



at the Centre for Health Promotion
University of Toronto

Implementing THCU's Ten Step Evaluation Model

The Purple Envelope:

Smoke-free Homes and Asthma A Pre-Post Evaluation Survey

November 14, 2006



Additional Copies & Copying Permission

This case study is available on our web site at <http://www.thcu.ca>.

The Health Communication Unit
at the Centre for Health Promotion

Department of Public Health Sciences,
University of Toronto, Health Sciences Building,
155 College Street, Room 400
Toronto, Ontario M5T 3M7

Tel: 416.978.0522
Fax: 416.971.1365
hc.unit@utoronto.ca
<http://www.thcu.ca>

Permission to copy this resource is granted for educational purposes only. If you are reproducing in part only, please credit The Health Communication Unit, at the Centre for Health Promotion, University of Toronto.

Acknowledgements

For their input and assistance in the development of this resource, we would like to acknowledge Karen McLean of the Program Training and Consultation Centre, Aysha Miwani of the Alder Group and Jodi Thesenvitz of THCU.

Disclaimer

The Health Communication Unit and its resources and services are funded by the Ontario Ministry of Health Promotion. The opinions and conclusions expressed in this paper are those of the author(s) and no official endorsement by the funder is intended or should be inferred.

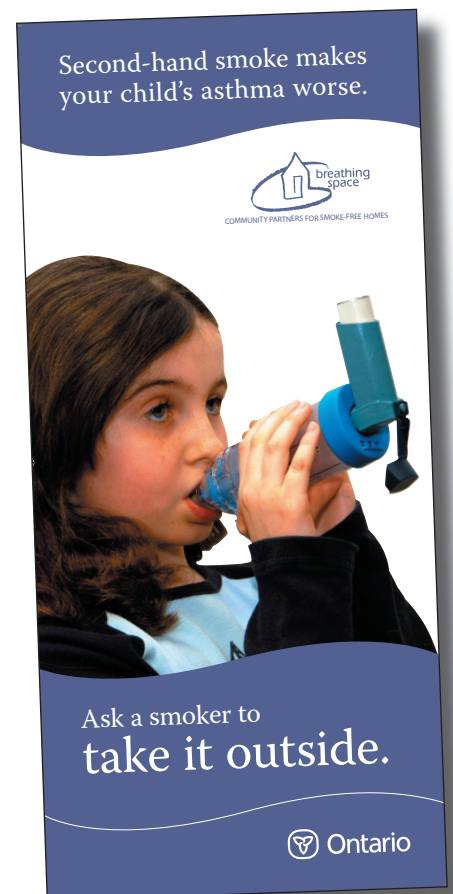


Background

The Smoke-free Homes and Asthma Project is one component of the Ontario Ministry of Health and Long-Term Care's *Asthma Plan of Action* that was launched in 2001. It involved a range of health promotion, prevention, education, clinical guidelines, control, treatment and research programs designed to reduce mortality, morbidity, and the financial costs associated with asthma.

This case study describes an independent outcome evaluation of a health communication campaign called *Smoke-free Homes and Asthma*. An independent evaluation is conducted by people who have not participated in the design or implementation of the project. Undertaking an independent evaluation often boosts the credibility of the evaluation results as there is increased autonomy and minimal bias.

A pilot project in the Kenora District, implemented by the Northwestern Health Unit, was chosen for the evaluation. It is one of 8 *Smoke-free Homes and Asthma* pilot site campaigns that took place across Ontario with support from the Program Training and Consultation Centre (PTCC). PTCC provided each pilot site with training, technical assistance, resource materials, and grants of between \$13,000 and \$15,000 to purchase media time.





Clarify Your Program

Goals

The ultimate goal of *Smoke-free Homes and Asthma* was to increase the number of homes that are smoke-free and increase the profile of second-hand smoke as a trigger for asthma. The goal of the Kenora District pilot site's *Smoke-free Homes* media campaign was to increase the number of homes with children under 12 years of age where smoking is not allowed.

Population of Interest

The *Smoke-free Homes and Asthma – Kenora District pilot site* campaign was targeted to parents, grandparents, and adult and pregnant caregivers of children aged 12 and under who were exposed to second-hand smoke in homes or cars.

Project Objectives

The specific objectives of the *Kenora District pilot site* campaign were as follows. The first relates to increasing knowledge about exposure to second-hand smoke:

- Address the common myths about children and exposure to second-hand smoke in compelling radio commercials;

The next objective is about increasing the number of parents who agree that smoke-free homes are good decisions for them and their children.

- Position a smoke-free home as a good decision for a parent to take based on their children's health and their own convenience (healthier children = less stress for parent);

Finally, the last objective is about increasing visibility around the issue.

- Get smoke-free home and car window decals into the hands of the parents of children under 12 and use radio commercials to encourage use.

Define Activities and Outputs

The main components of the *Smoke-free Homes and Asthma – Kenora District pilot site* campaign included a series of radio spots highlighting the harmful effects of second-hand smoke and advertising the main campaign materials (known as the 'purple envelope'). The call to action on the commercials urged people to watch for the 'purple envelope'. Purple envelopes were distributed to community members; they were sent home with children at schools and were also available for pick-up at toy libraries, pharmacies, medical

The purple envelopes contained the following materials: the 'Steps to Make Your Home Smoke-free' brochure containing the 'Welcome to Our Smoke-free Home/Car' window clings, and the 'Second-hand Smoke Makes Your Child's Asthma Worse' tear-off fact sheet. Materials were tailored to suit the local context: information about local smoking cessation programs was made available in the purple envelopes, and materials were targeted to those who did not already have smoke-free homes.

clinics and health unit offices. A video about second-hand smoke was distributed to prenatal instructors and a local hospital. The materials could also be requested directly by the public via a toll-free number advertised during the campaign.

Establish Indicators

The NRC+PickerGroup conducted a pre-campaign survey to measure indicators (including smoking status, household smoking rules and behavioural intentions regarding smoking) before the media campaign was implemented.

Plausible Causal Linkages Between Activities and Outcomes

A robust evidence base exists supporting the linkages between second-hand smoke and adverse health effects such as asthma, caused by exposure to second-hand smoke. Despite growing protection from second-hand smoke in Ontario due to the implementation of smoking bans in public places, there continues to be a significant source of second-hand smoke for children in homes. An Ontario Tobacco Research Unit Special Report: *Second Hand Smoke in Ontario Homes: Findings from a National Study* (October, 2005) found that 34 percent of Ontarians reported that at least one adult smoker (age 18+) lived in their home; and that 51 percent of Ontario respondents lived in homes with smokers and children (under the age of 18) reported that smoking occurred inside their homes – 33 percent daily and 18 percent occasionally.

The Ontario Tobacco Research Unit Special Report: *Second Hand Smoke in Ontario Homes: Findings from a National Study* recommends educational efforts to promote smoke-free homes among households with smokers and children, and among smokers with less education.

Remember to protect your family from second-hand smoke when you are away from your home as well:

- Don't smoke in your car.
- Visit only smoke-free places, restaurants and homes.
- Find smoke-free childcare.

Display these smoke-free decals in your home and car.

Smoke-free homes

breathing space
COMMUNITY PARTNERS FOR SMOKE-FREE HOMES

Steps to make your home smoke-free

Making healthcare work for you. Ontario

Developed by the Program Training and Consultation Centre, with funding from the Government of Ontario, 2002 (revised) adapted with permission and thanks to Grey Bruce Health Unit
Family photos: Health Canada
Design: MediaDoc

Here's how to make your home smoke-free:

Talk About It

- Sit down with everyone living in your home to discuss ways to make your home smoke-free.

Get Ready

- Set up a smoking area outside.
- Remove any ashtrays from inside the home.
- Display a smoke-free home sign on your front door.
- Think about the smokers who will visit your home and consider how you will ask them to smoke outside.

Ask A Smoker To Take It Outside

- Be polite, but firm.
- Thank your friends for helping you keep your home smoke-free.

I didn't know it was that important to keep young kids away from second-hand smoke. Not until our doctor told us that Sarah's asthma is much worse, 'cause she's breathing smoke into her tiny lungs. The past two weeks have been awful. We're exhausted from being up with her every night. And my heart breaks to see her so sick.

Father of nine-month old baby

2 STEP

Engage Stakeholders

The Better Practices Toolkit is designed to help community workers in Ontario make informed decisions about the best use of limited resources. It is a database of tobacco control interventions that experts have classified as either 'recommended' or 'promising' after a rigorous systematic assessment. Availability of high quality evaluation data is an important factor in the classification process.

Key stakeholders were engaged at various levels of the evaluation activities. NRC+PickerGroup designed and carried out the evaluation with input from PTCC and the Northwestern Health Unit. PTCC provided an array of technical support for and funding of evaluation activities. The *Smoke-free Homes and Asthma Advisory Committee*, with representation from the *Ontario Tobacco Research Unit*, *Breathing Space*, *Best Start*, and *The Health Communication Unit* guided the program, including evaluation, at the provincial level.

At the community level, the Northwestern Health Unit assumed a collaborative approach with community partners in the implementation of the smoke-free homes campaign. The degree of community organization was an important strength of the campaign. For example, NWHU partnered with various community agencies such as school boards, pharmacies and the local radio station.

Stakeholder	What do they want to know from the evaluation?
PTCC	PTCC was interested in this evaluation to learn more about the efficacy of promoting smoke-free homes. They also felt it was a necessary element of this program as part of its review for their Better Practices Toolkit. PTCC also funded the evaluation.
NWHU	NWHU was interested in this evaluation as they implemented the project and wanted to see an increase in the number of smoke-free homes in Kenora district. Successful evaluation results could also translate into more funding for other projects like this.
NRC+ PickerGroup	NRC+PickerGroup was contracted to conduct an independent evaluation. Their main interest was in developing effective methods for data analysis.
Community Partners	The participation of various community partners was leveraged throughout the implementation of the project. These partners were interested in seeing positive results, knowing that they had provided reach into the community.
Advisory Committee	The Advisory Committee was interested in learning whether this type of project is effective. If so, there would be potential to recommend scale-up of similar activities in different communities.

3 STEP

Assess Resources for the Evaluation

The costs of the evaluation included contract services of NRC+PickerGroup for one lead evaluation consultant and one advisory evaluation consultant.

PTCC allocated \$91,000 for the evaluation.

PTCC also provided in-kind support to the NWHU through training, technical assistance, and resource materials to carry out program and evaluation activities.

4 STEP

Design the Evaluation

An outcome evaluation with pre and post questionnaires was conducted to assess the impact of the intervention on behaviour change. This method fit within the available budget and there was capacity to develop the tools and analyze the data accordingly.

The purpose of the evaluation was to:

- Explore the importance of promoting smoke-free homes;
- Determine the level of awareness of the *Smoke-free Homes and Asthma* campaign;
- Determine the recall of the promotional materials from the *Smoke-free Homes and Asthma* campaign; and
- Determine if there was a change in behavioural intentions and behaviour of the public related to second-hand smoke exposure in homes and cars.

The evaluation pilot site was selected based on several factors:

- High percentage of children under 12 years of age;
- High smoking rate;
- High likelihood that the campaign would be well implemented.

In summary, the proposed evaluation design met the following requirements:

- In line with evaluation purpose;
- Supported the interests and needs of stakeholders – in particular the need to test effectiveness of the effort to inform PTCC's Better Practices Toolkit; and
- Fit within available budget, timeline and capacity.

5 STEP

Determine Appropriate Methods of Measurement and Procedures

A random sample of 400 residents of Kenora District who live with children 12 and under at least 50 percent of the time was interviewed for the pre-campaign questionnaire. An additional 402 residents were interviewed for the post-campaign survey.

The NRC+PickerGroup Canada worked collaboratively with PTCC to develop the pre- and post- campaign questionnaires. An examination of existing questionnaires from organizations such as the *Ontario Tobacco Research Unit* and *Breathing Space* helped with development. Five factors were considered in the development of the questionnaires: necessity of question; wording and language; biases; response categories; and logical flow.

A quota was set to over-represent smokers so that half of those surveyed on both the pre and post campaign surveys either smoked or lived with a smoker.

The evaluation was structured so that data collection took place after Christmas. The pre-campaign survey happened in mid January 2004; the smoke-free homes campaign was launched in February and continued through mid March 2004. The post-campaign survey was conducted in early April.

6 STEP

Develop the Workplan, Budget and Timeline for Evaluation

Budget and other resources

As previously stated, the cost of contracting NRC+Picker Group (following the issue of a Request for Proposals) to conduct the evaluation was \$91,000.

Considerable time contributions were also made from the advisory committee (including PTCC) and staff at the NWHU. One staff member at NWHU coordinated the evaluation and an epidemiologist was consulted, as needed.

Workplan and Timeline

In June, 2003, PTCC invited applications for pilot sites to implement Smoke-free Homes and Asthma campaigns to be completed by June 30, 2004. Evaluation planning began shortly after funding was awarded. The pre-campaign survey took place in January 2004 and the post-campaign survey happened in April 2004. The final evaluation report was submitted by NRC+Picker Group by the end of April.

7 STEP

Collect the Data Using Agreed Upon Methods and Procedures

In order to generate the random sample, the Kenora area's telephone exchanges were used, and the remaining four digits randomly entered. The "Last Birthday Method", in which the interviewer asks to speak with the adult 18 or over who most recently had a birthday was used.

Pilot Test the Instruments

The pre-campaign questionnaire was pilot-tested in mid-January 2004 on a random sample of 25 respondents in Kenora District. Based on the results of the pilot test, several changes were made to the wording of questions to increase the clarity and flow.

The post-campaign questionnaire was pilot-tested at the end of March 2004 on a random sample of 18 respondents in Kenora District. Based on the results of the pilot test, very few changes were made to the questionnaire. These changes did not affect the questions that were used in the pre-campaign survey.

Develop Data Collection Techniques

The "Last Birthday Method" eliminates biases based on which person in the household is most likely to answer the phone and offers a simple way to randomly select a person within the household. People who did not answer were called back up to eight times. This method eliminates demographic biases attributed to respondents who complete an interview on the first call, as compared to those who require multiple call backs.

All interviewers were carefully recruited and trained on data collection and interviewing, using the questionnaires. An advanced *Computer Assisted Telephone Interviewing* (CATI) system was used for interviewing.

8 STEP

Process and Analyze Data

Prepare Data for Analysis

The data were entered as the interviews were conducted, using the CATI system, which helps maximize response rates, optimize sample management and minimize response code errors (e.g., ensure that skip patterns or 'go to' questions are followed accurately).

Analyze Data with Stakeholder Input

The NRC+PickerGroup interpreted the data and analyzed the results, in consultation with PTCC and the Northwestern Health Unit.

Use Statistical Analysis

The data were then analyzed using SPSS for Windows. Chi-square tests were used to detect significant differences between pre- and post-survey results.

9 STEP

Interpret and Disseminate Results

This evaluation was reviewed by two independent experts as part of PTCC's *Better Practices Review* initiative. Following a thorough assessment, the *Smoke-free Homes and Asthma campaign Kenora district* received the rating of 'promising' intervention in the *Better Practices Toolkit*.

Promoting interventions have been promoted via announcements on various listservs, at conferences, presentations, and workshops.

Every question showed improvements post-campaign. However, more evidence is required to show that the smoke-free homes and asthma campaign impacted behavioural intentions or behaviour.

There was a high level of awareness generated from the *Smoke-free Home and Asthma* campaign, among both smokers (69 percent) and non smokers (69 percent). This suggests that the channels used to reach the public were effective for the Kenora district. The most commonly mentioned way pamphlets were received was via schools (83 percent) indicating that this channel was integral to a successful dissemination strategy.

Overall, 69 percent of respondents reported that they recalled seeing, hearing or reading about smoke-free homes; 29 percent reported that they did not. Households with smokers and those with non-smokers were similar.

The most commonly identified ways that respondents who are smokers changed their behaviour as a result of the campaign was to:

- Cut down on their smoking (62 percent);
- Not smoke in front of children (10 percent); or
- Only smoke outside (10 percent).

A significantly higher proportion of respondents on the post-campaign survey indicated that they would be very likely to not smoke in someone's home if non-smokers were present (73 percent) compared to respondents on the pre-campaign survey (61 percent). Respondents also indicated that, post-campaign, they would not be likely to allow smoking on special occasions at their home (79 percent) compared to respondents on the pre-campaign survey (74 percent).

The following conclusions and recommendations were developed, following this evaluation:

- Radio and pamphlet distribution through schools are effective channels through which to reach parents of children aged 12 and under in this community.
- It is important to try to target the smoke-free homes campaign to households with smokers.
- The health unit should continue to promote smoke-free homes with this target group (i.e., parents with children 12 and under), particularly to those who either smoke or live with smokers.
- This campaign should be evaluated in different communities (urban/rural; large/small) to determine its generalizability to other communities.

The complete NRC+PickerGroup evaluation report is available at http://www.ptcc-cfc.on.ca/rds/special_projects/smoke_free_homes001.cfm



Take Action

The Northwestern Health Unit is committed to building awareness and support for smoke-free homes. Shortly after the completion of this project, the health unit was awarded additional funding to support another smoke-free homes media campaign. The NWHU also made a short presentation about the *Smoke-free Homes and Asthma – Kenora District pilot site* campaign (presented as the 'Purple Envelope Campaign') at the *Ontario Tobacco Control Conference* in early May 2004.

Sources

1. Smoke-free Homes and Asthma Pilot Sites: Media Campaigns, PTCC. Retrieved from <http://www.ptcc-cfc.on.ca/bpt/intervention-details.cfm?IntID=31>
2. Smoke Free Homes Pre- and Post-Campaign Survey: Final Report. (April, 2004). Prepared by NRC+Picker Group Canada for the Program Training and Consultation Centre. Retrieved from http://www.ptcc-cfc.on.ca/pubs/RDS_0072.pdf.
3. Interview with Karen McLean, PTCC (11 April 2006).

Appendices

Pre and post survey questionnaires

See NRC+PickerGroup Report found at: http://www.ptcc-cfc.on.ca/pubs/RDS_0072.pdf

For More Information

Users of the PTCC Better Practices Toolkit can select this program and obtain detailed evaluation information on this initiative at <http://www.ptcc-cfc.on.ca/bpt/intervention-details.cfm?IntID=31>.