication after checking medication records for contraindications.

At the end of 6 months, cessation rates were 28% in patients receiving face-to-face group counselling sessions vs. 11.8% in the group receiving telephone counselling.

The Translator is an initiative launched by the Canadian Pharmacists Association to support the knowledge translation between pharmacy practice research and health policy. Each issue selects a number of pharmacy practice research articles, briefly summarizes them and discusses the health care policy implications. These articles are submitted by researchers who have a strong desire to support evidence-based health care policy and best practices.
Implications: This study demonstrates that pharmacists can play an active role in helping smokers quit. Moreover, this study also shows the positive impact pharmacists have when providing face-to-face care as opposed to over the telephone. The validity of smoking cessation rates in this study was confirmed using biochemical analysis. A limitation to this study is that the findings may not be generalized to all smokers since the majority of participants were white, middle-aged males. Nevertheless, this study supports the potential role pharmacists can play in delivering smoking cessation programs, improving smoking cessation rates and preventing smoking-related disease.

Background or research methods: This study was a randomized controlled trial conducted in a Veterans Health Administration outpatient clinic in the Rocky Mountain region, USA. Patients were eligible for inclusion if they were interested in participating in the study; if they smoked at least 1 or more cigarettes per day for 7 days; if they were somewhat ready to quit within the next 2 weeks (based on a 10-point motivational scale); and were willing and able to go to 3 sessions. There were 101 smokers who were randomized to receive intervention or usual care. The variable being measured indicating a successful intervention was abstinence from smoking at 6 months, verified by a biochemical urine test.

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**Employer-sponsored smoking cessation program helps Canadians quit smoking**


**Issue:** Smoking tobacco remains a major public health concern: in 2002, over 37,000 deaths in Canada were attributable to smoking, which represents about 17% of all deaths in Canada. While pharmacist-run smoking cessation programs are becoming more widely available, drug benefits programs rarely compensate pharmacists for these services. Currently, coverage for smoking cessation products is highly variable. Some employer-sponsored drug plans do not cover smoking cessation products whatsoever, some may offer broad coverage, while others may cover prescription smoking cessation aids but not over-the-counter products such as nicotine replacement therapy (NRT).

A solution: In 2006, GM Canada Limited (through Green Shield—their health benefits carrier) provided its employees and their beneficiaries with pharmacy-based smoking cessation services that included NRT and behavioural support provided by pharmacists. This program was based on the Transtheoretical Model of Change and the 5As (Ask, Advise, Assess, Assist and Arrange). Pharmacists in this study conducted an initial face-to-face assessment and 6 follow-up appointments (face-to-face or by telephone). Patients identified by the pharmacists as being in the “preparation” or “action” stage (according to the Stages of Change Model) were automatically eligible to receive NRT. Coverage for bupropion was provided regardless of the patient's stage of change. Pharmacies were reimbursed through billing codes known as “pseudo” Drug Identification Numbers (pseudo-DINs), which were used to keep track of patients’ progress—theyir quit status at time of assessment and subsequent follow-up visits.

At 6 months, 37.5% of patients reported being smoke-free. Men had a higher quit rate than women (42.6% vs. 21.2%) and patients aged 45–54 had the highest quit rate at 42.9%. The majority of patients used nicotine patches as their smoking cessation aid. There was no difference in quit rates between patients who used different types of NRT (patch, inhaler and gum).

Implications: This study demonstrates that pharmacists trained to provide smoking cessation services can be highly effective in helping their patients quit smoking. It also shows that Canadian employers can successfully sponsor drug benefit programs that reimburse for professional pharmacy services. A limitation to this study was that quit rates were based on patients self-reporting opposed to being biochemically verified. Nonetheless, the methods in this study were unique because prospective quitters were referred to pharmacists and were likely highly motivated to quit. The study also adds to the body of literature that indicates pharmacists can have a positive impact on smokers trying to quit.

Background or research methods: This descriptive study used prescription claims of an employer-sponsored smoking cessation program run by pharmacists to measure the effectiveness of pharmacists providing behavioural support to patients motivated to quit. The study enrolled 81 patients in participating pharmacies in Ontario and New Brunswick. Pharmacies were reimbursed for their assessment and follow-up of these patients. The primary outcome was patients’ self-reported 6-month quit rate that was captured by the submission of prescription claims via pseudo-DINs.

Financial support: No external funding provided.


Pharmacists help patients with diabetes and kidney disease quit smoking


**Issue:** Cigarette smoking is a major contributor to mortality and disease in patients with diabetes, renal disease and cardiovascular disease (CVD). According to the Canadian Centre on Substance Abuse in 2002, more than 37,000 deaths were attributable to smoking, 11,000 of which were cardiovascular in nature (stroke, heart attack). However, quitting smoking reduces the risk of smoking-related CVD by approximately 50% within 1 year and to normal levels (i.e., similar to individuals who have never smoked) in 5 years.

**A solution:** A pharmacist-led smoking cessation program is an important step to helping smokers who are at risk of a cardiovascular event quit. In this study, 2 clinical pharmacists ran a smoking cessation clinic in which they raised awareness about the program during multidisciplinary rounds. Their intervention consisted of following the 5A’s model, “Ask, Advise, Assess, Assist and Arrange.” Pharmacists primarily helped patients referred to the program by using “assist” and “arrange” strategies. Pharmacists further helped patients set a quit date and advised them to notify family and friends about the plan and remove tobacco products from their environment. Pharmacists also provided behaviour modification counselling and information on available drug treatment options. Patients received the required prescription from their family physician or from the physician who referred them to the smoking cessation program.

Of 51 patients enrolled in the program, 8 (15.7%) were able to quit after 3 months. Also, 26 (51%) participants in the program elected not to receive pharmacotherapy and chose to gradually wean themselves off cigarettes or quit cold turkey. Perhaps the success rate would have been higher had patients received some form of smoking cessation pharmacotherapy.

**Implications:** This study demonstrates that a pharmacist-initiated and -managed smoking cessation program promotes the importance of smoking cessation to both patients and health care professionals. It also shows that a smoking cessation program in a hospital clinic setting offers a venue where pharmacists can inform other health care providers about the value of smoking cessation in addition to helping patients stop smoking. A limitation of this study was that a 3-month follow-up leaves uncertainty over long-term relapse rates. Further research and randomized controlled trials are needed to evaluate the results of this program.

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**Background or research methods:** This study took place in clinics at St. Michael’s Hospital in Toronto that provide care to patients with diabetes and/or chronic kidney disease. Pharmacists worked within a multidisciplinary team and collectively managed the smoking cessation program. In this retrospective analysis, of 99 referrals to the program, 51 patients were enrolled in the program. Patients were eligible for inclusion if they were in the “contemplative” or “preparative” stage (i.e., expressed genuine interest in quitting smoking within the next 6 months) and they smoked 10 or more cigarettes every day. Follow-up occurred by telephone within the first week of the established quit date and then monthly for 3 months. The primary endpoint was abstinence rates at 3 months.

**Financial support:** No external funding provided.
Issue: Tobacco smoking is the single most common cause of preventable death in the United States and it is estimated to cost the U.S. economy close to $200 billion every year in direct and indirect costs—$96 billion in health care costs and $97 billion in lost productivity. Many pharmacists are receiving training in smoking cessation counselling and are interested in providing these services. This review provides a broad summary of the evidence that suggests pharmacists can play a positive role in providing smoking cessation services.

A solution: The purpose of this study was to perform a literature search on pharmacist-delivered smoking cessation services to determine the effectiveness of these interventions. Overall, 15 studies were identified that met inclusion criteria; 5 were controlled and 10 were uncontrolled. Further, the 15 studies were grouped according to 3 categories: controlled vs. uncontrolled, verified vs. non-verified, and whether or not the study was conducted in the USA. Biochemical testing is one of the most scientifically sound methods to determine smoking abstinence; 6 of the 15 studies that used biochemical testing were included in the review.

The evidence strongly suggests patients benefit from pharmacist interventions. All 5 controlled studies showed that pharmacists had a positive impact on quit rates and 3 of them found a statistical difference between the pharmacist intervention and the control group. Quit rates for the intervention group at 6–12 months’ follow-up ranged from 14–16% in the 3 studies showing statistical significance. In the uncontrolled studies the documented quit rates ranged from 5–36%.

Implications: The studies reviewed in this paper indicate that pharmacists are effective in delivering smoking cessation services. Widespread utilization of pharmacists to help patients quit smoking can potentially have a profound effect in increasing smoking cessation rates across the USA. This review also demonstrates the high variation in study design and methodology, which makes it difficult to combine the results and formally create a meta-analysis. Larger, well-controlled studies with biochemical verification are required in order to validate these findings.

Assume an expanded role in helping your patients quit.

Q.U.I.T: Quit Using and Inhaling Tobacco is a comprehensive and flexible online training program designed to help pharmacists implement smoking cessation programs in their pharmacies.

For additional information, contact CPhA at 1-800-917-9489 or at quit@pharmacists.ca or visit www.pharmacists.ca/quit

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