

Evaluation of the City of Woodstock's Outdoor Smoking By-law: A Longitudinal Study of Smokers and Non-Smokers

by

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A thesis
presented to the University of Waterloo
in fulfillment of the
thesis requirement for the degree of
Doctor of Philosophy
in
Psychology

Waterloo, Ontario, Canada, 2010

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AUTHOR'S DECLARATION

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

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ABSTRACT

PURPOSE: To evaluate Canada's most comprehensive outdoor smoke-free ordinance, in Woodstock, Ontario, using both quantitative (longitudinal cohort survey) and qualitative methods (key informant interviews with policy makers). Measures include levels of support for outdoor smoking restrictions, smoking behaviour in outdoor environments, measures of the social denormalization of smoking, measures of concern about litter or fires caused by discarded cigarette butts, and reported changes in use of services, facilities or businesses that were regulated by the by-law. This study also sought to understand aspects of the policy development process and determine to how relevant the findings may be to other communities across Canada, and the world.

BACKGROUND: The City of Woodstock, Ontario created a comprehensive outdoor smoke-free ordinance (OSFO) that came into effect on September 1, 2008. This by-law restricted or banned smoking in 5 different outdoor environments owned or regulated by the city including patios on downtown sidewalk cafés, parks and recreational fields, areas around transit stops and shelters, and doorways of city run facilities such as city hall. The by-law also created two schedules to further regulate smoking in other outdoor environments if elected by citizens in the community; one for non-city-owned properties such as private business to regulate smoking in their doorway environments and a second schedule for outdoor events organized by groups in the community. The schedules allowed council to pass a by-law that could easily regulate and enforce additional smoke-free environments, as requested by citizens, without the need for council approval.

METHODS: Qualitative and quantitative methods were used to address the research objectives. Quantitative measures were collected using a pre-post survey design, interviewing smokers and non-smokers, in the City of Woodstock, and a neighbouring community (Ingersoll) in the same county (Oxford County). Before the by-law was enacted, two surveys were conducted. The telephone survey (August 13-28, 2008) was a random digit dialled (RDD) general adult population survey of non-smokers (n=373) and smokers (n=234). A face-to-face survey (August 13-19, 2008) was conducted among a targeted sample of smokers who were observed smoking in one of the outdoor areas that was to become smoke-free in accordance with the by-law (n=176). Face-to-face interviewers used handheld Palm III devices to assist in the interviewing of these respondents. Surveying both samples ensured the beliefs, attitudes, and behaviour of those smokers who, given circumstances of their recruitment, would be more likely to be affected by the by-law, would be measured in this evaluation study. Using a longitudinal cohort design, respondents from both Wave 1

surveys were re-contacted by telephone in approximately one year after the ban was implemented (August 18-September 15, 2009), to measure changes in the key outcome variables. The Wave 2 survey was conducted entirely by telephone with no replenishment. The Wave 2 survey included respondents that were successfully re-contacted from the general population sample (non-smokers n=299, smokers n=182), and respondents from the targeted sample (n=61). This qualitative study sought to identify any specific lessons or findings from the process undertaken that would be applicable or helpful to other communities. The qualitative study involved 6 key informant interviews with identified public health and city staff and an elected official who were involved in different aspects of the by-law, from development to enforcement. The data collected from the key informant interviews was analysed using an inductive qualitative method called the 'framework approach'.

RESULTS: After the Woodstock outdoor smoking restrictions had been in place for approximately 1 year, most respondents from the general population survey, smokers, (71%), and non-smokers (93%), supported or strongly supported the by-law. Most smokers (82%) and non-smokers (96%) agreed or strongly agreed that the by-law had been good for the health of the children of Woodstock. The by-law was also associated with increased quit intentions; 15% of the smokers from the general population sample reported that the smoke-free by-law made them more likely to quit, and approximately 26% of the smokers from the targeted sample reported the by-law made them more likely to quit. Smokers from both the general population (30%) and the targeted sample (42%) reported that the smoke-free outdoor by-law had helped them cut down on the number of cigarettes they smoke. There were 30 respondents in the Wave 1 survey that were smokers, who had successfully quit at the time of the Wave 2 survey. Of these 'quitters', 33% reported that they outdoor smoke-free by-law had helped them to quit smoking, and approximately half (48%) reported that they by-law had helped them to stay a non-smoker. The overwhelming majority of smokers reported that the by-law did not impact their use of facilities or businesses that had been regulated by the by-law.

The key informant interviews revealed that the outdoor smoke-free ordinance was developed by following a standard public health policy development process that involved community (public) participation, exploration of policy options, and a political decision made by the city's elected officials. It was identified that the implementation of two schedules in the by-law, which allows for expansion of the environments regulated and enforced by the city, was an effective strategy to gradually increase smoke-free spaces without burdening the City Council with regular needs to amend or update a by-law. Appropriate public relations were engaged including

disseminating information about the by-law, and publicizing it through established networks in the community. Signage in the regulated environments, and enforcement were considered critical by the implementation team. City staff members recommended that other communities should consider passing similar by-laws and dedicate more effort to implementing and enforcing restrictions, rather than discussing or debating whether or not to enact a by-law. An analysis of the key informant interviews revealed that there were no unique features or circumstances specific to Woodstock that would suggest this by-law could not be developed or passed in another area municipality provided the community already has established smoke-free policies in indoor or enclosed public spaces. If Woodstock is unique in any way, it was in the presence of conditions such as high smoking prevalence and close proximity to tobacco growing regions that make it less likely to have successfully enacted an outdoor smoke-free ordinance.

CONCLUSION: Support for the Woodstock comprehensive outdoor smoking by-law is high among smokers and non-smokers. The overwhelming majority of residents interviewed supported the by-law and felt that the by-law was good for the health of the children of Woodstock. The by-law has not had negative impacts on use of facilities including parks and recreational fields. Further, a third of smokers reported that the outdoor by-law has helped them to cut down how much they smoke and almost a fifth of smokers reported that the by-law has made them more likely to quit smoking. Approximately half of the quitters in the sample also reported the by-law helped them to stay quit. These findings suggest that expanding smoke-free ordinances to include a range of outdoor environments will be supported by citizens, and will help smokers to reduce how much they smoke, encourage quitting and help those that quit, remain abstinent. The findings from the key informant interviews suggest that other jurisdictions should explore expanding their smoke-free ordinances to include outdoor environments, particularly environments frequented by children.

ACKNOWLEDGEMENTS

Thank you Geoffrey T. Fong – for years of mentoring, teaching, and inspiration. Thank you to my committee members, Andy Hyland and Roy Cameron – for years of assistance, support, and guidance. You have both taught me to keep my eye on what is important in my research and also in my life.

Thank you Mary Thompson – who stayed on past her well-earned retirement to support the Woodstock team (and others) here at UW. Your generosity to support graduate students is unparalleled. Thank you also to the co-investigators of this research: Roberta Ferrence, Pam Kaufman, and Robert Schwartz from the Ontario Tobacco Research Unit. Thank you to Carol Bossonberry, Gerry Moniz, and Peter Heywood at the Oxford County Public Health Unit for so generously collaborating on this initiative. You are true innovators and leaders in your field – and now that field is smoke-free... Thank you to the City of Woodstock engineering staff and management who drafted the by-law (David Creery) and then enforced it (Michael Mannapso).

Thank you to my colleagues in the Health Psychology Lab at UW – this has been a wonderful place to be... apart from the lack of light and fresh air.... Drilling noises and banging... Thank you also to the Research Assistants that helped cleaning data, making tables, and checking references (Min Chen, Claire Munhall, and Carla Parkinson). Thank you to the field staff who helped collect the face-to-face surveys in Woodstock (Kathleen, Krystal, Blake, Bill, Brittany) and notably Lauren Price, who oversaw the field work day-to-day.

Thank you to Fiona Heath and Kathleen McSpurren and everyone at the UW Survey Research Centre for so competently executing the phone survey. And thanks to the people of Woodstock and Oxford County who completed our survey – generously giving their time for public health research.

Thank you to my colleagues and friends at Region of Waterloo Public Health who introduced me to the world of tobacco control, and who alerted me to the new by-law in Woodstock – especially Lynn Johnston, Mary Sehl, and my colleagues in the Program Evaluation group.

Thank you to Rita Cherkewski in the Department of Psychology – who has been looking after me since my first year at UW... she will glad to see me give up my student card!

And my deepest thanks to my family – my boys Hudson and Cedar who have earned this PhD along with me. An honorary degree should be given to Simone who has endured so much, including allowing me to hide in the Kawarthas to write this – thank you for believing that this work was valuable and important. It was because of you and countless concessions that all of this was possible. You are my best friend.

This research was supported by funds from the Canadian Tobacco Control Research Initiative (CTCRI). I would like to acknowledge the support of a Canadian Institutes for Health Research (CIHR) Canada Graduate Award, as well as the CIHR Strategic Training Program in Tobacco Research program.

DEDICATION

Much of this dissertation was written in the Kawarthas, in what was my grandmother's home. While working there I was reminded that my two maternal grandparents died in their early 60s from cancers. My own children did not meet my maternal grandparents. I want to dedicate this work to them - Phyllis and Warren Brown.

I would also like to dedicate this to my sons Cedar and Hudson – who are becoming quite adept at delivering public health behaviour advice to anyone willing to listen. Cedar and Hudson are both an inspiration and an example. I hope my work in the arena of public health will help build a healthier world for you; a world where every child has a chance to meet their great grandparents.

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Figure 1. Public Park in Woodstock Ontario, 2009

Provided by the City of Woodstock (used with permission)

1.0 INTRODUCTION

Tobacco use is the leading cause of death and disability in the world,¹ killing more than five million people each year.² In 2005, tobacco use was responsible for an estimated 45,000 deaths in Canada.³ The overwhelming majority of tobacco users in Canada smoke cigarettes.⁴ Although smoking prevalence rates have dropped significantly over the last 40 years, 18.0% of Canadians were cigarette smokers (smokers) in 2008.⁵ In recent years, prevalence of tobacco use has remained fairly constant,⁶ suggesting that further reductions in tobacco use may require more creative tobacco control measures.

To reduce the health impact tobacco has on Canadian society, a range of comprehensive tobacco control strategies are employed. The three domains of tobacco control often described as “the three pillars” being: 1) protection from second-hand smoke, 2) prevention from tobacco use, and 3) cessation strategies to support tobacco users to quit.⁷ To date, in Canada, an array of policies and programs has been developed to support each tobacco control pillar.

One tobacco control domain that has been very successful in Canada is the creation of smoke-free laws that have restricted or banned smoking in a range of environments. These restrictions were initially introduced in the mid-1970s, and by 2009, virtually every enclosed public place and workplace in Canada had been made “smoke-free” by local, provincial/territorial or federal laws. Smoke-free laws have the obvious benefit of protecting non-smokers from dangerous second-hand smoke (SHS). But these laws have also been shown to help to prevent people from starting to smoke, and to support current smokers to quit and stay quit.⁸

With most indoor environments now smoke-free, some public health and tobacco control advocates have suggested that outdoor environments might be a logical next step in expanding and deepening smoke-free spaces.^{9, 10, 11} The present study evaluates a comprehensive outdoor smoke-free by-law that was passed by the Woodstock City Council in Southwestern Ontario, in June 2008, and which came into effect in September 2008. The Woodstock by-law restricted or banned smoking in 5 different outdoor environments owned or regulated by the city, including patios on downtown sidewalk cafés, parks, and recreational fields, areas around transit stops and shelters, and doorways of city run facilities such as the city hall. The by-law also created two schedules to further regulate smoking in other outdoor environments if elected by citizens in the community - one for non-city proprietors to elect to have the city regulate smoking in their doorway environments, and a second schedule for outdoor events, such as cultural or music events organized by groups in the community.

The schedules allowed the Council to pass this by-law which could easily regulate and enforce additional smoke-free environments without the need for future/additional council approval. The Woodstock outdoor smoke-free by-law was one of the first policies to regulate outdoor smoking, and was also the most comprehensive, regulating more environments than any other municipal by-law in Canada.

This study is the first to comprehensively evaluate an outdoor smoking by-law, to understand if outdoor smoking restrictions can provide benefits to each tobacco control domain in a way similar to indoor restrictions. From this study, the broader objective was to help inform other local authorities, provinces or territories in Canada and around the world considering enacting similar ordinances.

The Woodstock by-law is an example of how far Canada has progressed in the domain of tobacco control. The suggestion of regulating smoking in the outdoors would have been laughable less than 20 years ago, when smoking was still allowed in most workplaces, including offices, universities, and hospitals.

Some public policy critics, however, might ask if outdoor smoke-free by-laws represent progress or simply an example of over-regulation of behaviour. An article in Canada's national newspaper, the *Globe and Mail*¹² described such outdoor smoke-free policies as examples of 'nanny-state' governance. The voices questioning the validity of outdoor smoking bans has not just been from newsrooms and from those concerned with civil liberties. Some leaders in the field of tobacco control have stated that outdoor smoking restrictions, like those passed in Woodstock, are not ethically justifiable and simply go too far, effectively treating people who smoke unfairly.^{13, 14, 15} Other tobacco control researchers, however, have argued that outdoor restrictions are warranted on the grounds that they protect non-smokers from dangerous second-hand smoke.^{16, 17}

Considering the public health need to reduce smoking prevalence in Canada, and acknowledging that further smoking prevalence reductions may need to use new and innovative policy approaches, outdoor smoke-free policies will be of interest to some public health decision-makers and tobacco control advocates. It is therefore important to understand if outdoor smoking restrictions like Woodstock's by-law are justifiable strategies. Do outdoor smoke-free ordinances effectively support tobacco control strategies? Or are they, as has been suggested, merely punitive and unfair to people who smoke?

This design of the Woodstock evaluation program was informed by the framework presented in the International Agency for Research on Cancer (IARC) Handbook of Cancer

Prevention -Volume 12, a framework that arose from the International Tobacco Control Policy Evaluation Project (ITC Project). This framework was designed to ensure effective evaluation of tobacco control interventions including smoke-free policies.¹⁸ The evaluation measured the community of Woodstock's support for the by-law, before and after it was enacted using a longitudinal cohort design. The evaluation also measured the effectiveness of the by-law to reduce involuntary exposure to second-hand smoke, to encourage smoking cessation, and to denormalize smoking behaviour. Finally, the by-law's impact on use or patronage of environments and facilities regulated by the by-law was measured to quantify any unintentional consequences that the by-law may have caused.

To provide context to the Woodstock evaluation, this introductory chapter will review the history of tobacco use in Canada, and how tobacco control policies have evolved at the local, provincial/territorial, and federal level. This introduction will explain the evolution of these policies with a specific focus on smoke-free policies including outdoor smoke-free policies, detailing several different rationales for their enactment. The chapter will also include a description of the community of Woodstock, Ontario and the Woodstock by-law development process in detail. The by-law and its innovative schedules will then be described.

1.1 History of Tobacco Use and Tobacco Control Policies in Canada

When considering examples of sweeping changes in public attitudes and behaviours, there are few as dramatic as the erosion in the social acceptance of tobacco use in Canada over the last 40 years. The prevalence of smoking and the acceptance of the regulation of tobacco use have changed as a result of widespread acknowledgement of the dangers of the behavior, and the risk tobacco smoke represents to smokers, and non-smokers.

In Canada, in 1965, a remarkable 69% of men and 48% of women aged 25-44 were smokers.¹⁹ The national survey used to measure smoking prevalence – the *Health and Welfare Canada Survey* – revealed that half the Canadian population, aged 15+ were smokers. At that time people smoked in most workplaces, on airplanes, in schools, and in hospitals. There were no

restrictions on tobacco advertising or sponsorships, and cigarette packaging contained no health warnings or listing of constituents.

Since 1965, smoking rates have fallen consistently in Canada across all age groups^A, and the promotion of tobacco products has been highly regulated. These sharp declines in smoking rates are associated with numerous historical events – including the rapidly accumulated public health research that linked cigarette smoking with lung cancer, heart disease, and stroke as well as other diseases. Medical reports suggesting these causal associations began to surface in the 1920s, but it was not until after World War II that the number of lung cancer deaths prompted epidemiologists to look more closely with systematic studies²⁰. In 1954 the Canadian Medical Association issued their first public warning on the dangers of smoking.²¹ By the early 1960s the accumulated evidence of the health effects of smoking had been amassed and these findings were published by the Royal College of Physicians in London in 1962,²² Health and Welfare Canada in 1963,²³ and the Surgeon General of the United States in 1964.²⁴ In 1967, Canadian legislation required tobacco products and advertisements to include constituent information like tar and nicotine levels.²⁵ In 1970, the World Health Assembly called upon governments to act to address the issue of smoking and to work to avoid preventable deaths from tobacco.²⁶

Despite early action to address smoking, in 1981 Canada had the highest rate of tobacco consumption in the world.²⁷ From the early 1980s onward, governments in Canada enacted a series of comprehensive tobacco control policies including higher taxes, and more smoke-free ordinances for public places and workplaces. By the end of the 1980s, tobacco packaging was required to have large warning labels, and most forms of tobacco advertising had been banned. Canada played a critical part in negotiations surrounding the agreement to ban smoking on international flights.²⁸ In 2005, the World Health Organization described Canada as being at the forefront for the development and enactment of progressive policies to reduce tobacco use, including national anti-smoking media campaigns, school-based education programs, and laws prohibiting the sale of tobacco to minors.²⁹ Canadian provinces, territories, and municipalities have also been leaders in the development of

^A There is one exception to this statement -- a brief period during the 1990s smoking rates for teens climbed briefly – this coincided with a time period where some jurisdictions cut taxes in an effort to address smuggling and illegal cigarettes.

restrictions on smoking in public places and workplaces. The Canadian *Constitution Act, 1867*, gives jurisdiction over health to Canada's provinces and territories. However each level of government, meaning federal, provincial/territorial and local, has the legal authority to regulate tobacco products.³⁰ This is, in part, why the history of Canadian smoke-free policies has evolved in a patchwork manner, with some jurisdictions enacting smoke-free legislation years ahead of other communities. The range of jurisdictional opportunity has been useful to continuously improve smoke-free policies. This is still the reality and will likely be important in years to come as Canada continues to work to regulate tobacco products and tobacco use in an effort to reduce smoking prevalence.

Federal legislation concerning tobacco has focused mainly on taxation, restricting product promotion and sponsorship, and regulating the sale of tobacco products. The federal government has also been involved in national social marketing campaigns to raise awareness of the dangers of using tobacco and to encourage quitting. Federal legislation restricting or banning smoking has been limited to regulating federal workplaces, or workplaces governed federally, such as inter-provincial companies (such as long-haul trucking). In 1988 the federal government enacted the *Non-smokers' Health Act*, which regulates smoking in federal government workplaces. This Act prohibits smoking in federal workplaces with the exception of certain enclosed smoking rooms. In 1997 the Federal *Tobacco Act* was passed in Canada, with aims to protect the 'health of young persons' by restricting access to tobacco products, and to enhance public awareness of the health hazards of using tobacco products.³¹ An amendment to the Tobacco Act came into effect in October 2003 that banned the promotion of tobacco company sponsorship of cultural and sporting events. In 2009, amendments were tabled and passed in the House of Commons to increase controls on tobacco marketing to tighten loopholes that had made it legal to sell candy-flavoured cigarillos in Canada.

Smoke-free ordinances (SFOs) first emerged in Canada as by-laws written by local municipal councils. In 1976, the city of Ottawa passed Canada's first municipal law restricting smoking in some public places and work environments, including patient care areas, elevators, school buses, reception areas, service counters in banks, and retail shops.³² Over the next 30, years hundreds of other municipalities passed by-laws restricting or banning smoking in public and work places. Eventually provinces and territories followed the leadership of local councils and enacted smoke-free workplace and public place legislation. In some cases the provincial and territorial legislation only came into force after most of the jurisdiction's population had already been regulated by lower tiered municipalities. Such is the case with the Smoke-free Ontario Act, which came into effect in 2006, when most of Ontario's population lived in communities that had passed

comprehensive smoke-free bans, making workplaces and public places 100% smoke-free.³³ However the enactment of the Smoke-free Ontario Act ensured that every citizen in the province was equally protected from second-hand smoke.

Today several local authorities (cities, regions, counties) enforce by-laws that provide greater protection from second-hand smoke than their provincial or territorial laws.³⁴ There are numerous communities currently in discussion to expand their existing smoke-free by-laws, so it is anticipated that Canadian communities will continue to deepen and broaden their tobacco control policies in an effort to further reduce tobacco use and protect citizens from SHS.^B

1.2 Canada's Current Tobacco Use Landscape

As of 2009, every province and territory in Canada had smoke-free workplace and public places legislation.³⁵ Canada is considered among the front-runners for the title of the world's most successful smoking control nation, along with Sweden, Australia, and the United States.³⁶ Despite remarkable gains in tobacco control, and Canada's relative success in establishing comprehensive tobacco control strategies, tobacco use today is still a significant public health issue in Canadian society. According to findings from the Canadian Tobacco Use Monitoring Survey (CTUMS), it was estimated that in 2008, 4.9 million Canadians aged 15+ (17.9%) were smokers; the majority of those were daily smokers (13.5%) and prevalence was higher among males (20%) than females (16%).³⁷ In 2009, tobacco use is still the leading cause of preventable death in Canada, and Health Canada (2010) estimates that tobacco smoking accounts for 25-50% of premature mortality in the country.³⁸ Tobacco smoking is a principal cause of cardiovascular disease, which is the number one cause of death in Canada. Cardiovascular diseases include coronary heart disease, nonfatal and fatal

^B A recent scan showed the following communities across Canada considering a smoke-free outdoor policy: Cobourg, Ontario (Parks and Playgrounds), Sault Ste. Marie, Ontario (Parks and Playgrounds), Peterborough, Ontario, (Parks and Playgrounds), Picton, Ontario (Municipal Buildings and Recreational Facility grounds), Toronto, Ontario (Sports Fields), Winnipeg, Manitoba (Parks and Rec Fields), Vancouver, British Columbia (Parks and Beaches)

myocardial infarction, ischemic heart disease, coronary artery disease, hypertensive heart disease, angina, stroke, and other circulatory diseases. Tobacco smoking is also causally associated with earlier manifestation of essential hypertension, produces unfavourable changes in lipid status, and decreases the efficacy of antihypertensive therapy.³⁹ Tobacco smoking is also responsible for 30% of all cancers among Canadians.⁴⁰

Comparing provinces across Canada, there is a range of smoking. British Columbia has the lowest rate of smoking with prevalence at 14.7%, while Alberta, Manitoba, and Saskatchewan each have prevalence rates higher than 20%.⁴¹ In Ontario smoking prevalence was slightly lower than the national average, at 16.8%.⁴² It is important to note that smoking rates and daily consumption of cigarettes have become fairly stable in recent years, suggesting the historic decline in smoking may be slowing or stalled.

Smoking prevalence is highly relevant because of the approximately five million Canadians who smoke, it is estimated that up to half of them will become ill or die from continued tobacco use.⁴³ Tobacco is responsible for an estimated 45,000 deaths in Canada every year.⁴⁴ The broad economic costs to the Canadian society, including health care costs, and lost productivity, is estimated to be \$17 billion per year, which represents 42.7% of all substance abuse costs in Canada.⁴⁵ Included in this estimate is \$4.4 billion in direct health care costs of which \$2.6 billion is from hospitalization.⁴⁶ Despite notable successes in reducing smoking prevalence in Canada, tobacco continues to take a significant toll on the country's health and economic productivity. Therefore, it is paramount that public health and tobacco control advocates continue to work to discourage tobacco use.

In many countries, including Canada, the highest smoking rates are now found among disadvantaged communities and ethnic minorities.⁴⁷ Canada's Inuit population, for example, has smoking prevalence rates over 70%, among the highest in the world.⁴⁸ Other communities in Canada with persistently high rates of smoking include other Aboriginal communities, queer communities, and some racial/ethnic communities, as well as people who have low socioeconomic status.^{49, 50} It is widely agreed that the highest smoking rates in Canada are among those with severe mental illness. Beyond having high prevalence rates, it has been estimated that people with severe mental illness are only one-fifth as likely to stop smoking as are smokers in the general population.⁵¹

The disparities in smoking prevalence between some communities highlight the need to target specific subpopulations with appropriate public health initiatives as a way to reduce smoking. All reductions in smoking will of course help reduce the overall prevalence in the population.

Deciding what smoking prevalence level is a suitable goal for the population is not an easy task. Chapman (2007) suggests either using a smoking prevalence rate of 9.8%, the gold-standard in California, as a smoking prevalence rate target, or using rates of subpopulations such as 3% of physicians or 8.5% of college-educated graduates.⁵² Whatever the goal – it is a reasonable expectation that current rates of tobacco use can be further reduced in all communities.

In Canada, the Federal Tobacco Control Strategy (FTCS) was established in 2001 to try and address tobacco use in a comprehensive and goal-oriented manner.⁵³ National targets for smoking prevalence reduction in Canada are now set at 12% by 2011. Specific goals, as identified by Health Canada include:

- Reduce the prevalence of Canadian youth (15-17) who smoke from 15% to 9%;
- Increase the number of adult Canadians who quit smoking by 1.5 million;
- Reduce the prevalence of Canadians exposed daily to second-hand smoke from 28% to 20%;
- Examine the next generation of tobacco control policy in Canada;
- Contribute to the global implementation of the World Health Organization's Framework Convention on Tobacco Control; and
- Monitor and assess contraband tobacco activities and enhance compliance.

Health Canada, 2009⁵⁴

Although a national target of 12% smoking prevalence is likely achievable sometime in the future, it is clear that Canada will not achieve these goals within the next year. Such goals, however, do provide motivation and justification to push forward with strong tobacco control measures. Considering that most provinces and territories have recently updated their tobacco control laws, more extensive policies are likely to originate at the municipal level.

1.3 Tobacco Control Strategies

The scope of tobacco control efforts have frequently been articulated by three pillars: (1) prevention of tobacco use initiation, (2) cessation for tobacco users, and (3) protection from second-hand smoke.⁵⁵ Governments interested in addressing their citizens' tobacco use typically approach tobacco control in a comprehensive manner, developing policies and programs that address each pillar. Neglecting any one priority will not eliminate the public health issues caused by tobacco use

in the long run. Prevention strategies usually focus on youth and work to discourage initiation of tobacco use. Social marketing campaigns are a common strategy to make tobacco seem less appealing or normal. This is often called social denormalization. Cessation strategies include a range of options for people who smoke including counseling services, which could include group or individual one-on-one meetings with cessation experts, or supportive phone calls, emails, or text messages. Other cessation strategies include a person trying to quit smoking using a cessation ‘buddy’ who they can call on for support during the initial quitting period. Some cessation strategies also include replacement activities (drinking water, going for a walk, deep breathing) to help smokers address stress, cravings or other antecedents to smoking behaviour. There are chemotherapy aids such as nicotine replacement therapy which includes nicotine patches, gum, lozenges, or inhalers that help address the physical withdrawal from nicotine, the addictive agent in tobacco smoke. Protection strategies focus on developing, enacting, and enforcing smoke-free ordinances. Smoke-free Ordinances (SFOs) are very common in all jurisdictions of Canada and many parts of the world.⁵⁶

1.4 Smoke-free Ordinances (SFOs)

Smoke-free ordinances (SFOs) have the obvious benefit of helping to protect smokers and non-smokers from SHS. Studies measuring the effects of smoke-free laws have also demonstrated that SFOs can help support the other two pillars of tobacco control - prevention and cessation. Up until now, the primary motivation to develop SFOs has been to protect the health of non-smokers. In the future, it is conceivable that additional comprehensive SFOs will be developed with the primary rationale that they help support smokers to cut down how much they smoke, and encourage smokers to quit and help those that have successfully quit to stay quit. Further, the evaluation of SFOs has demonstrated that they help socially denormalize smoking, making it less appealing and therefore contributing to the prevention pillar of tobacco control, making it less likely that young people will start to smoke. The research to date in this area has been limited to indoor restrictions, generally in workplaces and public places.

A recent epidemiological study by the Institute for Clinical Evaluative Sciences in Toronto (ICES) found that after the City of Toronto’s 2001 public smoking ban resulted in fewer hospital admissions for heart and lung problems. The report reported that after the smoke-free policy, hospitals in Toronto experienced a 17% decrease in heart attack hospitalizations, a 33% reduction in the rates of admission for respiratory conditions (such as asthma, pneumonia and bronchitis) and a

39% decrease in hospital admissions because of cardiovascular conditions (including angina and stroke).⁵⁷

There is no 'safe' level of SHS exposure⁵⁸ and therefore eliminating the involuntary exposure of SHS is a health priority. Each year in the United States it is estimated that 35,000 deaths from coronary heart disease occur in never-smokers and an additional 3,000 deaths from lung cancer in never-smokers.⁵⁹ Exposure to SHS has been linked to diminished pulmonary function and more frequent exacerbations of asthma events in children with the disease.⁶⁰ Exposure to SHS is linked to reduced coronary circulation and greater severity of asthma events.^{61,62} Creating and enacting smoke-free environments is considered the most effective way to reduce second-hand smoke exposure among non-smokers.⁶³ SFOs have been enacted by all levels of government, private businesses, and by land owners or property companies.

As described previously in section 1.1, SFOs began to be implemented in Canada, in a variety of public and workplaces, in the mid 1970s and continue to be developed and enacted today. In Canada, comprehensive SFOs restricting smoking in workplaces and public places, including restaurants and bars, were passed and enforced from 1999 to 2009.⁶⁴ The first jurisdiction in Canada to enact and enforce a comprehensive smoke-free by-law was the Capital Region District, British Columbia. This by-law came into effect in 1999 and included all restaurants and bars, bingo halls, bowling alleys, long-term care facilities, and eliminated previous provisions for designated smoking rooms in workplaces.⁶⁵ The second comprehensive smoke-free by-law to come into effect was in Ontario, where the Region of Waterloo enacted and enforced a public places by-law (which did not include workplaces). The Region of Waterloo's smoke-free by-law came into effect January 1, 2000,⁶⁶ and was initially enforced heavily by a combination of Public Health Inspectors, Regional By-law Officers, and Regional Police Officers.⁶⁷

Speaking generally, compliance with early SFOs was quite high in Canada and other jurisdictions with similar smoke-free restrictions; however, many strategies were considered important to the success of each policy including signage, public relations efforts, and solid enforcement.^{68, 69, 70}

Enacting smoke-free legislation has greatly improved air quality in public places and work environments greatly reducing the involuntary exposure to SHS^{71, 72} and improved environmental working conditions of workers.⁷³

SFOs support the other 2 pillars of tobacco control - being tobacco cessation and prevention through the process of social denormalization. SFOs have been shown to influence and help change

broad social norms around the use of tobacco by influencing current smokers and potential future tobacco. This process of social denormalization can be defined as creating a “social milieu and legal climate in which tobacco becomes less desirable [and] less acceptable”.⁷⁴ Researchers have conducted broad evaluations of SFOs and demonstrated that these policies can shift the social environment, including the values and actions of individuals, effectively altering social norms around tobacco use.^{75, 76, 77, 78} Other studies have also shown that indoor smoke-free policies such as workplace restrictions help smokers decrease the number of cigarettes they smoke per day and increased their likelihood of attempting to quit.^{79, 80, 81} Therefore SFOs for workplaces and enclosed public places are associated with making smoking less appealing and less socially acceptable. This supports the prevention-pillar, and help smokers to cut down and eventually quit smoking, aiding the cessation-pillar of tobacco control.

The momentum for smoke-free environments is growing as numerous businesses and events become smoke-free including hotel chains,^{82, 83, 84} outdoor sporting events,⁸⁵ theme parks,⁸⁶ state fairs,⁸⁷ and zoos.^{88,89} Interestingly, these environments are often being made smoke-free not by government regulations but by voluntary industry initiatives.⁹⁰

Numerous global hotel chains have gone 100% smoke-free even though national or sub-national laws typically do not require the businesses to regulate individual hotel rooms. The Westin hotel chain became the first company to make this decision in 2006 (initially for all US, Canada, and Caribbean locations and later for Australia, Fiji, and Scotland).⁹¹ In 2006 the Marriott chain^C announced that their American and Canadian operations would be 100% smoke-free.^{92, 93} In 2008 it was announced that all Sheraton and Four Point Sheraton hotels would become 100% smoke-free for their Canadian, American, and Caribbean operations.⁹⁴ These companies positioned these policies as a way to make their product, a stay in a hotel, better for their customers. As described by Westin on their corporate website, their smoke-free policy makes rooms ‘comfortable, clean, and a healthy environment for our guests’.⁹⁵ Smoking is highly associated with socio-economic status,⁹⁶ so it could be argue that the decision for these hotel chains to become smoke-free is as much about product

^C The Marriott’s 100% smoke-free policy was not observed for their annual cigar party, the “Big Smoke”, where hundreds of cigar enthusiasts smoke cigars in one of the Marriott Time Square’s ballrooms in New York City. The impact of this event on air quality in the hotel can be read at: http://www.tobaccofreeair.org/documents/Dec6_BigSmokeReport-Final.pdf

offering and marketing strategies as it is about providing smoke-free environments for their workers and patrons. Regardless of the primary motivation behind these policies, they effectively work to make smoke-free environments more commonplace and ultimately to increase and expand protection from SHS.

Emerging scientific evidence measuring SHS in different environments has supported the creation of new smoke-free policies enacted by governments to restrict or ban smoking in a variety of settings including cars,⁹⁷ multi-unit dwellings,⁹⁸ and outdoor patios.⁹⁹ These studies have helped to inform policy makers who have acted to create smoke-free legislation covering those settings.^{100, 101} Further air quality monitoring of outdoor patio environments demonstrated that insufficient smoke-free policies, such as those that permit smoking in open air outdoor patios, can result in workers being exposed to SHS.¹⁰²

There has been, in recent years, an increase in smoking regulation in a range of outdoor environments including outdoor hospitality environments, parks, beaches, and sidewalks.^{103,104,105,106,107, 108} Outdoor restrictions, once unthinkable, are now considered an important emerging policy domain.¹⁰⁹

1.5 Outdoor Smoke-free Ordinances (OSFO)

A variety of outdoor smoke-free ordinances (OSFOs) are now common in sub-national jurisdictions in Australia, New Zealand, the United States and Canada.¹¹⁰ In some examples, these smoke-free areas have been legislated by city councils and in other cases they are from provincial or territorial laws.

Some outdoor or quasi-outdoor environments that have been smoke-free for some time include some transit environments such as train and subway platforms, open air stadiums, and the grounds of primary and secondary schools.¹¹¹ In parts of Canada, in recent years, there has been a move to expand smoking restrictions to outdoor public and workplace environments such as doorways or buffer zones around buildings, outdoor patios, municipal parks, recreational fields, and outdoor sports and cultural events.

In Canada, there are numerous examples of jurisdictions that have regulated outdoor smoking in hospitality environments, notably the patios of restaurants and bars. Currently, Newfoundland and Labrador, Alberta, and the Yukon require outdoor patios to be 100% smoke-free. Other provinces, including Ontario, Manitoba, Quebec and New Brunswick, permit smoking on patios provided certain physical characteristics are met. Area municipalities have also regulated

smoking on patios including Vancouver and Victoria (British Columbia), Thunder Bay and Kingston (Ontario), and Saskatoon (Saskatchewan).¹¹² Numerous communities in Canada currently have smoke-free public parks and civic recreational fields,¹¹³ either by way of local by-law or voluntary initiative. Doorway environments have been widely regulated across Canada with a range of buffer zones, typically 5-10m, with the buffer starting either at the entranceway, window, air intake, or building perimeter.¹¹⁴

Outdoor and quasi-outdoor environments such as outdoor transit environments have also been widely regulated. For example, smoking is not allowed in bus shelters or on outdoor subway or commuter surface trains on platforms in Ontario.^{115,116,117,118}

Outdoor cultural, sporting and music events, including the Calgary Stampede and the Vancouver 2010 Winter Olympic games, have successfully become smoke-free, albeit with the provision of outdoor designated smoking areas.^{119, 120} Support for further smoking restrictions is the growing public demand for further protection from SHS.¹²¹

To a lesser extent there has been movement across Canada to restrict or ban smoking in public outdoor spaces such as beaches, provincial and national parks, tertiary campuses, and hospital grounds. Dalhousie University in Halifax, Nova Scotia, has been a 100% smoke-free campus, including all grounds and university vehicles, since 2003.¹²² Similarly Lakehead University in Thunder Bay, have similar campus wide smoking restrictions.¹²³ Most university or college campuses in Canada do not have 100% smoke-free grounds, rather smoke-free doorways or restrictions around medical clinics or daycares.¹²⁴ A collection of health care properties, including Cambridge Memorial Hospital in Ontario¹²⁵, have 100% smoke-free grounds (including parking lots); however, most outdoor environments of health care facilities are not 100% smoke-free. There is no known municipal by-law in place in Canada that restricts smoking in outdoor workplaces such as construction sites, despite the fact that outdoor workers have high rates of smoking.¹²⁶

Hospitals that have restricted smoking on their grounds of campuses have done so on the premise that allowing smoking is incongruent at an institution that exists to support health. Outdoor smoking restrictions on patios of restaurants and bars have been passed to both protect the health of workers and patrons. In some cases these restrictions have been to please customers,¹²⁷ and also, in the case of Kingston Ontario, to provide a level economic playing field for venues that do not have a patio after indoor restrictions were passed.¹²⁸

As indoor restrictions become common place around the world, concerns about SHS exposure in outdoor spaces may increase. In California, a study by Al-Delaimy et al. (2008) reported

that non-smokers were increasingly reporting exposure to SHS in outdoor areas; in 1999 32% reported exposure, to 40% in 2002 and 43% in 2005.¹²⁹ It is possible that non-smokers are now more aware of their outdoor exposure and therefore more likely to report it, or that Californians are in fact now exposed to SHS to a greater extent.¹³⁰ There is also a concern that indoor and outdoor restrictions may move smoking to environments that are more visible – for example, on sidewalks, in full view of younger people who may then perceive smoking to be more prevalent than it actually is.¹³¹

At present, there are no studies on the effects of OSFOs on the social denormalization of tobacco use, or how OSFOs influence smoking behaviour. Based on the studies conducted on the denormalization impact of indoor smoke-free ordinances, it is hypothesized that OSFO could increase social denormalization of smoking, which could, in turn, increase quit attempts and decrease smoking behaviour.

1.5.1 Benefits and Rationale for Outdoor Smoke-free Ordinances (OSFO)

Governments or the private sector may be motivated to enact outdoor smoking restrictions for a variety of reasons. In some cases this rationale is based on what we know about the benefits of indoor smoke-free ordinances, like protecting people from SHS. In other cases, outdoor smoking presents its own set of unique problems, and restricting or banning smoking outdoors may help address specific problems such as preventing litter or forest fires. The benefits and rationale for enacting OSFO discussed below include government's compliance with national or international goals or obligations, improved air quality, the social denormalization of smoking behaviour (or to establish positive role models for youth), to positively influence smoking behaviour and quit attempts, and reduce the opportunities youth have to start smoking, reducing litter or the risk of fire, to create a level economic playing field, and to satisfy public support for such policies. These are further discussed in sections 1.5.2-1.5.7.

1.5.2 World Health Organization Framework Convention on Tobacco Control

The rationale for enacting tobacco control policies that restrict smoking in outdoor environments may originate, in part, to achieve compliance with the World Health Organization's Framework Convention on Tobacco Control (FCTC). The FCTC was adopted by the World Health Assembly on 21 May 2003, and entered into force on 27 February 2005.¹³² Since then the FCTC has since become one of the most widely embraced treaties in UN history, with 169 nations being

member parties (including Canada) by June 2010. The FCTC includes a range of prescribed policies and actions that member parties are obligated to enact for the protection of their people from the dangers of tobacco. Each tobacco control domain is outlined in an Article of the treaty, each of which has or will have a set of guidelines for implementation. These guidelines are prepared by the parties of the treaty and include specific details on what Parties should do in complying with the treaty. Protecting citizens from exposure to tobacco smoke is the focus of FCTC Article 8. The language of the treaty requires that members establish protective policies to create smoke-free in indoor public places and also ‘other public places’.¹³³ The 3 sections of the guidelines to Article 8 that pertain to protection from SHS in other public places – namely outdoor and quasi-outdoor environments – are presented below.

- *Article 8 requires the adoption of effective measures to protect people from exposure to tobacco smoke in (1) indoor workplaces, (2) indoor public places, (3) public transport, and (4) “as appropriate” in “other public places”.*
- *This creates an obligation to provide universal protection by ensuring that all indoor public places, all indoor workplaces, all public transport and possibly other (outdoor or quasi-outdoor) public places are free from exposure to second-hand tobacco smoke. No exemptions are justified on the basis of health or law arguments.*
- *The language of the treaty requires protective measures not only in all “indoor” public places, but also in those “other” (that is, outdoor or quasi-outdoor) public places where “appropriate”. In identifying those outdoor and quasi-outdoor public places where legislation is appropriate, Parties should consider the evidence as to the possible health hazards in various settings and should act to adopt the most effective protection against exposure wherever the evidence shows that a hazard exists.*

Sections 23, 24 & 27,
Guidelines on Article 8 on the Protection from Second Hand Smoke¹³⁴

The Article 8 Guidelines are forward-looking in that they explicitly state that some outdoor or quasi-outdoor environments may require smoke-free regulation provided there is sufficient evidence to demonstrate a possible health hazard from exposure to SHS in those environments. To date, however, there exists limited epidemiological data on the long term public health impact for exposure to low levels of SHS for brief periods of time, thus it may be difficult today to quantify

health impacts from exposure to SHS in outdoor or quasi-outdoor environments. However, it has been determined by the USDHHS that there is no ‘safe’ level of SHS,¹³⁵ so it would be a logical policy position to say that any presence of SHS represents a hazard. Therefore the only evidence necessary to justify outdoor or quasi-outdoor smoking restrictions would be the presence of SHS, and a situation where a person would be involuntarily exposed to SHS because the setting would make it difficult to move away from the smoke. This would be the case, for example, in some transit environments, busy patios, doorways, seating at an outdoor sporting or cultural event, or beaches.

The Article 8 guidelines do call clearly for the research community to provide scientific evidence that demonstrates that a hazard exists so this is clearly an area in need of further scientific exploration to inventory where and when SHS is present or measurable in different outdoor spaces. It would also be beneficial to measure how far SHS can be transported by winds to establish sufficient distances or set-backs that would ensure SHS has dissipated sufficiently to be below detection.

In Canada, it is the obligation of the federal government to achieve compliance with the FCTC, but with the exception of federal workplaces, SHS legislation has been developed, enacted, and enforced by provincial/territorial and local governments. However, the federal government may be interested in regulating outdoor smoking in environments under the jurisdiction of federal departments such as international harbours, airports, national parks, and border crossings.

Further, elected officials for provinces/territories and local authorities may be interested in the objectives of the FCTC and be motivated to achieve compliance with these international goals as was seen by the movement of cities and provinces to symbolically ratify the Kyoto Protocol in support of the Framework Convention on Climate Change.¹³⁶

Although an international treaty is a possible rationale for OSFOs being enacted, it is unlikely that this will be the primary impetus. More likely is that the same reasons and rationale that fueled the development of the FCTC, will also support the development and passing of OSFOs.

1.5.3 Reduced Second-hand Smoke Exposure

Historically smoke-free laws were predicated on the need to improve air quality and to protect people, usually non-smokers, from the involuntary exposure to SHS. Public opinion of smoking started to shift in the 1960s when there emerged universal scientific agreement about the personal health hazards from smoking cigarettes. However the critical argument that was central to de-normalizing tobacco use and provided the necessary evidence to develop effective SFOs was the later scientific evidence that the involuntary exposure of SHS was also unhealthy. Deep values

around the right to choose a behaviour or activity, the “libertarian argument” are very culturally tied to the pursuit of happiness, and individual expression. However, when someone’s behaviour compromises the happiness (or health) of another, the moral focus shifts. When the ‘other’ in question is a child, then other, even deeper values are engaged.

It was not until the 1986 US Surgeon General Report, *The Health Consequences of Involuntary Smoking* that a national report concluded that involuntary smoking caused lung cancer in lifetime non-smoking adults and was linked to adverse effects on the lung-health of children.¹³⁷ In 2006 the updated report, *The Health Consequences of Involuntary Exposure to Tobacco Smoke: a Report of the Surgeon General (2006)*¹³⁸, concluded that:

1. SHS causes premature death and disease in children and in adults who do not smoke.
2. Children exposed to SHS are at an increased risk for sudden infant death syndrome (SIDS), acute respiratory infections, ear problems, and more severe asthma. Smoking by parents causes respiratory symptoms and slows lung growth in their children.
3. Exposure of adults to SHS has immediate adverse effects on the cardiovascular system and causes coronary heart disease and lung cancer.
4. The scientific evidence indicates that there is no risk-free level of exposure to second-hand smoke.

Over the decades of accumulated knowledge about the harm of cigarette smoking, and in particular, the harm SHS can cause non-smokers, public support for smoking restrictions grew – even among smokers. The *Heather Crowe* campaign, produced by Health Canada, featured an Ottawa bar worker who was a life-time non-smoker, dying of lung cancer caused by exposure to SHS. In May 2009 the city of Ottawa named a park in her honour – the first smoke-free park in the city.¹³⁹

What this means for OSFOs is that concerns about involuntary exposure are valid, as SHS is widely understood to be harmful. However in many outdoor settings, such as parks and beaches, exposure to SHS can often be avoided simply by moving sufficiently away from the source. This is certainly not always the case as often parks or beaches are busy, and users may situate themselves in one place for extended periods of time in close proximity to one another. Other outdoor environments, like doorways, often need to be traversed and, therefore avoiding exposure is virtually impossible if SHS is present. It has been demonstrated through experimental studies and natural observations that smoking on outdoor patios at restaurants and bars can produce elevated levels of SHS for prolonged periods of time.^{140, 141, 142} Therefore air quality concerns are a valid rationale for

many outdoor environments although arguments to prevent exposure to SHS may be less effective for policies restricting smoking in some other, less crowded environments.

1.5.4 Social Denormalization of Smoking Behaviour

Tobacco use is highly influenced by social norms and what is perceived as an acceptable or normal behaviour. In recent years, the social denormalization of smoking has become a key component to many comprehensive tobacco control strategies. Social denormalization has traditionally been accomplished with the use of social marketing or media campaigns that highlight the decreasing social acceptability of smoking, presenting it as undesirable or unpopular. As with other unhealthy behaviours, such as binge-drinking or illegal drug use, youth tend to overestimate how many of their peers smoke cigarettes.¹⁴³ Some denormalization campaigns have focussed on correcting this overestimation and thereby present smoking as less common or normal.¹⁴⁴

Other tobacco control policies, such as SFOs, have been shown to have a strong influence on tobacco denormalization because they physically marginalize smoking, requiring the behaviour take place in a different environment. Smoke-free laws reinforce the notion that smoking and second-hand smoke are dangerous and worthy of legislation to protect people.

New OSFOs would remove smoking from the environment, making it less visible and therefore further remove the behaviour from the cultural landscape. Regulating smoking in outdoor environments also communicates a societal standard or statement that the behaviour is unacceptable or inappropriate. This could further denormalize smoking behaviour and the tobacco industry, as has been demonstrated with indoor SFOs.

Like other countries with histories of declining smoking rates and far-reaching tobacco control strategies, Canada has seen a sharp deterioration of positive associations of smoking.¹⁴⁵ Fong et al. (2004) reported that 90% of Canada's current smokers regret that they started smoking.¹⁴⁶ Hammond et al. (2006) reported that 88% of Canadian smokers feel that society disapproves of their behaviour.¹⁴⁷ These measures indicate that smoking has been greatly denormalized in Canada. In the same study Hammond et al. found smoking denormalization was associated with living in areas with comprehensive SFOs suggesting that these smoke-free laws may have contributed to the denormalization of smoking. Hammond et al. also demonstrated that measures of tobacco denormalization were independently associated with smoking cessation outcomes such as quit intentions with adult smokers. Hyland et al. (2006) found that more negative attitudes about smoking were predictive of making a quit attempt.¹⁴⁸ It is a reasonable hypothesis that the addition of broader

smoke-free laws such as OSFOs would further denormalize smoking, increase negative attitudes about smoking, and might lead to increases in intentions to quit smoking and quit attempts.

As described in section 1.0 of this dissertation, there has been a concern voiced in the tobacco control literature and news media that OSFOs may not be justifiable, and are examples of overzealous governments attempting to over-regulate behaviour. However, if OSFOs can protect people from the involuntary exposure of SHS, is that regulation not important and justified? Further, if OSFO can be demonstrated that they further socially denormalize smoking, and if this supports prevention and cessation efforts, are further smoke-free legislations appropriate? Considering that the majority of smokers feel society already disapproves of their behaviour, it begs the question if OSFOs will result in further denormalization. Or, is it possible that Canadian society is already at the upper limits of disapproval, and further regulation will only result in a negative construction of smokers? The description below from Simon Chapman, then the editor of the journal *Tobacco Control* describes the current public perception of a smoker, published in the *Medical Journal of Australia*:

“Today, smokers huddle in doorways and excuse themselves from meetings. To smoke with equanimity is increasingly to wear a badge of immaturity, low education or resigned addiction. Thirty years ago, it was very different. The tobacco industry had infected smokers with the thought that they had a monopoly on all that was interesting, convivial and sensual. Epidemiological revelations rather ruined all that; but it was advocacy that ensured the translation and transition of epidemiologists' conclusions into policy and law reform.”

Chapman (2002) ¹⁴⁹

Chapman's description of smokers also solicits a warning to tobacco control policy makers – to be sensitive to the new realities faced by people who smoke in today's cultural context. Smokers today are, arguably, socially marginalized, and strategies that relying on policies and social norms will not impact all groups equally – given that marginalized groups are less affected by social norms.¹⁵⁰

1.5.5 Public Support for Outdoor Smoke-free Ordinances

If support is high for OSFOs then enacting new laws is perhaps easier for elected officials. If support is high among smokers, then enacting new outdoor smoke-free laws is even easier.

Support is often measured before a policy is enacted to provide justification for policy makers. What has been observed for indoor SFOs is that support for such laws tends to rise significantly for both smokers and non-smokers after the law has come into force.¹⁵¹ There have been no studies published that have reported public support for an OSFO before and after the policy. If smokers and non-smokers' support for a comprehensive OSFO goes up after the by-law is enacted, other communities may feel more confidence proceeding with similar legislation even if they don't have a level of public support they might consider a minimum prior to the policy's enactment. What is known about public support for OSFOs is summarized below.

Support for smoke-free parks is high in the handful of jurisdictions that have enacted such laws. For example, in the community of Upper Hutt Council in New Zealand, 83% of park users thought smoke-free parks was a good idea.¹⁵² In Minnesota, researchers measured support from not only citizens but administrators such as park directors to understand their experiences with outdoor smoke-free parks. In a study by Klein et al. (2007) 90% of park directors in parks with tobacco-free policies stated that they would recommend a tobacco-free park policy to other communities.¹⁵³ Further, 88% of park directors in parks with tobacco-free policies said that it was not at all difficult or not very difficult to establish a tobacco-free park.¹⁵⁴

Smokers and non-smokers' support further smoke-free restrictions, including outdoor environments.¹⁵⁵ A 2008 Smoke-Free British Columbia campaign found that 73% of British Columbians support smoking bans in outdoor public places.¹⁵⁶ In a 2007-07 survey, conducted by the Ontario Tobacco Research Unit, it was found that approximately 64% of citizens supported 100% smoke-free patios.¹⁵⁷ In their review of public attitudes towards smoke-free outdoor places, Thomson et al. (2009) found that in a number of jurisdictions around the world, including New Zealand, Australia, United States, United Kingdom, and Canada, the majority of the public supported outdoor smoking restrictions, particularly environments frequented by children.¹⁵⁸ Thomson called this the 'child effect' – suggesting that environments frequented by children (such as parks, zoos and fairs) would be logical places for OSFOs. This 'child effect' was also experienced in the smoke-free car debate in Canada which has seen legislation in Ontario, Manitoba, and Nova Scotia ban smoking in cars if children (18 or under) are present in the vehicle.¹⁵⁹

The studies that demonstrate that smokers both tend to approve of these new SFOs, coupled with studies that show improved conditions for quitting help to justify further regulation. Understanding how support for OSFOs may change after a by-law is in place would be valuable.

1.5.6 Outdoor Smoke-free Ordinances and Smoking Behaviour

1.5.6.1 Cessation and Reduction in Cigarettes Smoked

Little is known about how OSFO may influence smoking behaviour however several things are known about how indoor SFOs influence behaviour. As indicated in section 1.4, published studies have demonstrated that indoor SFOs are associated with changes in smoking behaviour including, an increased number of quit attempts by smokers, an increased number of successful quit attempts, and a decreased number of cigarettes smoked per day by those who continue to smoke.^{160,161}

¹⁶² Further, it has been described in section 1.4, that tobacco denormalization constructs were associated with jurisdictions with comprehensive SFOs, and that tobacco constructs of denormalization were independently linked to cessation-related outcomes with adult smokers. Fong, Hyland et al. (2006) measured the impact a nation-wide smoke-free law had on quitting behaviours.¹⁶³ Fong, Hyland et al. presented findings from the ITC Project showing that after the Republic of Ireland went smoke-free in all enclosed public and work places, about half of Irish smokers reported that the law had made them more likely to quit. Among Irish smokers who quit after the law went into effect, 80% said that the law had helped them quit, and 88% said the law helped them stay quit.¹⁶⁴

It is expected that OSFOs will have similar effects on smokers' quit intentions and support reductions in the number of cigarettes smoked, particularly for smokers who frequent environments regulated by OSFOs, although perhaps at lower levels than those observed in indoor SFOs.

1.5.6.2 Prevention, Role Modeling and Social Denormalization of Smoking

Indoor smoke-free ordinances have been shown to help socially denormalize tobacco use and support tobacco use prevention. Little is understood about how OSFOs may denormalize or support tobacco-use prevention; however there is a need to improve prevention strategies in Canada. In 2008, among Canadian youth aged 15-19, 14.8% were current smokers.¹⁶⁵ It is understood that children and young adults are likely to copy the behaviours they see. If a location in a neighbourhood is known to have smokers, and those smokers are highly visible, more student or youth tobacco-users report smoking there as well.¹⁶⁶ A study presented by Alesci et al. (2003) found that:

- Both youth and parents believe that outdoor gathering places are the most common, and socially acceptable places for adults to smoke

- Youth smokers see smoking as a normal and acceptable part of adulthood
- Student smokers report smoking most in locations where they often saw adults smoking
- Two and a half times as many student smokers reported smoking outdoors than the next highest indoor location.

Alesci et al., 2003.¹⁶⁷

Therefore, the modeling of smoking as normal behaviour can be reduced through policies that restrict smoking in the presence of children and youth.¹⁶⁸ It has also been demonstrated that stronger restrictions on smoking in public places has a protective effect on smoking uptake among teenagers.¹⁶⁹

It is a reasonable hypothesis to believe that restricting smoking in public outdoor environments, such as parks will have similar prevention benefits as those measured in indoor public bans and will positively influence smoking behaviour.

1.5.7 Litter and Fire Concerns Caused by Cigarette Butts

Other reasons cited in the literature for creating outdoor smoking restrictions include decreasing fire risk and to stop environmental impacts caused by discarded butts.¹⁷⁰ Fire and litter concerns are very valid for some outdoor environments, including parks and beaches that may be managed and maintained by a province/territory or local government. These same governments may be responsible for issues like waste management, water and wildlife protection or fire services.

Over 4.5 trillion cigarettes are littered worldwide each year, making cigarette butts are the most littered item in the world. A large beach clean-up initiative in Alberta inventoried the items of litter collected. This group found that smoking related litter, including cigarette and cigarillo butts, wrappers, packages, and lighters, was the most common type of litter found on Alberta's beaches. Items of smoking related litter outnumbered other forms of litter by more than 3:1.¹⁷¹ Composed of cellulose acetate, a form of plastic, cigarette butts can persist in the environment as long as other forms of plastic. The plastic package wrapper and cigarette butts don't biodegrade, they only break down.

Litter clean-up is a significant cost for some cities.¹⁷² Therefore passing restrictions that bans or limits smoking in certain environments can help to reduce clean up and maintenance costs. What commonly happens to cigarette butts is that they are discarded on the ground near entranceway of buildings, and on sidewalks and will wash down after a rain event into storm drains that carry run-

off to surface waters such as creeks, rivers and lakes. The litter created by discarded cigarette butts and packages has associated environmental costs. While not only making the parks less attractive, the residue in cigarette butts contains some highly toxic and soluble chemicals.¹⁷³

Improperly extinguished cigarette butts also represent fire risk. Temporary OSFOs have been instituted in numerous parks across Canada including Stanley Park in Vancouver during droughts when the risk of fire is high.¹⁷⁴

Youth working to advance smoke-free policies in the Region of Waterloo systematically collected discarded cigarette butts in municipal parks in the cities of Cambridge, Waterloo and Kitchener during 2008. With the more than 10,000 cigarette butts, they built a model slide, shown in Figure 2. This powerful piece of art skillfully juxtaposed a playful image associated with children with one that was very displeasing and unhealthy. This slide and its picture have been shared around the world.



Figure 2. Slide made of 10,000 Cigarette Butts

Used with permission from the Region of Waterloo Public Health, 2010

Internationally, Australian and American beaches are now commonly smoke-free including the famous Bondi Beach.¹⁷⁵ The main rationale for these restrictions has been environmental

concerns. In Canada, Vancouver recently announced that their beaches will go smoke-free – largely to address the cigarette butt litter that is particularly challenging to clean from the sand.¹⁷⁶

1.5.8 Unintentional Consequences of Outdoor Smoke-free Ordinances

Public policies enacted with the intention to improve the health or welfare of a community, can have unintentional, negative consequences. In some cases these are unforeseen and sometimes they are known as a possible outcome however the likelihood of them materializing is unknown. Communities that develop policies after pioneering jurisdictions have the benefit of making improvements or modifications to avoid these undesirable outcomes. It is important when developing an evaluation to try and measure these unintentional consequences.

When considering restricting smoking in outdoor environments it is possible that some people may choose to no longer visit these places as a result of the new policy. This was a significant concern in the debates surrounding indoor SFOs, in particular the issue of regulating smoking in hospitality and gaming environments. For early policies, there was a concern that SFOs might deter possible customers or visitors who would chose to go to another destination where smoking was permitted. The City of Kingston, Ontario passed a public and workplaces smoke-free by-law which made all of their outdoor hospitality environments smoke-free. The rationale for this was that an indoor restriction might give some venues – those with patios – an advantage to retain or attract patrons that smoked. Since not all venues have a patio and may not be able to add one, the Medical Office of Health for (health unit) explained that a smoke-free policy created a level economic playing field. The Kingston by-law was passed in 2002.¹⁷⁷

Studies were conducted to evaluate how early SFO impacted tourism related revenues and employment. One of the first comprehensive studies, conducted by Glantz and Charlesworth (1999) concluded that hotel revenues were not adversely affected in 3 US states and 6 US cities after some pioneering SFO were passed making restaurants smoke-free in those jurisdictions.¹⁷⁸ Similar findings were reported by Hyland, Nauenberg, and Cummings (1999) and more recently Selin (2005) concluded that studies that used objective data including sales tax or employment information, have demonstrated that the creation of smoke-free environments has a neutral or positive economic impact on restaurant and bar sales.^{179,180,181}

OSFOs often regulate public spaces such as parks, municipally owned recreational fields, and beaches. It is more difficult to measure economic impact on these types of venues since there are no sales or tax records associated with usage or visits. OSFOs that regulate smoking on outdoor

patios would also present challenges because most businesses with outdoor patios do not differentiate their receipts based on sections of their business. Further, comparing patio income year to year would be highly impacted by weather, and this variability might require a long time series analysis to detect an effect in the noise of data.

Understanding how OSFOs may influence usage of community facilities, environments and businesses is important. Even the most adamant tobacco control supporter would likely feel uncomfortable advocating for a smoke-free park policy if they knew that such a policy would result in families no longer using a park, given the net health impact of children not playing outside is likely much worse than witnessing smoking or any brief exposure to SHS.

1.5.9 Need to Evaluate Outdoor Smoke-free Ordinances

The City of Woodstock, Ontario developed, and passed, a comprehensive OSFO in June 2008. The policy was enacted in September 2008 and enforced fully the spring of 2009. A comprehensive evaluation was conducted to try and understand which of the above benefits or negative impacts were realized, and what lessons can be passed forward to other communities considering a similar policy.

In section 1.6, the community of Woodstock is described as well as the process that the community followed to develop their smoke-free ordinances including the by-law that restricted or banned smoking in outdoor environments.

1.6 Smoke-free Ordinances in the City of Woodstock, Ontario

1.6.1 Profile of the community of Woodstock

The City of Woodstock is the largest city (2006 population = 35,480) in Oxford County (2006 Population = 102,756),¹⁸² located in Southwestern Ontario. Oxford is comprised of 8 municipalities including the 3 urban centres of Ingersoll, Tillsonburg, and Woodstock and 5 rural townships including Blandford-Blenheim Township, East Zorra-Tavistock Township, Norwich Township, Township of South-West Oxford, and Zorra Township.



Figure 3. Oxford County Communities¹⁸³

Woodstock has seen significant economic activity recently in the manufacturing sector including the expansion of the CAMI automotive plant and the new Toyota Motor Manufacturing Corporation's automotive assembly plant (see Figure 4 below).¹⁸⁴ In general, Woodstock is a city with a remarkably optimistic outlook, buoyed up by recent investment in their community.

Woodstock has 'high urban dominance' – meaning that it provides a range of services for the surrounding area, particularly communities like Ingersoll, which is also north of Highway 401. Indicators of urban dominance are the presence of commercial, financial, and service industries. People from other towns in Oxford County are likely to visit Woodstock often for shopping, government services, employment and cultural events. Woodstock has its own newspaper, the *Woodstock Sentinel*,¹⁸⁵ and health care services (hospital).¹⁸⁶



Figure 4. TMMC Assembly Plant in Woodstock Ontario¹⁸⁷

Oxford County has significant primary economic production (agriculture) as well as a mix of light and heavy industrial processes (notably auto parts manufacturing), and service industries and government (including health care).¹⁸⁸ On the official City of Woodstock website, the city describes the community as being ‘family friendly, with 62 parks and 35 playgrounds and numerous recreational opportunities.¹⁸⁹ The city also has a tradition of coming together as a community for events like Cow-a-palooza (an outdoor celebration of music – see Figure 5 below).¹⁹⁰



Figure 5. A participant of the Cowapalooza event, Woodstock, 2008

The public health unit that supports Woodstock, Oxford County Public Health, is a part of the county government, which provides a variety of services including waste management and water

treatment, recycling and waste management, roads, libraries, and emergency medical services. The health unit reports to the county's elected members as their Board of Health.

Woodstock's public health characteristics reveal a community with lower than average measures of socio-economic status including education levels and household income, compared with neighbouring communities and the province.¹⁹¹ In 2008, the proportion of citizens in Oxford county that were daily or occasional smokers was 31.3%, approximately double the provincial average.¹⁹²

1.6.2 Evolution of Smoke-free policies in the City of Woodstock

The evolution of smoke-free policies in the City of Woodstock is presented in Figure 6 below. Between the year 2000 and 2006, dozens of smoke-free by-laws were created in Ontario by local authorities including cities, regions, counties, and townships. The first jurisdiction to do so was in the Region of Waterloo, shortly followed by the City of Ottawa and the City of Toronto.^{193,194, 195} In 2003 the city of Woodstock passed the *Woodstock Workplaces and Public Places Bylaw* - that banned smoking in all enclosed public and workplaces. Like other communities in Ontario, the Woodstock smoke-free by-law came to pass after significant community input. A community/citizens group called the *Oxford Interagency Council on Smoking and Health* was developed to advise Woodstock City Council on this by-law. The Interagency Council then played a critical role in the policy development process. The membership of the Interagency Council included citizens from the community including a family doctor, staff from the city, and local business leaders. The Council was chaired by a staff member from Oxford County Public Health.

In 2006, the province of Ontario passed the Smoke-free Ontario Act (SFOA), which banned smoking in all enclosed public and workplaces and placed restrictions on outdoor patios.¹⁹⁶ Since the SFOA did not alter the regulatory environment in Woodstock, it meant little for its citizens; however, the provincial law did mean that the enforcement of smoke-free spaces could now be done by both the local health unit's by-law officers (charged with the responsibility of enforcing the SFOA) and the by-law officers of the City of Woodstock (who enforced the city by-law). Thus, a person smoking illegally in Woodstock could be charged under either law.

In September 2007, citizens in Woodstock began a dialogue in the local paper through letters to the editor. The citizens argued that outdoor smoke-free policies were important and would be a good idea for the community of Woodstock. An amendment to the *Woodstock Workplaces and Public Places Bylaw* was proposed by the *Oxford Interagency Council on Smoking and Health* in

September 2007 (See Appendix A for correspondence). The Interagency Council requested by letter that the Woodstock City Council consider further restricting tobacco use in city-owned recreation areas, building entrances, and public events. The Interagency Council suggested that no smoking zones could be applied to parks, recreational fields, and playgrounds, and that designated ‘smoking areas’ could be established at outdoor events provided such smoking areas were placed far away from crowded areas. The Interagency Council suggested that recent discourse in the newspaper showed a readiness of the community and a level of support from the citizens of Woodstock for expand smoke-free policies.

The Interagency Council acknowledge that the Woodstock Smoke-Free Bylaw and the SFOA had been successful at protecting workers from the involuntary exposure of SHS, but that there still was a variety of exposure taking place in the community. In particular, it was noted, children were being exposed.

The Interagency Council used published scientific studies that identified that outdoor smoke could be a health hazard. Included with the letter was a copy of a recently published journal article authored by air quality scientists from California (Klepeis et al., 2007), that described the findings of their study that measured SHS in a variety of outdoor environments. In the letter to City Council, the Interagency Council summarized the findings from Klepeis et al., which concluded that outdoor SHS does not instantly disperse outdoors and levels of SHS can be high, in some cases as high as levels that would be recorded indoors.¹⁹⁷ The Interagency Council also cited the 2006 US Surgeon General’s Report that concluded that even brief exposures to SHS could have adverse health effects including heart and respiratory systems and increase the severity of asthma attacks – particularly in children.¹⁹⁸ By citing these two reports the Interagency Council were able to establish that outdoor SHS could represent a health hazard and that people, in particular children, could be protected with an OSFO.

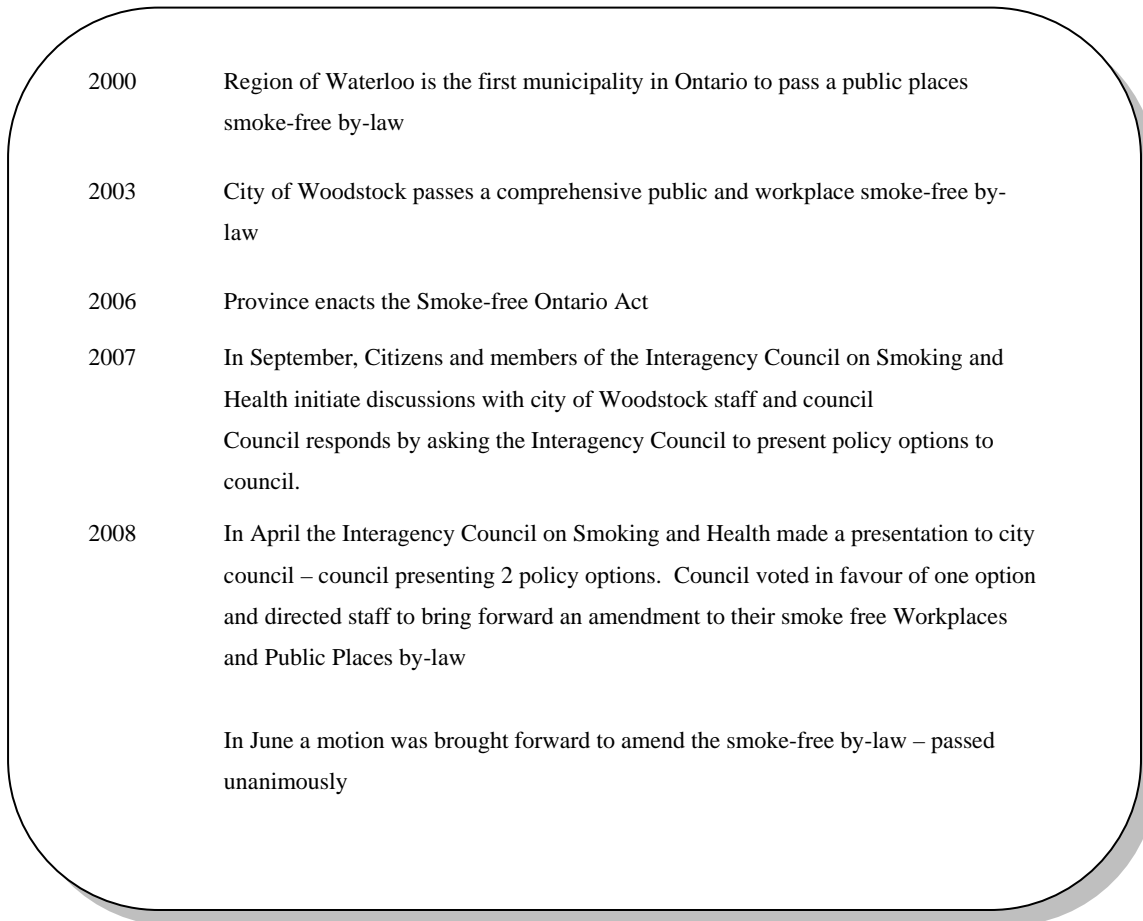


Figure 6 Evolution of Smoke-free Policies in Woodstock.

Two other communities in Ontario - Collingwood and Uxbridge - had already made amendments to their smoke-free bylaws by adding restrictions to different outdoor settings frequented by children including parks, recreational fields, and parades. Although the boasting rights of being ‘first’ to pass such a by-law were gone, the Interagency Council did impress upon City Council that Woodstock could still show leadership in the province by enacting a by-law.

Woodstock City Council asked the Interagency Council to provide a set of policy options for council and present these options as a delegation in the near future.

The Interagency Council developed 2 policy options that were presented to council in April 2008. Option 1 suggested 7 environments to regulate. The policy recommended:

- **Restricting smoking in public parks** – no smoking within 30 metres of any playground equipment in a municipal public park
- **Restricting smoking in city-owned municipal recreational fields** – no smoking within 15 metres of any recreation field in a municipal public park (i.e. baseball diamond, soccer pitch) that is in use
- **Restricting smoking in doorways of city owned buildings** – no smoking within 9 metres of any entrance to a municipal facility
- **Banning Smoking** on any downtown sidewalk café
- **Restricting smoking in outdoor transit environments** – no smoking within 4 metres of any bus stop or bus shelter
- Schedule for non-municipal property doorways – which would restrict smoking within 9 metres of any doorway that elects to be on the schedule
- Schedule for community events – which would make that outdoor event 100% smoke-free in identified areas^D

The Interagency Council also proposed an Option 2, which was similar although suggested making all parks of parks and recreational fields 100% smoke-free.

Woodstock City Council voted in favour of Option 1, and at its April 17th council meeting passed the following motion:

“That City Council direct staff to bring forward an amendment to Municipal Code Chapter 835 Smoke Free Workplaces Public Places including smoking restrictions as described in Option 1 with the establishment of a \$100 set fine for outdoor smoking offenses.”

Woodstock City Council Minutes, April 17th, 2008¹⁹⁹

^D The Schedule proposed for non-municipal properties would create a mechanism whereby any property owner of a venue visited by the public could request the city add their doorway or entire property to the list of premises enforced under the by-law. The Schedule for community events allows any organizer of an outdoor event in Woodstock to request the city add their event to the list of enforced events under the by-law. These schedules allow new premises and events to be added by staff versus needing to be approved by council regularly. This ensures enforcement can be almost immediate. This also allows the adoption of further smoke-free environments as requested by the community. Examples of outdoor events provided by the Interagency Council included the Santa Claus Parade, Cow-a-palooza and Sidewalk Days which is an event that sees the main street shut down to traffic to permit on-street vending by the main street shops.

City staff then proceeded to draft a revised Municipal Code Chapter 835, including details from the accepted option, with input from the by-law enforcement office and the city solicitor. It should be noted that the by-law did not include golf courses in the definition of recreational fields on municipal land. City staff also estimated that there would be a need for approximately 150 no-smoking signs to communicate the by-law in the various parks, recreational fields and municipal building entrances. The estimated cost to develop and install these signs was \$10,000.

The Interagency Council offered financial support of up to \$5,000 to assist with the smoking restriction promotion including web site content, flyers distributed to day care centres, Early Years Centres, OCYC (Oxford County Youth Club), Oxford Community Child Care, Elementary Schools, High Schools, Sport and Recreation Groups and Leagues, the Business Improvement Association and the Woodstock Chamber of Commerce.

City staff further recommended that the City of Woodstock allocate approximately \$2,000 for promotion of the new by-law through traditional mediums such as the “What’s on Woodstock” magazine and transit ads on city buses.

On June 8, 2008 Woodstock City Council voted unanimously to repeal and replace their Municipal Code Chapter 835, Smoke-Free Workplaces and Public Places, to include smoking restrictions in 5 outdoor public places and create 2 schedules to expand smoke-free areas as requested by citizens.

Implementation of the new by-law was set for September 1, 2008.

This by-law has had no legal challenges to date and met no opposition. City Council members including the Mayor have said their offices have received no complaints. Staff time to draft the by-law has been described as ‘minimal’ (see section 5.4.3.2.5)

1.6.3 Details of the City of Woodstock’s Outdoor Smoke-free By-law

The Woodstock OSFO passed June 8, 2010 prohibited smoking in the following places:

- Within 30 metres of any playground equipment in a municipal public park
- Within 15 metres of any active recreation field in a municipal public park (i.e. baseball diamond, soccer pitch)
- 9 metres of any entrance to a municipal facility
- Within any downtown sidewalk café

- Within 4 metres of any bus stop or bus shelter

The OSFO also include two schedules that could have additional properties (Schedule A) or outdoor events (Schedule B) added; these properties or events would then be made smoke-free and enforced by the City by-law enforcement staff.

- Schedule A - for non City of Woodstock properties – Smoke-free Doorways or Properties
- Schedule B - community events

Distances for doorway restrictions were selected to be consistent with restrictions in the Smoke-free Ontario Act, which bans smoking within 9m of doorways to medical facilities. Recreational field and park restrictions were set based on other published policies in North America and considering the size of many of the parks in Woodstock with play structures. The transit stop restrictions were developed by city staff as a workable distance that would reduce the likelihood of a transit user missing their bus.

City staff and Interagency Council both completed the various promotional activities suggested in the June council meeting; however, promotion did not take place until after the by-law came into effect after September 1, 2008. On the enactment date there was a media event, covered by the local cable television provider. This took place without any public opposition.

Woodstock, like many places in Canada, has a cold winter and the use of outdoor patios, for example, typically comes to an end with the autumn equinox. It was decided that after September 1, 2008 signage would be posted and in place before Spring 2009. An example of the signage used is included in below in Figure 7.



Figure 7. Signage used in Woodstock Parks to communicate smoking restrictions

City by-law officers did give warnings to people smoking in one of the newly regulated environments but no tickets were issued until Spring 2009. The bulk of promotional information for the new by-law was distributed through businesses, sports organizations, schools and child care centres. Application forms were provided for businesses and community events organizers and on the city website. Presentations were made to sports clubs and coaches to support developing smoke-free team policies. No additional resources were added to the city's enforcement staff following this by-law. As of June 2010, there have been no logged complaints to the city enforcement staff about smoking in parks or recreational fields. Further details about the enforcement aspects of this by-law are discussed in section 5.4.3.2.6.

1.6.4 City of Woodstock Outdoor Smoke-free By-law Evaluation

The by-law passed in Woodstock was one of the first in Ontario to regulate outdoor smoking, and was the most comprehensive in the county at the time. Public health and tobacco control policy evaluation scientists identified that this by-law would be ideal to evaluate to provide insight into the efficacy of OSFOs to reduce involuntary exposure to SHS and to positively change smoking behaviour. This evaluation could help other area municipalities know what the potential benefits are from such policies. Specific research objectives of the evaluation are listed in section 2.0.

In June 2008, a research team was formed with faculty and a student from the University of Waterloo, including Geoffrey T. Fong, Ph.D., Mary Thompson, Ph.D., and Ryan Kennedy, and researchers from the Ontario Tobacco Research Unit including Roberta Ferrence, Ph.D., Robert Schwartz, Ph.D., and Pam Kaufman, Ph.D. The research team was supported by the staff from the Oxford County Public Health Unit which collaborated on the research, reviewing survey measures, and helping design the face-to-face survey methods. A letter of support for the evaluation was provided by the Manager of Tobacco Programs at Region of Waterloo Public Health, indicating that this research would be helpful in the development of future policies in their community.

Funding was sought and provided from the Canadian Tobacco Control Research Institute (CTCRI) through a Fast-Track Policy Research grant (grant #19857).²⁰⁰ These grants are designed to assist with the evaluation of a tobacco-control policy where timing is critical, necessitating a review process that is fast and conducted when needed (as opposed to a review process with set-dates).

The CTCRI review panel required the research team to demonstrate that a) the Woodstock OSFO was a by-law worth evaluating and b) that the findings from an evaluation of the city's OSFO would be relevant to other communities in Canada. The research team easily demonstrated that the Woodstock OSFO was, at the time, the most comprehensive by-law, regulating many outdoor environments and therefore an appropriate policy to evaluate. The Woodstock by-law was adopted also with the rationale that it would help protect people, notably children, from exposure to SHS and would further encourage positive role modeling and present smoking as not a normal activity. These details are presented in the video inserted in Appendix B. The research team also found relevant comparisons to Woodstock and communities or neighbourhoods within each tobacco control area network in Ontario (TCAN); these details are included in Appendix C.

Both city and public health staff collaborated on the evaluation, allowing the survey teams to use offices, providing survey researchers with city bus tickets, and helping with the selection of sampling sites.

The evaluation that took place was a longitudinal cohort design, of adult smokers and non smokers from the City of Woodstock and neighbouring Ingersoll. Details of the methods used for the evaluation are provided in the methods section (chapter 3.0). Details of the analysis conducted are detailed in the analysis section (chapter 4.0), and findings from the study are discussed in the results section (chapter 5.0).

It should be noted that at the time the Woodstock outdoor smoke-free by-law came into effect in September 2008, downtown sidewalk café patios were already smoke-free. This had been

accomplished through the leasing agreement between the businesses and the city (who allowed the businesses to use the public sidewalks). So the by-law changed the mechanism whereby the patios had been made smoke-free and created a fine, and an enforcement mechanism. Other patio environments in the city – meaning patios of restaurants and bars not on sidewalks on the main street, were not affected by this by-law; there are significantly more venues with patios not on the main street than on. The new OSFOs was well publicized and therefore the smoke-free status of the downtown patios was likely more widely known after the by-law came into effect and was enforced. All restaurant owners/managers were complying with the smoke-free policy during the street intercept period of 2008 with no ashtrays available on the patios.

Further, it should be noted, that the two schedules created by the by-law – one for non-city doorway environments and one for outdoor public events, had different uptake. This is detailed in the results section. While the schedule created for doorways was widely embraced by a range of businesses, Oxford County, and a variety of public buildings including churches, there were no outdoor events added to Schedule B. One event of particular interest was the music festival Cow-a-palooza which is held every year in the largest park in the city of Woodstock. Cow-a-palooza was an example provided to City Council by the Interagency Council when they discussed the proposed by-law and the spirit of the outdoor event schedule. The organizers of Cow-a-palooza have increased the areas that are smoke-free during the event and in 2009 the main stage asked visitors to not smoke during the concert, and the beverage garden had a non-smoking section added in 2009. There were regular announcements made during the main stage event to ask people not to smoke however, the event was not entirely smoke-free and was not added to the schedule. Therefore there was no enforcement from the City by-law officers in 2009.

2.0 RESEARCH FRAMEWORK AND OBJECTIVES

2.1 Research Framework

The Woodstock Outdoor Smoke-free by-law evaluation represents the most comprehensive evaluation of an outdoor smoking by-law to date. The design of this research was informed by the evaluation framework presented in the *IARC Handbook of Cancer Prevention – Volume 12*, “Methods for Evaluating Tobacco Control Policies”, written by the International Agency for Research on Cancer (IARC).²⁰¹ IARC is an independently financed organization within the framework of the World Health Organization (WHO).²⁰² Section 5.2 of this Handbook includes details on what measures public health and tobacco control policy researchers should consider using to assess the effectiveness of smoke-free policies.

The IARC handbook was written to primarily support the development and evaluation of indoor smoke-free policies. Historically, the primary objective of indoor smoke-free law has been to improve indoor air quality and protect people from involuntary exposure to second-hand smoke. This focus has been taken into consideration when designing the Woodstock by-law evaluation.

The authors of the IARC handbook’s Section 5.2 on smoke-free policies, and Section 2.1 on design considerations for evaluating tobacco control policies, suggest that evaluations ideally be conducted using a pre-post model, meaning that measures are collected both before a policy is enacted and after a policy has come into force. Ideally this design includes an external control or comparison group that does not have a similar policy enacted. This quasi-experimental design, described in section 2.1 of the IARC handbook, allows policy evaluation researchers to measure changes that may be attributable to the smoke-free regulation. Prior to a policy being implemented, the main variables of interest are an inventory of the level of existing smoke-free policies and a measure of support or attitudes citizens have for or about restrictions in various environments. Following the policy being implemented, it is important to measure compliance and exposure to SHS as well as health and economic measures. Other distal variables that could be considered include reported opinions about social norms of smoking in different environments, and support for restrictions in those environments. It is also important to measure personal choices people make regarding self-imposed restrictions in their own spaces including homes and cars.

The IARC handbook acknowledges that often the central argument in public debates about SFOs is the economic impacts that policies may have on environments regulated so where possible economic impacts such as altered patronage to certain businesses or improved work productivity

should be measured if possible. Other key incidental measures to try and quantify in an evaluation include changes in smoking behaviour including a reduction in cigarette consumption, quit intentions and successful quitting. The conceptual framework for the evaluation of smoke-free policies is represented below in Figure 8.

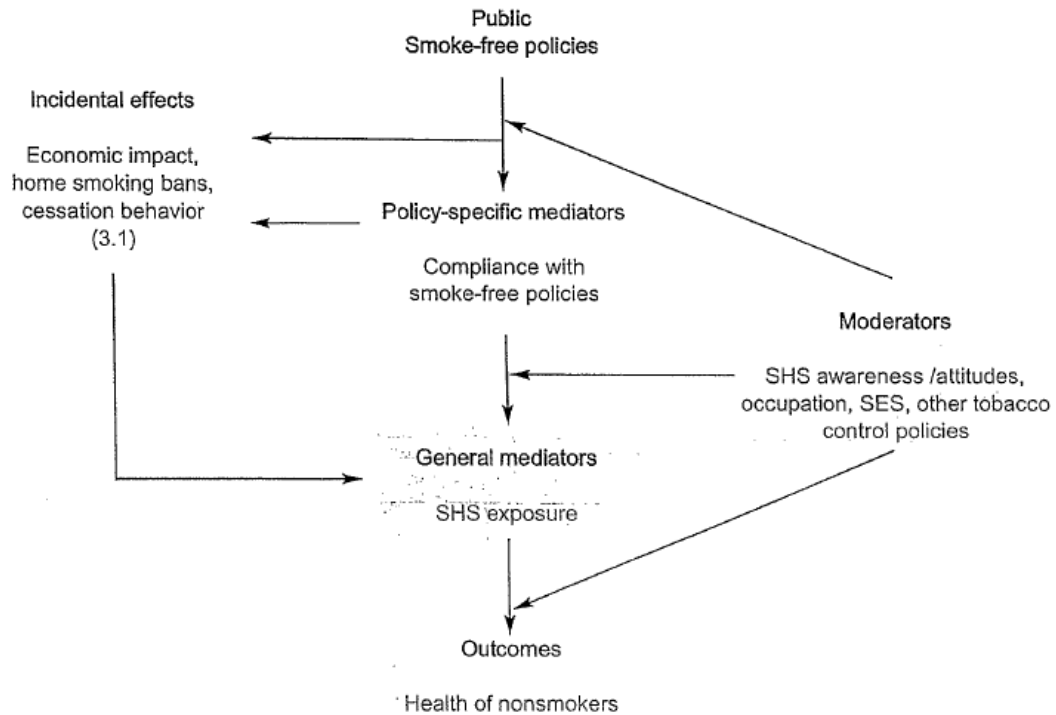


Figure 8 Conceptual framework for the evaluation of smoke-free policies

The numbers in parentheses indicate the section in the IARC Handbook covering the topic.

SHS = second-hand smoke

SES = socio-economic status

Based on this framework a set of research questions were identified and are presented in section 2.2 below. The research design, in accordance with suggestions made from the IARC framework, includes a survey that was conducted prior to the policy being implemented, and a survey conducted after the policy was implemented.

In addition to the evaluation design considerations presented in the IARC Handbook, this dissertation's research objectives were also informed by the literature reviewed above that explored reasons to support the creation of OSFOs, (discussed above in Section 1.5 and its subsections). Issues specific to outdoor restrictions included concerns about litter and fire, and different methods to measure economic impact were considered since many of the areas are overseen by the public sector, and are 'free' to visit or use and there are no records kept to measure usage.

Considering this is one of the first by-laws of its kind in Ontario and the first to have a comprehensive pre-post evaluation, it was also considered a research priority to understand how applicable the findings from Woodstock would be for other communities in Canada and around the world. Therefore this evaluation also sought to understand the process that was followed, the motivations or rationale for the by-law, and how the city crafted the by-law and enforced it.

2.2 Research Objectives

The following 7 key research objectives were identified. Some of the research objectives have additional questions that are detailed below.

1. To determine if the OSFO reduced second-hand smoke exposure

Was the City of Woodstock OSFO effective at reducing the involuntary exposure to second hand smoke in the regulated outdoor environments?

2. To determine if the OSFO contributed to the social denormalization of smoking behaviour

3. To understand if the public has concerns about discarded cigarette butts and litter, or worries that accidental fire may be caused by discarded cigarette butts.

Did they by-law influence public concerns about litter caused by smoking or fires started as a result of smoking behaviour?

Should these concerns be included in arguments for municipal OSFO development?

4. To assess the level of public Support for OSFOs

What is the support for outdoor smoking restrictions in Woodstock, and how does support differ between people who smoke and people who do not?

Does support for outdoor smoking restrictions change after the by-law had been in effect for approximately 1 year?

5. To determine if the OSFO contributed to changes in smoking behaviour and personal smoking restrictions

Did smokers report they were compliant with the OSFO?

Did the OSFO increase quit intentions?

Did the OSFO help smokers to quit?

Did the OSFO help smokers that quit smoking to stay quit?

Was there an increase in smoke-free policies in homes and personal vehicles after the by-law was enacted?

6. To identify if any unintentional consequences or ‘economic impacts’ resulted from the OSFO.

Were there any unintentional consequences from the by-law – specifically, did the by-law result in people who smoke reporting that they use city facilities or businesses less since the OSFO was enacted?

7. To assess if the Woodstock OSFO experience can be generalized to other communities

What was the rationale or motivation for the City of Woodstock to enact a comprehensive OSFO?

Are lessons and findings from the Woodstock by-law applicable to other communities in Canada and around the world?

These research questions were examined through two related studies. The first was a longitudinal cohort study that surveyed people from 2 samples. The first sample was from the general population, (adult smokers and non-smokers), selected from communities in Oxford County (cities of Woodstock and Ingersoll) and the second sample was from a targeted sample of people that were smoking in one of the environments to be regulated by the impending by-law. The second study was qualitative and involved key-informant interviews with staff and management from the City of Woodstock and Oxford County Public Health and an elected official.

3.0 METHODS

Two related research studies were undertaken to answer the research objectives outlined above in section 2.2.

A quantitative longitudinal survey was conducted with a general population sample of adult non-smokers and smokers from the communities of Woodstock and neighbouring community of Ingersoll (both in Oxford County). A nearly identical longitudinal cohort survey was conducted with a targeted sample of smokers that were recruited after being observed smoking in one of the environments that was to be regulated by the Woodstock OSFO after September 2008.

This survey research study sought to answer the address research objectives 1-6. Details of the procedures followed to conduct this survey work are described below in Section 3.1. The surveys were conducted by the Survey Research Centre (SRC), at the University of Waterloo. This research project received ethics clearance from the University Of Waterloo Office Of Research Ethics (ORE#14923). The survey was developed by researchers from the University of Waterloo and the Ontario Tobacco Research Unit (OTRU).

A qualitative study was also conducted using key-informant interviews with municipal employees from Oxford County Public Health, the City of Woodstock and, an elected official from the City of Woodstock Council. Details of the procedures followed to conduct this qualitative study are described in section 3.2. The qualitative study sought to address research objective 7, identified in section 2.2 above. This study received ethics clearance from the University of Waterloo (ORE#15925). The survey was developed by the research team from the University of Waterloo and field work was conducted by the principal investigator (RDK) with assistance from a research assistant (CM).

3.1 Quantitative Data Collection- Pre By-law (Wave 1) – General Population Sample of Smokers and Non-Smokers (Telephone), and Targeted Sample of Smokers (Face-to-Face Survey)

The pre-OSFO survey took place in August 2008. It included a Random Digit Dialing (RDD) general adult population (ages 18 and older) sample of non-smokers and smokers with telephone exchanges from Oxford County. Another set of smokers was contacted through a convenience sample street-intercept adult (ages 18 and older) sample of smokers. Interviewers

collecting the street-intercept sample used hand-held computer devices, and went to the outdoor areas that were about to be regulated by the Woodstock OSFOs. Both groups of respondents, telephone and street-intercept, were asked essentially the same set of questions to allow for comparison. The surveys are included in Appendix D (general population sample) and Appendix E (targeted sample).

Due to the need to successfully complete fieldwork prior to the implementation of the ban, and short timelines that are associated with Fast-Track policy evaluations, no pilot was conducted. Pre-testing of the survey tool, however, was done within the SRC to test the survey instrument. Also, a great majority of the survey questions were those used in the ITC surveys, or were variations of the questions tailored for the outdoor environments that was the focus of this study.^E Thus, there was a very strong foundation for the survey and high confidence in the survey questions.

3.1.1 Participants – Wave 1 – General Population Sample (Telephone Survey)

For the telephone portion of this survey, a sample of 4,515 RDD telephone numbers from Oxford County was purchased. The telephone numbers were provided by a private firm, ASDE Survey Sampler, located in Gatineau, Quebec.²⁰³ ASDE uses a geographically stratified, general phone population random sampling program. It samples using RDD methodology and checks its samples against published phone lists to divide the RDD frame into “directory listed” and “directory not listed” components. Their method is adapted from the Mitofsky-Waksberg Method.²⁰⁴ The list is randomly ordered within strata. This bank of telephone numbers was comprised of approximately 75% Woodstock telephone exchanges and 25% Ingersoll telephone exchanges. Ingersoll is a neighbouring community 15km from Woodstock and was included in the study because the communities are closely connected physically, and economically. Having measures from Ingersoll was also identified as helpful for collaborators from Oxford County Public Health and the Oxford County Interagency on Smoking and Health. The research team also wanted to explore whether or not residency in a community influenced support for restrictions.

^E The ITC Project mission is to evaluate the psychosocial and behavioural effects of national-level tobacco control policies throughout the world. The project follows thousands of adult smokers over five or more years from the survey start date in their respective countries. The start dates are strategically chosen to follow changes in national-level tobacco policies according to the recommendations of the first and currently only international treaty on health, the Framework Convention on Tobacco Control (FCTC). More details about the ITC Project can be found at: www.itcproject.org

3.1.2 Procedures – Wave 1 – General Population Sample (Telephone Survey)

Specific details of the procedures followed in Wave 1 of the telephone survey can be reviewed in the document *Woodstock Technical Report 2008*, from the Survey Research Centre, in Appendix F. Interviewers were trained in a four hour session on August 11th, 2008, which included a presentation by the principal investigator (RDK). All calls were conducted using WinCATI v4.2, a computer system from Sawtooth Technologies.

Fieldwork for Wave 1 of the phone survey of the general population sample began Wednesday, August 13th, 2008, and ended on Thursday, August 28th, 2008, for a total of 14 days of fieldwork. Approximately 70% of contacts were made on weekday evenings, with the rest made Sunday afternoon or during weekdays. The initial project design called for telephone data collection from 300 non-smokers and 175 smokers (a ratio of 1.7:1). For details about how the sample size was selected and power calculations, please refer to Appendix L.

The survey was only conducted with people aged 18 or older. Respondents were selected by requesting household adult composition and the number of smokers. If there were smokers in the household, the smoker whose birthday was coming next was recruited, whether the non-smoker quota was open or not. If there were no smokers in the household, and the non-smoker quota was open, then the non-smoker with the next birthday was requested. Given that only about 20% of the general adult population in Canada can be identified as smokers, and that the field time was limited, preference was given to capturing smokers efficiently. Woodstock has a smoking prevalence greater than 30%,²⁰⁵ which could partially explain why calling was completed very quickly for this survey, as detailed in Appendix F.

Respondents were classified as a smoker if they had smoked more than 100 cigarettes in their life and at least once in the past 30 days. Possible respondents were selected through smoking status and then by the next birthday method.²⁰⁶ Table 1 below outlines the standard protocols followed for RDD samples.

Table 1. Call Protocols Used in the Woodstock Phone Survey

Call Protocols	
Call Attempts	8 dialings will be made to each phone number. All call attempts to each number will be exhausted.
Timing of Call Attempts	Calls will be varied among all times, including mornings, afternoons, evenings, and weekends.
Busy Signal	Dialings resulting in busy signals will be rescheduled at 30-minute intervals up to 2 times. These will override the 8 dialing limit. If the first 5 attempts result in only busy signals, the number will be assumed not in service and coded accordingly.
Break Offs/Hang Ups/Early Refusal	If before the #of people of household question is asked, code as break off.
Call Backs	Appointment calls will be made when requested by respondents subject to call centre schedule.
Answering Machine/Message service	No message will be left. 8 call attempts will occur.
Fax machine, not-in-service, and business numbers	The number is checked to ensure the correct number was reached. They are then retired from the queue.
Changed numbers	Numbers that have been changed are checked, given a final disposition of not-in-service and retired from the queue.
Non-Smoker Quota	will be opened at supervisor's discretion

Over two-thirds (70.2%) of the calls were completed in the first 3 call attempts. Only a few call attempts went past 8 in situations such as callbacks and busy signals; 98.6% of the cases were completed by 8 attempts.

Due to the much higher incidence of non-smokers within the general population, and therefore the greater likelihood that they would complete a survey, daily goals were set for non-smokers. Once the goal was achieved, the non-smoker quota was closed and only smokers were recruited. This ensured the proportion of non-smokers to smokers was maintained. A table of the final disposition codes for Wave 1 telephone surveys is found in its entirety in the Wave 1 Technical Report in Appendix F. Further details about the sample are in results chapter, in section 5.1.1.

For the telephone interview, participants were offered a booklet of Tim Hortons gift certificates worth \$5 dollars. Tim Hortons is a popular coffee shop/restaurant with locations in many communities in Canada including 7 locations in Woodstock, Ontario and 2 in Ingersoll, Ontario.²⁰⁷

3.1.3 Participants – Wave 1—Targeted sample – Smokers (Face-to-Face Survey)

For the targeted sample of smokers (street-intercept surveys), a targeted convenience sample of smokers was collected from 7 different outdoor locations in the city of Woodstock. These environments are listed in Table 15 below.

The rationale for collecting this targeted sample was to ensure the study included smokers who currently go to smoke in one of the environments in the City of Woodstock that was to become regulated in the coming weeks. The participants in the street intercept, targeted sample were not necessarily residents of Woodstock or Oxford County but it was assumed most would be.

Interviewers successfully completed surveys with participants in each of the targeted outdoor location. Some locations were challenging, such as transit stops, where respondents needed to catch their bus. In some cases the interviewers were able to board buses with respondents and complete the survey.^F Interviewers approached smokers outside doorways of public buildings including the library, and city hall. Private or commercial sector doorways included retail businesses on the main street, office buildings and doorways of large grocery and department stores outside the core of the city. Outdoor special events included ‘Black-out Days’ – an event in an outdoor downtown square the commemorated the major North American blackout in 2003, and celebrated energy conservation. Interviewers also approached smokers at the outdoor music festival Cow-a-pallosa which takes place in the city’s largest public park. Numerous city parks were surveyed including small neighbourhood parks and large parks. Participants included people at Cow-a-pallosa prior to the music starting – interviewers found that once the scheduled entertainment was started it was more difficult to interview participants. Every park surveyed had a play structure such as swings or climbers. City staff provided the research team with schedules of city recreation-leagues for both children and adults and interviewers visited the recreation fields during times when they were in use by city sports leagues. There are less than 10 downtown sidewalk cafes patios, all in close proximity to each other along the main street (Dundas Street).

^F The City of Woodstock provided the research team with city bus tickets so that interviewers could board buses with respondents.

3.1.4 Procedures – Wave 1 – Targeted sample – Smokers (Face-to-Face Survey)

Specific details about the procedures followed to collect the targeted sample (street intercept) can be found in the report *Woodstock Technical Report, 2008*, from the Survey Research Centre, found in Appendix F.

Prior to conducting field work the team supervisors spent a day in Woodstock to identify appropriate locations for identifying possible participants. This was done in consultation with the city and Public Health staff. Prior to conducting street intercept surveys in business locations, such as doorways or sidewalk cafes, the owner or manager was first approached for permission. Each location was staffed by a pair of researchers for at least one day of fieldwork. Surveyors always worked in pairs and had mobile phones with them to improve safety.

Interviewers attended a three hour training session on August 12th, 2008, which emphasized the survey rationale, methods for approaching possible survey respondents, interviewer neutrality and using the handheld computers, Palm IIIs, for inputting the respondents' answers. Training attention was given to some potentially difficult surveying situations including how to assess gender, dealing with difficult or aggressive respondents, survey break-offs and poor weather.

In the field, interviewers visually identified smokers actively smoking in the locations of interest and approached the person or people smoking to explain the study and seek their participation. Possible participants were given an 'Information letter' about the study and provided verbal consent to participate in the study. The information letter included details about the study's objectives and explained that the study had been reviewed and given ethics approval by the University of Waterloo's Office of Research Ethics.

More than one respondent was accepted if a group of smokers was approached. The intercepts were conducted using *Entryware* software on Palm III handheld devices. Each respondent was offered \$10 in Tim Hortons gift certificates as a token of appreciation upon completion of the survey. Street intercept participants were not sent a thank you letter. Data was downloaded every night onto a SRC password protected laptop.

Schedules of when and where interviewers would survey in the outdoor environments were established and re-visited throughout the collection time period given that completing surveys in some environments was easier than in other environments. Respondents from recreation fields, for example, were minimal given that many rec-leagues were done for the season (although fields were visited one evening while in use with an adult baseball team, and one afternoon fields were visited while a youth soccer tournament was being held).

3.2 Quantitative Data Collection – Post By-law (Wave 2)

The follow-up survey, or Wave 2, was conducted in August and September, 2009, approximately one year after Wave 1 of the survey, and one year after the outdoor smoke-free by-law was enacted in Woodstock. The by-law had been enforced since 2010 so by August and September, the people of Woodstock had had most of a summer with smoke-free restrictions.

3.1.5 Participants – Wave 2

All participants from the initial surveys - both participants in the general population sample and those in the targeted smoker survey were eligible for the follow up survey (copy of the Wave 2 survey can be found in Appendix G). If a respondent gave permission to be re-contacted and provided contact information, that person was retained in the second wave of the evaluation. There was no ‘replenishment’ for the sample, meaning that no new respondents were added during Wave 2. All participants in Wave 2 were contacted using the telephone.

In Wave 2, smokers were more likely to be untraceable, and also had a lower response rate, resulting a smaller sample. It should be noted that non-smokers were solely recruited by telephone in the first wave, and so it is not surprising that this group is less likely to be untraceable.

3.1.6 Procedures – Wave 2

For specific details about the procedures followed in Wave 2, the Technical Report from the Survey Research Centre is in Appendix H – *Woodstock Follow-up Technical Report*. Included in Table 2 below is a summary chart describing the success of re-contacting respondents in Wave 2.

Table 2. Response Rates and Retention by Smoking Status and Mode

Sub-group Rates	Smokers %	Non-Smokers %	Targeted Sample of Smokers (Face-to-Face)	General Population Sample of Smokers (Telephone)
Traceable Rate	77.6	94.4	68.1	83.6
Contact Rate	86.9	97.5	70.4	95.2
Cooperation Rate	94.4	96.9	87.0	97.2
Response Rate	82.0	94.5	61.2	92.5
Retention Rate	63.6	89.2	41.7	77.3

Overall retention rates were decent and comparable or better than other similar surveys conducted in Ontario such as the Ontario Tobacco-use Survey (OTS).²⁰⁸ Retention of telephone non-

smokers was almost 90%; almost all non-smokers that could be traced were retained in the survey. Co-operation rates were very high for all groups. In general, smokers were less traceable, which is also consistent with similar surveys. The respondents from the targeted sample (those recruited face-to-face in Wave 1) were the most difficult to retain, with less than half remaining in the survey in Wave 2. However the original targeted sample was larger than expected which compensated slightly for the lower retention rate in Wave 2.

For all participants providing mailing addresses in the initial interview, a pre-contact letter was mailed with the incentive. For those not providing mailing addresses initially, a letter was sent after the second interview was completed, once an address was obtained. The incentive was \$5 in Tim Hortons gift certificates (the same incentive given for respondents from the general population sample in Wave 1).

Look-ups were performed for wrong numbers and not-in-service dispositions. All alternate numbers were exhausted before a final disposition of not-in service or wrong number was assigned.

Interviewers were trained in a four hour session on August 17th, which included a presentation by the client (RDK). Fieldwork began August 18th and continued through to September 15th, 2009. Approximately 70% of contacts were made on weekday evenings, with the rest made Sunday afternoon or during weekdays. All calls were conducted using WinCATI v4.2, a computer system from Sawtooth Technologies.

During the summer, holiday schedules can mean more call attempts are needed to achieve a completed interview. Overall 88% of interviews were completed in the first 8 attempts. An average of 4 attempts was required to achieve a completed interview.

Details of response rates are outlined in the Woodstock Follow-up Technical Report (Appendix H).

3.3 Measures Collected in the Surveys

3.3.1 Sample Characteristics Measures

The survey collected a variety of descriptive measures including age, place of residence, education level and whether or not there were children (age less than 18 years) in the home. Birth date was also recorded and used to generate an age. Gender was also recorded – only asked on the telephone if the interviewer could not confidently determine the gender over the phone.

Respondents were considered smokers if they had smoked more than 100 cigarettes in their life and had had at least one cigarette in the last month. The overwhelming majority of smokers in both the general population sample and the targeted sample were daily smokers (see Tables 16 and 17).

Geographic place of residence was classified as: 1) the city of Woodstock, 2) Oxford county but not Woodstock, or 3) outside Oxford County.

Respondents provided information about their highest level of education achieved. The education measure included 7 response options, ranging from ‘no schooling’ to ‘completed university’. This variable was dichotomized for describing the sample and modeling purposes into a ‘low or medium level’ for response options no education to completed high school, and a ‘high level’ of education for respondents that had completed some education above high school.

Age was collected in years and then grouped into one of the following 4 categories, 18-24, 25-39, 40-54 and 55+.

Smoking behaviour is reported using a measure of nicotine addiction, the heaviness of smoking index (HSI). HSI scores range from 0–6 and are calculated by summing the points for time to first cigarette after waking and number of cigarettes smoked per day. Time to first cigarette is scored: 3 points if the first cigarette is smoked in less than 5 minutes from waking; if the first cigarette is smoked 6–30 minutes from waking the smoker is given 2 points; if the first cigarette is smoked within 31–60 minutes of waking, the respondent is given 1 point; and if the cigarette is smoked more than 60 minutes after waking the respondent doesn’t get any points (0). Respondents were asked: “on average, how many cigarettes do you smoke each day?” Cigarettes per day are scored: more than 30 = 3 points; 21–30 cigarettes per day = 2 points; 11–20 cigarettes per day = 1 point; less than 1–10 cigarettes per day = 0 points. Therefore a person can have an HSI index that ranges from 0-6.; higher HSI scores indicate more dependence on nicotine. HSI was used in the longitudinal models to incorporate daily vs. non-daily smoking. Values for this variable range from 0 to 6. THSI index is positively associated with nicotine dependence.²⁰⁹

Table 3. Sample Characteristics - Socio-demographic, and Addiction to Cigarettes Measures

Measure	Question and Response Options
AGE	<p>What year were you born?</p> <p><i>Enter year of birth.</i></p> <p>If response>[current year-18] (respondent too young), say sorry, you must be over 18 to participate.</p>
Age Group – derived variable	<p>Derived variable — age at recruitment (categories).</p> <p>1 18-24</p> <p>2 25-39</p> <p>3 40-54</p> <p>4 55 and up</p>
Gender	<p><i>Interviewer only</i></p> <p>1. Female</p> <p>2. Male</p>
	<p>Pre-ambule read to all</p> <p>Finally, these last questions are for classification purposes only.</p> <p>Coverage: All respondents</p>
EDUCATION Measure	<p>What is the highest level of education you have completed?</p> <p>[DO NOT READ CATEGORIES]</p> <p>01 – No schooling</p> <p>02 – Some elementary</p> <p>03 – Completed elementary</p> <p>04 – Some secondary</p> <p>05 – Completed secondary</p> <p>06 – Some community college, CEGEP or nurse’s training</p> <p>07 – Completed community college, CEGEP or nurse’s training</p> <p>08 – Some university or teacher’s college</p> <p>09 – Completed university or teacher’s college</p> <p>10 – Other education or training</p> <p>66 – DK</p> <p>99 – R</p>
CHILDREN in the HOUSEHOLD	<p>Are there any children under the age of 18 currently living in your household?</p> <p>1 Yes</p> <p>2 No</p> <p>7 NA</p> <p>8 Refused</p> <p>9 Don't know</p> <p>What are their ages?</p>

	<i>(record)</i>
PLACE OF RESIDENCE	<p>Finally, in order for us to send you payment for this survey, can you tell me your name, address and postal code where you receive your mail?</p> <p>PROBE: This is a UNIVERSITY based research study. Your answers to this survey will be kept absolutely confidential. All personal information, including your name and address, will be kept strictly confidential and will not be shared with any person or group that is not associated with this survey.</p> <p>[MAKE SURE THAT SPELLING IS CORRECT—REPEAT BACK TO RESPONDENT TO CHECK]</p> <p>01 – SPECIFY ADDRESS: _____</p> <p>02 – NO</p>
	<p>Without this information, we are unable to send you the Tim Horton’s gift card for participation in this survey.</p> <p>01 – Respondent offers FULL address, Enter address</p> <p>02 – Respondent does NOT offer FULL address</p>
	<p>Can you just tell me your postal code?</p> <p>[PROBE: This inform information will be used for regional classification purposes only]</p> <p>01 - _____ ENTER 6-DIGIT POSTAL CODE</p> <p>06 – DK</p> <p>09 – No/R</p>
	<p>Would you be willing to provide me with the first 3 digits of your postal code?</p> <p>PROBE: As a reminder, this information will be kept completely confidential and will not be shared with any person or group that is not associated with this survey. This information will be used to help us understand regional differences in behaviours and beliefs related to tobacco.</p> <p>01 - _____ ENTER 3-DIGIT POSTAL CODE</p> <p>06 – DK</p> <p>09 – No/R</p>
Heaviness of Smoking measures – Cigarettes smoked	<p>On average, how many cigarettes do you smoke each day (or week or month), including both [factory-made/ packet] and roll-your-own cigarettes?</p> <p><i>Enter number of cigarettes. If range, take mid-point, round up.</i></p>
Time to first cigarette	<p>[Do not read out time units. Respondent can answer with one time unit, or use both hours and minutes to give a more accurate answer.]</p> <p>How soon after you wake up do you usually have your first smoke?</p> <p>1 Minutes</p> <p>2 Hours</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>

3.3.2 Longitudinal Measures Collected in Both Wave 1 and Wave 2

Some questions in the surveys were asked of both smokers and non-smokers but with wording changed as appropriate. Many measures, like those that asked about smoking behaviour, were only asked of smokers.

To address the research objectives 1-6, identified above in section 2.2, 24 measures have been grouped in six topical domains, which correspond to the six research objectives. The six domains and their behavioural and attitudinal measures collected for each are detailed in Tables 4-9 below. For each of the 24 measures, the same or comparable question was included in both the Wave 1 and Wave 2 survey to facilitate comparisons and measure change.

Table 4. Measures of Reductions in Second-hand Smoke Exposure

Research Objective 1: To determine if the OSFO reduced second-hand smoke exposure <i>Was the City of Woodstock OSFO effective at reducing the involuntary exposure to second hand smoke in the regulated outdoor environments?</i>				
Measure #	Wording of question for Smokers	Response Options		
1	SMOKER: How often do you smoke a cigarette or other lit tobacco when visiting a park?	1 – Never 2 - Sometimes 3 - Usually 4 - Always [every time I visit a park] 7. Not applicable 8. Refused 9. Don't know		
2	SMOKER: When visiting a recreational field in Woodstock to play or watch a game - how often will you have a cigarette?	1 – Never 2 - Sometimes 3 - Usually 4 - Always 7. Not applicable 8. Refused 9. Don't know		
3	SMOKERS: How often do you smoke near the doorway to a public or private building - not including your own home?	1 – Never 2 - Sometimes 3 - Daily 4 - More than once a day 7. Not applicable 8. Refused 9. Don't know		
4	SMOKERS: Will you smoke a cigarette when waiting for a bus - near the shelter or stop post?	1 - No, I never smoke near the bus stop/shelter 2 - Yes, but I always step back from the stop/shelter to smoke 3 - Sometimes 4 - Usually 5 – Always 7. Not applicable 8. Refused 9. Don't know		
5	WAVE 1 When visiting an event in downtown Woodstock like Cowapalooza, how often will you smoke a cigarette or other lit tobacco? WAVE 2 [Did you attend Cowapalooza this year?] SMOKERS: Did you smoke a cigarette or other lit tobacco while at the event?	<table border="1"> <tr> <td> WAVE 1 1 Never 2 Sometimes 3 Usually 4 Always 8 Refused 9 Don't know </td> <td> WAVE 2 1 – No 2 – Yes 1 Never 2 Sometimes 3 Usually 4 Always 7. Not applicable 8. Refused 9. Don't know </td> </tr> </table>	WAVE 1 1 Never 2 Sometimes 3 Usually 4 Always 8 Refused 9 Don't know	WAVE 2 1 – No 2 – Yes 1 Never 2 Sometimes 3 Usually 4 Always 7. Not applicable 8. Refused 9. Don't know
WAVE 1 1 Never 2 Sometimes 3 Usually 4 Always 8 Refused 9 Don't know	WAVE 2 1 – No 2 – Yes 1 Never 2 Sometimes 3 Usually 4 Always 7. Not applicable 8. Refused 9. Don't know			
6	SMOKERS: When visiting an outdoor patio of a restaurant, bar or sidewalk café in Woodstock, how often do you have a cigarette?	1 - Never 2 - Sometimes 3 - Usually OR 4 - Always 7. Not applicable 8. Refused 9. Don't know		

Table 5. Measures of Social Denormalization of Tobacco Use

Research Objective 2) To determine if the OSFO contributed to the social denormalization of smoking behaviour		
Measure #	Wording of question for Smokers and Non-Smokers, Wave 1 and Wave 2:	Response Options
7	SMOKER: There are fewer and fewer places where you feel comfortable smoking.	1 - Strongly Disagree 2 - Disagree 3 - Agree 4 - Strongly Agree 7. Not applicable 8. Refused 9. Don't know
8	Smokers and Non-smokers Society disapproves of smoking.	1 - Strongly Disagree 2 - Disagree 3 - Agree 4 - Strongly Agree 7. Not applicable 8. Refused 9. Don't know

Table 6. Measures of Concerns about Litter and Fire Caused by Cigarette Butts

Research Object 3) 1. To understand if the public has concerns about discarded cigarette butts and litter, or worries that accidental fire may be caused by discarded cigarette butts. Did they by-law influence public concerns about litter caused by smoking or fires started as a result of smoking behaviour? Should these concerns be included in arguments for municipal OSFO development?		
Measure #	Wording of question for Smokers and Non-Smokers, Wave 1 and Wave 2:	Response Options
9	How often do you notice the litter caused by cigarette butts?	1 - Never 2 - Sometimes 3 - Often 4 - Always 7. Not applicable 8. Refused 9. Don't know
10	How often do you worry that a cigarette butt could cause a fire?	1 - Never 2 - Sometimes 7. Not applicable 8. Refused 9. Don't know 3 - Often 4 - Always 7. Not applicable 8. Refused 9. Don't know

Table 7. Measures of Public Support for Outdoor Smoke-free Ordinances in a Variety of Environments

<p>Research Objective 4) To assess the level of public Support for OSFOs What is the support for outdoor smoking restrictions in Woodstock, and how does support differ between people who smoke and people who do not? Does support for outdoor smoking restrictions change after the by-law had been in effect for approximately 1 year?</p>		
Measure #	<p>Wording of Questions for Smokers and Non-Smokers, Wave 1 and Wave 2: For each of the following places, please tell me if you think smoking should be allowed in outdoor environments:</p>	Response Options
11	Patios at Pubs or Bars?	1 - All outdoor areas 2 - Some outdoor areas 3 - No outdoor areas 7. Not applicable 8. Refused 9. Don't know
12	Patios at Restaurants?	1 - All outdoor areas 2 - Some outdoor areas 3 - No outdoor areas 7. Not applicable 8. Refused 9. Don't know
13	Patios at Family Restaurants?	1 - All outdoor areas 2 - Some outdoor areas 3 - No outdoor areas 7. Not applicable 8. Refused 9. Don't know
14	City Parks?	1 - All outdoor areas 2 - Some outdoor areas 3 - No outdoor areas 7. Not applicable 8. Refused 9. Don't know
15	Doorways of a public building, like a post office or city hall?	1 - All doorway areas 2 - Some doorway areas 3 - No doorway areas 7. Not applicable 8. Refused 9. Don't know
16	Doorways of any private building, like an office building?	1 - All doorway areas 2 - Some doorway areas 3 - No doorway areas 7. Not applicable 8. Refused 9. Don't know

Table 8. Measures of Smoking Behaviour and Personal Smoking Restrictions

<p>Research Objective 5) To determine if the OSFO contributed to changes in smoking behaviour and personal smoking restrictions <i>Did smokers report they were compliant with the OSFO?</i> <i>Was there an increase in smoke-free policies in homes and personal vehicles after the by-law was enacted?</i></p>		
Measure #		Response Options
17	<p>Wording of question for Smokers, Wave 1 and Wave 2: Wave 1 - Do you think it is likely that you will always follow the bylaw restricting smoking in outdoor spaces?</p> <p>Wave 2 – Do you always follow the by law restricting smoking in outdoor spaces?</p>	<p>1 - Yes, all the time 2 - No - there would be some times when I would not follow the bylaw 7. Not applicable 8. Refused 9. Don't know</p>
18	<p>Smokers and Non-Smokers: Which of the following best describes smoking inside your home?</p>	<p>1 - Smoking is allowed anywhere in your home 2 - Smoking is NEVER allowed ANYWHERE in your home 3 - Something in between 7 – Not applicable 8. Refused 9. Don't know</p>
19	<p>Smokers and Non-Smokers: Which of the following best describes smoking inside your vehicle?</p>	<p>1 - Smoking is allowed in your vehicle 2 - Smoking is NEVER allowed in your vehicle 3 - Something in between 7. Not applicable 8. Refused 9. Don't know</p>

Table 9. Measures of Unintentional Consequences

<p>Research Objective 6) To identify if any unintentional consequences or ‘economic impacts’ resulted from the OSFO. <i>Were there any unintentional consequences from the by-law – specifically, did the by-law result in people who smoke reporting that they use city facilities or businesses less since the OSFO was enacted?</i></p>		
Measure #	Wording of question for Smokers and Non-Smokers, Wave 1 and Wave 2:	Response Options
20	<p>Wave 1: How do you anticipate the new smoking restrictions will impact your use of PARKS or FIELDS? Would you say:</p> <p>Wave 2: How have the new smoking restrictions impacted your use of PARKS OR FIELDS? Would you say:</p>	<p>1 – I (will) go to parks or rec fields MORE often 2 - I (will) go to parks or rec fields LESS often 3 - The restrictions (will) have not affected how often I go to parks or fields 7. Not applicable 8. Refused 9. Don't know</p>
21	<p>Wave 1 and 2: The city of Woodstock outdoor smoking bylaw can prohibit smoking at events like Cowapalooza and Sidewalk Days. If the city made these events smoke-free, how would this impact your decision to attend these events this year? Would you say...</p>	<p>1 - I was MORE likely to attend 2 - I was LESS likely to attend 3 - I was not affected 7 - Not Applicable 8 - Refused 9 - Don't Know</p>
22	<p>The City of Woodstock outdoor smoking bylaw (will) prohibit(s) smoking on sidewalk areas of downtown cafés along Dundas Street.</p> <p>Wave 1: How will this impact your decision to visit these venues, Would you say....</p> <p>Wave 2: How has this impacted your decision to visit these venues? Would you say...</p>	<p>1 - I am MORE likely to visit the cafes along Dundas Street 2 - I am LESS likely to visit 3 - I have not been affected 7 - Not Applicable 8 - Refused 9 - Don't Know</p>
23	<p>The city of Woodstock outdoor smoking by law (will) prohibit(s) smoking on sidewalks within 4 metres of transit shelters or transit stops.</p> <p>Wave 1: How will this impact your decision to use transit? Would you say:</p> <p>Wave 2: How has this impacted your decision to use transit? Would you say:</p>	<p>1 - I am MORE likely to use transit 2 - I am LESS likely to use transit 3 - I have not been affected 7 - Not Applicable 8 - Refused 9 - Don't Know</p>
24	<p>The city of Woodstock outdoor smoking by law (will) prohibit(s) smoking on sidewalks within 9 metres of doorways for all public buildings like city hall, and for private businesses that elect to make their doorway areas smoke free.</p> <p>Wave 1: How do you anticipate this will impact your decision to visit these venues in the future? Would you say:</p> <p>Wave 2: How has this impacted your decision to visit these venues? Would you say:</p>	<p>1 - I am (will be) MORE likely to visit 2 - I am (will be) LESS likely to visit 3 - I have not (will not be) been affected 7 - Not Applicable 8 - Refused 9 - Don't Know</p>

3.3.3 Measures – Collected in Wave 2 Only

An additional 4 measures were collected related to public support for the Woodstock OSFO and an additional 3 measures were collected to evaluate changes in smoking behaviour after the by-law. These additional measures and their response options are detailed in Tables 10 and 11 below. In Wave 2 some of the smokers in Wave 1 had successfully quit smoking and were quitters at the time of the survey. Therefore some questions were re-worded so that they could be asked of quitters.

Table 10. Measures of Public Support for the Woodstock Outdoor Smoke-free By-law - Questions Asked Only in Wave 2

Research Objective 4) What is the support for outdoor smoking restrictions in Woodstock, and how does support differ between people who smoke and people who do not? Does support for outdoor smoking restrictions change after the by-law had been in effect for approximately 1 year?		
Measure #	Wording of question for Smokers and Non-Smokers, Wave 2: The City of Woodstock passed a bylaw almost a year ago, September 2008, that restricts smoking in 7 different outdoor areas including parks and recreational fields. The bylaw prohibits smoking within 30 metres of playground equipment in city parks and within 15 metres of a recreation field when it is being used.	Response Options
25	Do you support or oppose the restrictions on 7 outdoor smoking environments in Woodstock?	1 - Strongly oppose 2 - Oppose 3 - Support OR 4 - Strongly support 7. Not applicable 8. Refused 9. Don't know
26	The restriction on smoking in 7 different outdoor areas including parks and recreational fields has been a good thing for the community. Do you...	1 - Strongly Disagree 2 - Disagree 3 - Agree OR 4 - Strongly Agree 7. Not applicable 8. Refused 9. Don't know
27	The restriction on smoking in 7 different outdoor areas including parks and recreational fields has been good for the health of the children in the community. Do you...	1 - Strongly Disagree 2 - Disagree 3 - Agree OR 4 - Strongly Agree 7. Not applicable 8. Refused 9. Don't know
28	For each of the following places, please tell me if you think smoking should be allowed in outdoor environments: At crowded outdoor events sponsored by the city like Cowapalooza or Sidewalk Days?	1 - All outdoor areas 2 - Some outdoor areas 3 - No outdoor areas 7. Not applicable 8. Refused 9. Don't know

Table 11. Measures to Assess Changes in Smoking and Quitting Behaviour After the Woodstock OSFO - Questions Asked Only in Wave 2

	Research Objective 5) To determine if the OSFO contributed to changes in smoking behaviour and personal smoking restrictions <i>Did the OSFO increase quit intentions?</i> <i>Did the OSFO help smokers to quit?</i> <i>Did the OSFO help smokers that quit smoking to stay quit?</i>	
Measure #	Wording of question for Smokers and Quitters, Wave 2:	Response Options
29	SMOKER: Has the smoke-free law made you more likely to quit smoking? QUITTER: Did the smoke-free law help you to quit smoking?	1 – Yes 2 – No 3 – Not applicable to me 7 – Not applicable 8 – Refused 9 – Don't Know
30	QUITTERS: Has the smoke-free law helped you stay a non-smoker?	1 - Yes 2 – No 7 – Not applicable 8 - Refused 9 - Don't know
31	SMOKERS: Has the smoke-free law made you cut down on the number of cigarettes you smoke?	1 – Yes 2 – No 7 – Not applicable 8 – Refused 9 – Don't Know

3.4 Qualitative Data Collection

A qualitative study was conducted using key informant interviews with municipal employees from Oxford County Public Health, the City of Woodstock and an elected official from the City of Woodstock Council. Research objective 7 (listed in Section 2.2) seeks to assess if the Woodstock OSFO experience can be generalized to other communities. The research objectives seeks to understand the rationale or motivation for the City of Woodstock to enact a comprehensive OSFO, and to itemize any lessons or findings from the Woodstock OSFO that could be applicable to other communities in Canada or elsewhere in the world.

3.3.4 Participants – Key Informant Interviews

Six key informants were interviewed including staff and managers from Oxford County Public Health, and the City of Woodstock, and an elected official from Woodstock City Council who was involved in both the 2003 by-law and 2007 outdoor smoking by-law. These key informants were identified by reviewing public documents including letters to City Council from the Interagency Council on Tobacco and Health and from discussions with other public health professionals in the province.

3.3.5 Procedures – Key Informant Interviews

A discussion guide with a set of interview questions and prompts was developed to address research objective 7 as outlined in section 2.2 (see Table 12 below in section 3.3.6). A list of key informants, decision-makers from both the City of Woodstock and Oxford County Public Health, was created. These key informants were selected in consultation with the Chair of the Oxford County Interagency Council on Tobacco and Health. Each key informant was contacted by phone or email in early November 2009 and, provided with an information letter, outlining the objectives of the research and that it had been reviewed and approved by the University of Waterloo Office of Research Ethics (see Appendix I for a sample letter). Interviews were requested by the researcher, and granted by all key informants. Each of the 6 interviews were scheduled and took place in Woodstock on November 13, 2009. Key informants were interviewed alone with the exception of 2 staff from the City of Woodstock who were interviewed together. Each key informant provided written consent to participate in the research. Each informant also agreed to permit exact quotes to be used in reports generated from the research.

The interviews followed the format of a guided discussion, using prompts where needed or appropriate. Some questions in the discussion guide were more appropriate for some key informants, but each question was asked of each interviewee.

Interviews were conducted by the principal investigator (RDK), who is trained in conducting qualitative interviews. An additional research assistant (CM) took notes during the discussions, which were recorded with a digital audio MP3 recorder. These data files were then uploaded into iTunes version 9.2 and transcribed verbatim by a research assistant (CM). Interviews lasted approximately 30 minutes (ranging from 22 minutes to 43 minutes).

Written transcripts were coded and charted using tables in Microsoft Office Word 2007.

3.3.6 Measures

The measures included in the key informant discussion guide addressed the history of the by-law's development, the roles of different community agents, such as Oxford County Public Health, City of Woodstock, and the Oxford County Interagency on Smoking and Health. Measures also included the key informants' perceptions of community readiness for regulation and what they felt were the critical steps in the development, enactment and enforcement of the by-law. The interviewer also sought to understand what the community's motivation was to have such a comprehensive outdoor smoke-free ordinance and how this was communicated to the broader community. Finally, the measures included questions to determine whether Woodstock had any unique characteristics or historical events that may explain the by-law's success, and suggest that similar legislation would not be successful in other communities. The research guide, which includes a list of questions and prompts, is included below in Table 12.

Table 12. Research Guide for Key Informant Interviews – Universality of the Woodstock Outdoor Smoke-free By-Law

<p>Research Objective 7:</p> <p>What was the rationale or motivation for the City of Woodstock to enact a comprehensive outdoor smoke-free ordinance? Are lessons and findings from the Woodstock by-law applicable to other communities in Canada and around the world?’</p>	
Measure #	Question and probes
32	Describe your role in the creation of the by-law
33	<p>What do you think were the critically important steps in the creation of the by-law</p> <p>Probes:</p> <p>Public involvement – allowing public input?</p> <p>How did the city and the health unit work together?</p> <p>The role of scientific evidence to inform public health policy?</p>
34	<p>Why was Woodstock ready for the by-law?</p> <p>Probes:</p> <p>Did the recent enactment of other legislation (such as the Smoke-free Ontario Act) make it easier or harder to pass such a by-law?</p> <p>Did the local data on smoking rates in Woodstock or Oxford County help justify such a by-law?</p> <p>What were the economic conditions of the community when the by-law was created?</p>
35	<p>Who was the by-law primarily designed to protect or support?</p> <p>Probes:</p> <p>a. Workers? Children? Parents? Smokers? Non-Smokers?</p>
36	How effective have the optional Schedules in the by-law been (private doorways and special events)?
37	Describe the first year of enforcement
38	What general lessons have been learned through this process? What advice would you have for other communities?

4.0 ANALYSIS

The steps taken to analyze the collected data, including software used, data cleaning, coding, and statistical procedures used are detailed below. The steps taken to present and analyze the quantitative cohort survey data is described in section 4.1, and the steps taken to analyze the qualitative data collected with key informant interviews, are discussed in section 4.2.

4.1 Quantitative Data Analysis

4.1.1 Data Preparation and Software

Initial data cleaning was performed by the Survey Research Centre including a review of data to check for obvious erroneous errors. Finalized data sets were provided to the researcher in an SPSS data file. All analyses were conducted in SPSS (version 17.0); the sample was not weighted.

4.1.2 Respondent Groups

All data are presented based on the respondent's smoking status, and the population sample they were surveyed from. This creates three respondent groups in Wave 1 and five respondent groups in Wave 2; the respondent groups for each wave are detailed in Table 13 below.

Table 13. Respondent Groups in Wave 1 and Wave 2

	Wave 1	Wave 2
General Population Sample	Non-smoker	Non-smoker
	Smoker	Smoker
		Quitter
Targeted sample	Smoker	Smoker
		Quitter

4.1.3 Response Proportions

The proportions reported do not include: non-responses, refusals, ‘not applicable’, or ‘don’t’ know’ options. The response proportions are presented as percentages respondents for that respondent group. Sample sizes are also reported with percentages.

4.1.3.1 Sample Characteristics

Sample characteristics include smoking status, gender, geographic place of residence, age, education, the presence of children (under 18) in the household. These proportions are reported for Wave 1’s entire sample, and for the Wave 1 sub-sample of respondents that remained in the sample. Wave 1 sample characteristics are reported based on the 3 respondent groups. The proportion of smokers in the Wave 1 subsample do not include ‘quitters’, however those respondents’ sample characteristics are described in the Wave 2 sample characteristics table (Table 18). Proportions of the Wave 2 sample characteristics are also reported for each of the 5 respondent groups.

4.1.3.2 Longitudinal Survey Measures

Similar to the sample characteristic measures, response proportions are reported for each longitudinal measure for Wave 1 and Wave 2. To compare proportions of responses across Wave 1 and Wave 2, findings are reported based on the 5 different respondent groups. Respondents that quit between waves are identified as ‘quitters’ in Wave 1 as they became quitters in Wave 2.

The proportions reported for Wave 1 only include the respondents who were present in Wave 2. The response proportions for the entire Wave 1 sample are included in Appendix J.

For some longitudinal measures, such as those that measure smoking behaviour, quitters have been removed from the proportions reported to ensure that a comparison is only made between people who continue to smoke.

4.1.3.3 Wave 2 specific measures

For the 6 measures collected only in Wave 2, proportions are reported based on the respondent group. Again, some of these measures were only asked of smokers or quitters.

4.1.4 Tests of Difference

The sample characteristics in Wave 1 and the sub-set of the sample that remained in Wave 2 were compared using 2-tailed z-tests for two proportions, with an alpha of 0.05 used for significance testing.

T-tests of means were used to test the difference in mean value from the heaviness of smoking index for smokers in Wave 1, and then the sub-set of smokers that remained in the survey in Wave 2. A α of 0.05 was used for t-tests significance testing.

4.1.5 Generalized Estimating Equation (GEE) Modeling

Generalized estimating equation (GEE) modeling was used to analyze most longitudinal response measures and model outcomes. GEE models are an extension of general linear models, used with longitudinal data when an outcome variable is collected over different time periods.^{210,211} GEE models used probability distribution and an exchangeable working correlation matrix structure. An α of 0.05 was used for significance testing.

Because behaviours and attitudes of smokers regarding these various outcomes may differ greatly from those of non-smokers, the two groups were generally considered to be distinct populations and separate models were fitted for many models. When analyzed together smoking status was included as a factor. Measure responses were made dichotomous, the details of this re-coding is outlined in the Results section for each measure.

Models included 7 predictors: (1) gender, (2) age (4 groups, 18-24, 25-39, 40-54, and 55+), (3) place of residence (Woodstock, Oxford County but not Woodstock, or outside Oxford), (4) Mode (face-to-face or telephone in Wave 1), (5) education (low-medium, or high), (6) children in the household (yes, no) and (7) Wave. A measure of smoking addiction (Heaviness of Smoking Index - HSI) was included in the model as a covariate.

In each case, the responses for the attitudinal and behavioural measures (dependent variables) were dichotomized; the way the measures were grouped is for analysis was often different for smokers and non-smokers. These details are described in the results sections that explore each of these measures individually.

4.2 Qualitative Data

The results of the key informant interviews followed an inductive qualitative method called the ‘framework approach’ developed by Bryman and Burgess.²¹² In general, qualitative inductive methods are a form of data analysis that informs theory, as opposed to more quantitative deductive approaches where data are applied to existing theory.²¹³ The framework approach was developed specifically for applied policy relevant qualitative research and is considered an appropriate framework for health policy evaluation.²¹⁴

4.2.1 Software

All key informant interviews were recorded using a digital MP3 recording device. Data were transferred from the MP3 digital recorders using Macintosh operating system Leopard. The audio files were played back for transcribing using iTunes 9.0.2. Transcriptions were done verbatim, however pauses, stammers, and other measures were not captured as the level of analysis would not incorporate these measures. Data analysis used tables in Microsoft Word Office 2007.

4.2.2 Analysis Framework

This framework refers to ‘data’ – meaning the quotes, ideas, sentiments or themes that were provided during the key informant interviews. The framework approach involves 5 steps including data familiarization, identifying a thematic framework, indexing, charting, and mapping and interpretation.

4.2.3 Data familiarization

Data familiarization involves a full immersion in the data, which includes listening to audio recordings, reading transcripts to list key ideas and recurrent themes.

The researcher (RDK) and research assistant (CM) familiarized themselves with the data by reading the key informant transcripts and reviewing the audio files. The researchers were then able to identify a series of themes that were then grouped into a thematic framework.

4.2.4 Identifying a Thematic framework

This step of the framework approach involves identifying the key issues, concepts and themes that were itemized in the familiarization step. These issues, concepts and themes are identified and a sort of high-level classification is given for all data.

4.2.5 Data Indexing

The next step in the framework approach for analyzing qualitative data is to apply systematically the thematic framework index to every piece of data, by annotating the transcripts with numerical codes from the index. This was done using Microsoft Word tables – where the transcribed quotes appear in one column with the index code in an adjacent column. In some cases a single quote may touch on multiple themes and were therefore double-indexed.

4.2.6 Data Charting

This step in the framework approach involves physically re-arranging the data according to the identified thematic framework and charting index. A document for each of the three themes was created, and then quotes associated with each sub-theme were grouped together. This was done again in Microsoft Word tables.

4.2.7 Mapping and Interpretation

Finally, the thematic charts were examined with the goal of finding associations and explanations for the findings. This step is influenced by the original research objectives and the themes that were identified through the process. This process was undertaken by the researcher (RDK). The main findings are presented in section 5.0 below with main ideas presented and supported by quotations.

5.0 RESULTS

This chapter presents the results from both the quantitative, survey research, and qualitative, key-informant research.

5.1 Results of the Quantitative Study

Sample Characteristics

Samples characteristics are described below in 5.1.1 including gender, age, place of residence, education level, and whether or not there are children (under 18 years of age) in the household. The sample of smokers is also described with a measure of smoking addiction (heaviness of smoking). The sample from Wave 1 is described both in terms of the sample as a whole and the sub-sample that remained in Wave 2. Respondents were classified in Wave 1 as either a non-smoker, a smoker who was recruited and surveyed on the telephone, from the **general population sample**, or a smoker that was recruited and surveyed face-to-face as part of the **targeted sample**. These details are presented in Table 14 below.

Longitudinal Measures

The longitudinal survey measures are reported for Wave 1 and Wave 2, to show possible changes after the by-law was enacted. These measures are reported for respondents that were present in each wave. The measures are reported as proportions based on smoking status and sample population (general or targeted). Proportions from the Wave 1 survey – entire sample – are included in a separate summary in Appendix J.

Wave 2 only Measures

The measures that were only collected in Wave 2 are further reported in section 5.1.2. These measures collected information about behaviour or support for the by-law after the by-law was in place.

5.1.1 Sample Characteristics Wave 1

Sample Size

The Wave 1 survey was completed by 783 adults (18 years old or older); 410 respondents were adults who smoke and 373 were adults who do not smoke. All non-smokers were interviewed on the telephone as part of the general population sample. Smokers were interviewed both by telephone

(n=235) as part of the general population sample, and face-to-face (n=176) as part of the targeted sample. The details of the different completed surveys are detailed below in Table 14.

Table 14. Wave 1 Smoking Status by Survey Mode

	Number of Completed Surveys	Number of Partially Completed Surveys	Total
Non-Smoker – General Population Sample (Telephone)	368	5	373
Smokers – General Population Sample (Telephone)	232	2	234
Smokers - Targeted sample (Face-to-face)	171	5	176
Total	771	12	783

The respondents who completed the survey as part of the targeted sample (face-to-face) were interviewed in 7 different environments as outlined in Table 15 below.

Table 15. Geographic Location of Targeted Sample (Face-to-Face) Interviews

Location	Frequency	Percent
1 - Recreation field	10	5.7
2 - Park, near playground	21	11.9
3 - Transit stop	21	11.9
4 - Sidewalk patio	2	1.1
5 - Special event	65	36.9
6 - Doorway of public building	37	21.0
7 - Doorway of private building	20	11.4
Total	176	100.0

As noted above in section 1.6.4, the sidewalk patios had been previously made smoke-free through a lease agreement between the city and the businesses, and therefore smoking in those environments was already restricted. This in part explains why there were only 2 completed surveys in that environment. Approximately 37% (n=65) of surveys conducted with the targeted sample were completed by smokers in outdoor events.. Surveys were completed at two outdoor events, one was a city-sponsored ‘Black-Out Day’ event in the city square, (n=38 respondents), and the Cow-a-polloza outdoor music event in the city’s South Side park (n=27 respondents).

The vast majority of smokers in Wave 1 were daily smokers, for both the general population survey and the targeted sample survey. Approximately 6% of smokers who completed from the general population survey were weekly or monthly smokers. All smokers who completed the survey

from the targeted sample survey (face-to-face) smoked at least weekly. Details are in Table 16 below. The proportions reported for ‘smokers’ include all smokers meaning daily, weekly and monthly. Heaviness of smoking is accounted for in the GEE models with the inclusion of the heaviness of smoking index (HSI) in the model as a co-variate.

Table 16. Wave 1 - Frequency of Smoking Behaviour

	Daily smoker	Weekly smoker	Monthly smoker	Total
Smokers – General Population Sample (Telephone)	93.2% n=218	5.1% n=12	1.7% n=4	234
Smokers - Targeted sample (Face-to-Face)	94.9% n=167	5.1% n=9	0% n=0	176

The sample characteristics from Wave 1, and the subset of Wave 1 that remained in the survey in Wave 2, is presented in Table 17. This provides a thorough description of the respondents, including smoking status, gender, geographic place of residence, age, education, and the presence of children (under 18 years old) in the household. This is described for both the general population sample and the targeted sample. The sample of smokers is also described using a composite measure of smoking addiction - the heaviness of smoking index (HSI). The mean and standard deviation HSI values are reported for smokers in Table 17. Also included in Table 17 are the proportions of sample characteristics in the subset of Wave 1 respondents that stayed in the sample for Wave 2. In Table 17, in the columns that describe the sub-set of the Wave 1 sample that remained in the survey, quitters are not included. The characteristics of quitters are included in Table 18.

The entire sample in Wave 1 included 22.5% (n=176) respondents who were part of the targeted sample. In Wave 2, 61 of these respondents were retained, which represented 11.3% of the overall sample. The proportion of targeted sample respondents in overall sample changed significantly ($p < 0.05$) in Wave 2.

The general population sample in Wave 1 included more female respondents than male respondents. Non-smokers who completed the general population survey were 68% women. The respondents from the targeted sample were almost evenly men and women in the Wave 1 entire sample. Of the respondents from the targeted sample, that remained in the survey in Wave 2, more were women than men. The overall proportions of men and women, however, did not change significantly between the entire Wave 1 sample, and the subset of Wave 1 that was retained.

The targeted sample was younger than the general population sample. In Wave 1 the average age of people in the targeted sample was 40 years of age. The average age of respondents interviewed in the general population sample was 50 years of age. Smokers, from both the general population sample and the targeted sample, were younger (average age of both groups was 43 years) than non-smokers (average age 54 years). The overall proportions of each age category did not change significantly between the entire Wave 1 sample and the subset of Wave 1 that was retained.

The goal of the general population telephone survey was to have 75% respondents from Woodstock and 25% from other Oxford county communities. The sample from Wave 1 was close to this goal, with 74% of the sample being from Woodstock and 21% being from other communities in Oxford County. The proportions of respondents from each place of residence did not change significantly between the entire Wave 1 sample and the subset of Wave 1 that was retained.

The entire Wave 1 sample was fairly evenly divided into respondents that had education levels classified as 'low or medium', and respondents with education levels classified as 'high'. Respondents that had obtained any education beyond high school were classified as 'high'. More non-smokers were classified as having a 'high' level of education than smokers. There was not a significant difference in the proportions of education classifications of smokers surveyed in the general population sample compared to the targeted sample ($p>0.05$). However, the proportions of education classifications of the subset of respondents that remained in the sample did change from the overall sample in Wave 1. The subset of respondents that remained in the sample in Wave 2 had a statistically significantly higher proportion of respondents with 'high' education level, relative to the proportion of respondents from the Wave 1 entire sample. This change was significant for the smokers from the general population sample, and the smokers from the targeted sample ($p<0.05$). This means that in Wave 2, the smokers with higher levels of education were more likely to be retained.

Smokers from the targeted sample were the most likely to have children (under age 18 years) in the home, and non-smokers were the least likely to have children in the home. The overall proportions of respondents with children did not change significantly between the entire Wave 1 sample and the subset of Wave 1 that was retained.

Smokers interviewed in the targeted sample had a mean heaviness of smoking index (HSI) value of 3.20, higher than smokers who completed the survey as part of the general population sample, HSI 2.45. The subset of respondents that remained in the sample in Wave 2 had slightly lower HSI values compared to the mean values in Wave 1, HSI 3.0 for smokers in the targeted sample

and 2.37 for the general population sample, however these changes were not found to be statistically significant (t-test of means, $p>0.05$).

Overall it can be said that the subset of respondents that remained in the sample was slightly more educated than the overall sample but all other measures of sample characteristics were not significantly different.

Table 17 below includes the proportions of sample characteristics reported for each of the 3 respondent groups in Wave 1, and for the subset of respondents that remained in the sample in Wave 2. Note that in Wave 2 some respondents had become quitters and those respondents are not reported in this table. A description of the sample characteristics for the 5 respondent groups in Wave 2 are reported in Table 18.

Table 17. Wave 1 Demographic Characteristics by Mode – and Wave 1 Retained

	Wave 1				Wave 1 Retained in Wave 2			
	All	Non-Smoker (population survey)	Smoker (population survey)	Smoker (targeted survey)	All	Non-Smoker (population survey)	Smoker (population survey)	Smoker (targeted survey)
CHARACTERISTICS	n=783	47.6% n=373	29.9% n=234	22.5% n=176	n=542	55.2% n=299	29.1% n=158	8.9% n=48
GENDER	n=783							
Male	39.8% n=312	31.9% n=119	45.7% n=107	48.9% n=86	35.6% (n=193)	29.4% (n=88)	44.5% (n=81)	39.3% (n=24)
Female	60.2% n=471	68.1% n=254	54.3% n=127	51.1% n=90	64.4% n=349	70.6% n=211	60.7% (n=37)	60.7% (n=37)
AGE	0 missing				0 missing			
18-24	7.0% n=55	3.2% n=12	9.4% n=22	11.9% n=21	4.8% n=26	2.7% n=8	6.6% (n=12)	9.8% (n=6)
25-39	27.3% n=214	21.7% n=81	27.8% n=65	38.6% n=68	24.2% n=131	20.4% n=61	27.5% (n=50)	32.8% (n=20)
40-54	34.0% n=266	28.7% n=107	40.2% n=94	36.9% n=65	34.9% n=189	30.4% n=91	39.0% (n=71)	44.3% (n=27)
55+	31.7% n=248	46.4% n=173	22.6% n=53	12.5% n=22	36.2% n=196	46.5% n=139	26.9% (n=49)	13.1% (n=8)
PLACE OF RESIDENCE	n=710 (73 missing)	50.3% n=357	31.6% n=224	18.2% n=129	n=534 (8 missing)	55.6% n=297	29.0% n=155	8.6% n=46
Woodstock	73.9% n=525	72.5% n=259	75.4% n=169	75.2% n=97	71.7% n=383	71.4% n=212	74.7% (n=133)	64.4% (n=38)
Oxford County	20.8% n=148	24.9% n=89	23.2% n=52	5.4% n=7	23.4% n=125	26.3% n=78	23.0% (n=41)	10.2% (n=6)
Outside Oxford County	5.2% n=37	2.5% n=9	1.3% n=3	19.4% n=25	4.9% n=26	2.4% n=7	2.2% (n=4)	25.4% (n=15)
EDUCATION	n=762 (21 missing)	47.6% n=363	30.1% n=229	22.3% n=170	n=537 (5 missing)	55.5% (n=298)	33.1% (n=178)	11.4% (n=61)
Low and Medium	54.5% n=415	41.0% n=149	65.5% n=150	68.2% n=116	43.0%* (n=231)	36.2% (n=108)	53.9% (n=96)	44.3% (n=27)
High	45.5% n=347	59.0% n=214	34.5% n=79	31.8% n=54	57.0%* (n=306)	63.8% (n=190)	46.1% (n=81)	55.7% (n=34)
CHILDREN in the household	n=768 (15 missing)	47.8% n=367	29.9% n=230	22.3% n=171	n=541 (1 missing)	55.3% (n=299)	33.5% (n=181)	11.3% (n=61)
Yes	34.2% n=263	28.1% n=103	37.8% n=87	42.7% n=73	32.5% (n=176)	27.1% (n=81)	37.0% (n=67)	45.9% (n=28)
No	65.8% n=505	71.9% n=264	62.2% n=143	57.3% n=98	67.5% (n=365)	72.9% (n=218)	63.0% (n=114)	54.1% (n=33)
Mean Heaviness of Smoking Index (HSI)	2.77 n=405 (1.649 SD)	n/a	2.47, n=230 (1.551 SD)	3.20 n=174 (1.678 SD)	2.52 n=198 (1.445 SD)	n/a	2.37 n=150 (1.416 SD)	3.00 n=48 (1.444 SD)

*Proportions are significantly different between Wave 1 whole sample and Wave 1 that remained in Wave 2, z-score test, alpha 0.05

5.1.2 Sample Characteristics Wave 2

Wave 2 included 542 complete and partial surveys; 299 non-smokers completed the survey with no partials, and 243 respondents that were smokers in Wave 1 completed the survey, of which one was a partial complete. Of the 243 respondents that were smokers in Wave 1, 158 were from the general population sample and 48 from the targeted sample that were still smokers in Wave 2. There were an additional 37 respondents that reported they had quit smoking; 24 from the general population sample and 13 from the targeted sample. The sample characteristics of Wave 2 are described in detail in Table 18 below; proportions of sample characteristics are presented based on the 5 respondent groups.

There was a higher proportion of smokers that quit who had been surveyed in the targeted sample, compared to respondents who had been surveyed from the general population sample. It is possible that quitters were more interested or willing to participate in the second-wave of the survey than smokers who had continued to smoke. The retention rate for respondents from the targeted sample was relatively low, so the higher proportion of quitters from this group may be a function of the likelihood of a quitter to stay in the survey.

Women were about twice as likely to report quitting in Wave 2, compared to men. Age or education level did not seem to influence the likelihood of quitting, or the presence of children in the home (proportions of telephone quitters and face-to-face quitters did not differ from the proportions of non-quitters).

Table 18. Wave 2 Sample Characteristics

WAVE 2 Sample Characteristics						
	All	Non-Smoker (population survey)	Smoker (population survey)	Smoker (targeted sample survey)	Quitter (population survey)	Quitter (targeted survey)
CHARACTERISTICS	n=542	55.2% n=299	29.1% n=158	8.9% n=48	4.4% n=24	2.4% n=13
GENDER						
Male	35.6% n=193	29.4% n=88	45.6% n=72	39.6% n=19	37.5% n=9	38.5% n=5
Female	64.4% n=349	70.6% n=211	54.4% n=86	60.4% n=29	62.5% n=15	61.5% n=8
AGE	0 missing					
18-24	4.8% n=26	2.7% n=8	6.3% n=10	12.5% n=6	8.3% n=2	0% n=0
25-39	24.2% n=131	20.4% n=61	28.5% n=45	33.3% n=16	20.8% n=5	30.8% n=4
40-54	34.9% n=189	30.4% n=91	38.6% n=61	45.8% n=22	41.7% n=10	38.5% n=5
55+	36.2% n=196	46.5% n=139	26.6% n=42	8.3% n=4	29.2% n=7	30.8% n=4
PLACE OF RESIDENCE	n=534 (8 missing)	55.6% n=297	29.0% n=155	8.6% n=46	4.3% n=23	2.4% n=13
Woodstock	71.7% n=383	71.4% n=212	76.8% n=119	71.7% n=33	60.9% n=14	38.5% n=5
Oxford County	23.4% n=125	26.3% n=78	21.3% n=33	6.5% n=3	34.8% n=8	23.1% n=3
Outside Oxford County	4.9% n=26	2.4% n=7	1.9% n=3	21.7% n=10	4.3% n=1	38.5% n=5
EDUCATION	n=537 (5 missing)	55.5% n=298	28.7% n=154	8.9% n=48	4.5% n=24	2.4% n=13
Low and Medium	43.0% n=231	36.2% n=108	53.9% n=83	43.8% n=21	54.2% n=13	46.2% n=6
High	57.0% n=306	63.8% n=190	46.1% n=71	56.3% n=27	45.8% n=11	53.8% n=7
CHILDREN in the household	n=541 (1 missing)	55.3% n=299	29.0% n=157	8.9% n=48	4.4% n=24	2.4% n=13
Yes	32.5% n=176	27.1% n=81	36.3% n=57	45.8% n=22	41.7% n=10	46.2% n=6
No	67.5% n=365	72.9% n=218	63.7% n=100	54.2% n=26	58.3% n=14	53.8% n=7
Mean Heaviness of Smoking Index (HSI)	2.52 n=198 (1.445 SD)	n/a	2.37 n=150 (1.416 SD)	3.00 n=48 (1.444 SD)	n/a	n/a

5.2 Longitudinal Survey Measures

Below are the responses from the 24 longitudinal measures that were asked to address research objectives 1-6, identified in section 2.2 above. Each measure is described below in terms of response proportions for Wave 1 and Wave 2; proportions are reported for only respondents that were present in both waves. The response proportions are presented for each measure based on respondents' smoking status and sample they were recruited from in Wave 1 (general population or targeted sample).

Response proportions are generally presented with collapsed data – meaning some of the response options have been combined to address the research objectives. This is described for each measure.

Most longitudinal measures were modeled using GEE to determine if the change between waves was statistically significant and what, if any, sample characteristics, influenced responses. How response variables were coded for the GEE models is described below for each measure modeled. Some measures had very small samples and the GEE models could not be fit. For one measure, the GEE model could only be fit with Wave as a factor. For some measures there were no reported changes across waves and a GEE model was not fit.

5.2.1 Effectiveness of the Woodstock by-law to reduce involuntary exposure to outdoor second-hand smoke

There were 6 measures collected to help understand how the smokers' smoking behaviour in different outdoor spaces after the OSFO was in place. Each measure was asked to understand smoking behaviour in the different environments regulated by the Woodstock by-law, namely: in parks, in recreational fields, in or near public sector doorways, in or near non-municipal doorways, around or near city bus stops and shelters, while visiting outdoor events like Cow-a-palooza, and while visiting outdoor patio restaurants on the main street of Woodstock. Smokers were asked to describe their smoking behaviour in each of these environments, before the by-law in Wave 1, and after the by-law in Wave 2. If smokers report they smoke less often in these environments after the by-law, then there is a reduction in smoking in these environments, and therefore a reduction in tobacco smoke pollution in these environments. This is used as a proxy measure to estimate possible reductions in exposure to outdoor second-hand smoke. It is acknowledged that these measures do not directly measure exposure to SHS, however, they do evaluate how the by-law influences smoking behaviour in regulated environments.

Proportions from the 6 longitudinal measures reported in section 5.2.1 only report changes for smokers who remained a smoker across both waves, meaning that smokers who quit have been removed from the proportions reported, since it is known that they stopped smoking completely across waves and their change in behaviour is due to a change in smoking status rather than them complying with a city by-law.

5.2.1.1 City Parks

The question asked of smokers was “*How often do you smoke a cigarette or other lit tobacco when visiting a park?*” – and the response options were ‘never’, ‘sometimes’, ‘usually’, ‘always, every time I visit a park’. These response options were re-coded to ‘not-often’ for never or sometimes, and ‘often’ for usually or always. The proportion of responses for participants that were in both Wave 1 and Wave 2 are included in Table 19 below. There was no statistical difference between the sub-set of smokers in Wave 1 that remained in the sample in Wave 2 ($p>0.05$), compared to the entire sample from Wave 1 (proportions are almost exactly the same, see Appendix J).

In Table 19 below, smoking behaviour in parks is reported. Respondents from the targeted sample were more likely to say that they smoked often when visiting a park, compared to smokers surveyed on from the general population sample. More than half of the targeted sample smokers reported that they smoked ‘often’ at a park. In Wave 1, the proportion of smokers surveyed in the general population survey reporting they smoked ‘often’ (‘usually’ or ‘always’), was significantly less than those surveyed face-to-face ($p<0.05$). However, in Wave 2, the proportions of ‘often’ smokers did not differ between the groups of respondents based on survey mode in Wave 1.

In Wave 2 there was a reduction in the proportion of smokers reporting that they ‘often’ smoke when visiting parks. The new Woodstock by-law regulates smoking in city parks; smokers are permitted to smoke in parks with play structures provided they are sufficiently far away (30m set-back), and in parks with no play-equipment for children, there are no restrictions. Therefore a result showing that some smokers still smoke in parks does not mean that the by-law is not being followed.

Table 19. Smokers’ Reported Smoking When Visiting Parks, Wave 1 and 2

Smokers: How often do you smoke a cigarette when visiting parks							
		Wave 1			Wave 2		
		“Not often”	“Often”	Total	“Not often”	“Often”	Total
Smokers – General Population Survey (Telephone)	Count	70	44	114	94	20	114
	%	61.4%	38.6%	100.0%	82.5%	17.5%	100.0%
Smokers – Targeted Sample (Face-to- Face)	Count	17	24	41	35	10	45
	%	41.5%	58.5%	100.0%	77.8%	22.2%	100.0%
Total	Count	87	68	155	129	30	159
	%	56.1%	43.9%	100.0%	81.1%	18.9%	100.0%

The results presented in Table 19 indicate that smoking behaviour has been reduced in city parks. To understand these changes better GEE modeling was used to analyze the longitudinal response data and model outcomes. The results of the model are included in Table 20 below. This model was built only for smokers. The different samples of smokers were both included in the model with their sample group (general population or targeted sample) included as a factor in the model. The dependent variable was coded in the GEE the same as it was presented in Table 19 above; the model predicted the likelihood of respondents reporting that they ‘often’ (usually or always) smoke when visiting parks.

The results of the model show that respondents in Wave 2 were less likely (OR 0.285) to report that they often smoked in parks, relative to Wave 1; this was found to be highly statistically significant ($p < 0.001$). Males were more likely than females (OR 1.811), to report smoking ‘often’ however this was not found to be statistically significant ($p > 0.05$). There was a trend with place of residence; people from Oxford county, but not Woodstock, were more likely to report they smoke often in parks (OR 1.6848) however this was not statistically significant ($p > 0.05$). Respondents from outside Oxford County were more than three times likely (OR 3.042) to report they often smoke in parks, relative to residents of Woodstock; this was found to be highly statistically significant ($p < 0.05$). There was also a trend identified with age; older respondents (40-54, OR 0.244; 55+ OR

0.293) were less likely to report that they smoked ‘often’ in parks, relative to younger respondents (18-24). This was highly statistically significant ($p < 0.05$).

Table 20. GEE Model – Smokers’ Reported Smoking Behaviour in Parks

Summary of GEE model results for Smokers, Reported Smoking Behaviour in Parks					
<i>How often do you smoke a cigarette or other lit tobacco when visiting a park?</i>					
Likelihood of Saying “often”, or “very often”					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.053	1.811	.992	3.306
Female	.	.	1	.	.
Age 55+	1	.032*	.293	.096	.898
Age 40-54	1	.009*	.244	.084	.708
Age 25-39	1	.064	.351	.116	1.064
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.589	1.212	.603	2.433
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.684	1.133	.621	2.067
Education – Med & Low	.	.	1	.	.
Place of Residence outside Oxford	1	.022*	3.042	1.176	7.867
Place of Residence – Oxford	1	.189	1.648	.782	3.474
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.432	1.306	.671	2.544
General Population	.	.	1	.	.
Wave 2	1	<.001*	.285	.170	.478
Wave 1	.	.	1	.	.
H.S.I.	1	<.001*	1.510	1.214	1.878

* indicates a significant factor or covariate, $p < 0.05$

Heaviness of smoking was a significant covariant in the model; the higher the HSI the more likely the respondent was to report they smoked “often” in parks ($p < 0.01$).

These results suggest that smokers are smoking significantly less often in parks now, compared to prior to the by-law. This has been measured for both smokers surveyed in the general

population, as well as smokers from the targeted sample. The by-law appears to have effectively improved air quality in parks.

5.2.1.2 Recreational Fields

The questions asked of smokers was, “*When visiting a recreational field to play or watch a game – how often will you have a cigarette?*” – and the response options were ‘never’, ‘sometimes’, ‘usually’ or ‘always’ . These response options were re-coded to ‘not-often’ for never or sometimes, and ‘often’ for usually or always. The proportion of responses for respondents in both Wave 1 and Wave 2 are included in Table 21 below. Response proportions are reported for smokers who were surveyed from the general population sample, and from the targeted sample.

The response proportions from respondents in Wave 1 that remained in the sample in Wave 2, were not significantly different ($p>0.05$) from those for the entire Wave 1 sample (See Appendix J).

The sample in Wave 1 who were in the targeted sample, were more likely to say that they smoked “often” when visiting a recreational field, compared to the random sample of smokers surveyed in the general population sample, however the difference between proportions did not differ significantly ($p>0.05$).

In Wave 2 there was a reduction in reported smoking in recreational fields, relative to Wave 1. In Wave 1 approximately 37% of smokers reported that they smoke ‘often’ when visiting recreational fields (both the general population sample and the targeted sample). In Wave 2, 16% of the general population sample reported that they ‘often’ smoked when visiting recreational fields, and 11% of the targeted sample.

Table 21. Wave 1 and Wave 2 Smokers – Reported Smoking While at a Recreational Field

Smokers: When visiting a recreational field in Woodstock to play or watch a game - how often will you have a cigarette?							
		Wave 1			Wave 2		
		“Not often”	“Often”	Total	“Not often”	“Often”	Total
Smokers – General Population Survey (Telephone)	Count	52	30	82	53	10	63
	%	63.4%	36.6%	100.0%	84.1%	15.9%	100.0%
Smokers – Targeted Sample (Face to Face)	Count	20	12	32	16	2	18
	%	62.5%	37.5%	100.0%	88.9%	11.1%	100.0%

The results presented in Table 21 indicate that smoking behaviour has been reduced in city rec fields. To understand these changes better GEE modeling was used to analyze the longitudinal response data and model outcomes. The method of generalized estimating equations (GEE) was used to analyze the longitudinal response data and model outcomes. The results of the model are included in Table 22 below. This model only included respondents that were smokers, with the survey mode included as a factor. The dependent variable was coded in the same manner as in Table 20 above, ‘usually’ or ‘always re-coded into ‘often’, and ‘never’, or ‘sometimes’ into ‘not often’. The odds ratios present the likelihood that the respondents reported ‘often’.

Table 22. Summary of the GEE Model, Smokers’ Reported Smoking Behaviour in Recreational Fields

Summary of GEE model results for Smokers					
When visiting a recreational field in Woodstock to play or watch a game - how often will you have a cigarette? Modeled Likelihood of reporting Often (“Usually” or “Always”)					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.975	.986	.420	2.318
Female	.	.	1	.	.
Age 55+	1	.059	.221	.046	1.061
Age 40-54	1	.077	.273	.065	1.151
Age 25-39	1	.221	.406	.096	1.720
Age 18-24	.	.	1	.	.
No Children (under 18) in HH	1	.542	.754	.304	1.870
Children (under 18) in HH	.	.	1	.	.
Education – High	1	.977	.989	.455	2.149
Education – Medium and Low	.	.	1	.	.
Place of Residence outside Oxford County	1	.883	1.132	.215	5.952
Place of Residence – Oxford County, not Woodstock	1	.794	1.137	.434	2.975
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.637	.800	.315	2.027
General Population	.	.	1	.	.
Wave 2	1	.002*	.384	.210	.703
Wave 1	.	.	1	.	.
H.S.I	1	.003*	1.490	1.143	1.942

* indicates a significant factor or covariate, $p < 0.05$

The results of this model show that smokers were less likely in Wave 2 (OR 0.384) to report that they smoke a cigarette ‘often’ when visiting a recreational field, relative to Wave 1 (significant finding, $p=0.002$). Smokers more heavily addicted to cigarettes – those with a higher HSI – were more likely to report smoking in recreational fields. No other factor was found to be a significant predictor of smoking at recreation fields.

The new Woodstock by-law regulates smoking in recreation fields; smokers are permitted to smoke in fields provided they are sufficiently far away (15m set-back). Therefore, a result showing that some smokers still smoke in recreation fields does not mean that the by-law is not being followed.

These results of the GEE model suggest that after the by-law, smoking in recreational fields has decreased significantly. Smokers more heavily addicted to cigarettes are more likely to report that they smoke ‘often’ when visiting recreational fields in Woodstock.

5.2.1.3 Doorways

The question used to measure smoking behaviour in doorways did not differentiate between public or private sector doorways. The questions asked of smokers was, “*How often do you smoke near the doorway to a public or private building – not including your own home?*” and the response options were ‘never’, ‘sometimes’, ‘daily’ or ‘more than once a day’. The response options for ‘daily’ and ‘more than once a day’ have been collapsed to a response ‘daily’ in Table 23 below. Response proportions are reported for smokers who were part of the general population sample, and the targeted sample. The response proportions from respondents in Wave 1 that remained in the sample in Wave 2, were not significantly different ($p>0.05$) than those found the entire Wave 1 sample (See Appendix J).

In Wave 1, respondents surveyed in the targeted sample were more likely to say that they smoked daily in doorways of public or private buildings, compared to the random sample of smokers surveyed as part of the general population sample, however the difference between proportions did not differ significantly ($p>0.05$).

Table 23. Wave 1 and Wave 2 Smokers – Reported Smoking in Public and Private Doorways

Smokers: How often do you smoke near the doorway to a public or private building – not including your own home?									
		Wave 1				Wave 2			
		Never	Sometimes	Daily	Total	Never	Sometimes	Daily	Total
Smokers – General Population Survey (Telephone)	Count	71	62	25	158	82	66	10	158
	%	44.9%	39.2%	15.8%	100.0%	51.9%	41.8%	6.3%	100.0%
Smokers – Targeted Sample (Face to Face)	Count	19	12	17	48	27	11	10	48
	%	39.6%	25.0%	35.4%	100.0%	56.3%	22.9%	20.8%	100.0%

In Wave 2 there was a small reduction in reported smoking in doorways with most smokers from both samples reporting that they ‘never’ smoke in public or private doorways. The new Woodstock by-law regulates smoking only in public or city owned doorways, and those that are included in the Schedule – which at the time of sampling included all County owned doorways and approximately 30 other doorways. So the overall majority of doorways in the city of Woodstock would not have been regulated.

The results presented in Table 23 indicate that ‘never’ smoking behaviour has increased in doorways. To understand these changes better, GEE modeling was used to analyze the longitudinal response data and model outcomes.

For the GEE model the proportions were further collapsed, combining ‘never’ and ‘sometimes’ for a ‘not often’ category (and the daily or more than once a day being combined to an ‘often’ category). The model was constructed to predict the likelihood of a respondent reporting ‘often’. The results of the GEE model are included below in Table 24.

Wave was found to be a significant factor in the model, with respondents in Wave 2 being less likely to report ‘often’ smoking in doorways (OR 0.398, $p < 0.001$). The sample was also found to be a significant factor; smokers surveyed in the targeted sample (face-to-face) were more likely (OR 2.105) to report that they ‘often’ smoke in doorways ($p = 0.046$) compared to smokers from the general population sample. Respondents that were older were less likely to report smoking ‘often’ in doorways; this finding was significant ($p = 0.04$) for the oldest age group that included respondents age

55+ (OR 0.255 compared to the youngest age category, people 18-24). People more heavily addicted to cigarettes, those with higher measures on the HIS, were also more likely to report smoking ‘often’ in doorways (p<0.001).

Table 24. Summary of the GEE Model For Smokers – Doorway Environments

Summary of GEE model results for Smokers					
How often do you smoke near the doorway to a public or private building – not including your own home?					
Modeled Likelihood of reporting Often (“Daily” or “More than Once a Day”)					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.544	1.238	.622	2.464
Female	.	.	1	.	.
Age 55+	1	.040*	.255	.069	.941
Age 40-54	1	.202	.476	.152	1.489
Age 25-39	1	.270	.524	.166	1.654
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.985	1.007	.473	2.145
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.175	1.591	.814	3.110
Education – Medium and Low	.	.	1	.	.
Place of Residence outside Oxford County	1	.347	1.610	.596	4.350
Place of Residence – Oxford County, not Woodstock	1	.904	1.056	.439	2.536
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.046*	2.105	1.014	4.370
General Population	.	.	1	.	.
Wave 2	1	<.001*	.398	.246	.643
Wave 1	.	.	1	.	.
H.S.I	1	.009*	1.325	1.072	1.637

* signifies a statistically significant finding, p<0.05)

5.2.1.4 Transit Environments

The questions asked of smokers was, “*Will you smoke a cigarette when waiting for a bus – near the shelter or stop post?*” The response options were all read and included:

1. NO – I never smoke near the bus stop/shelter
2. YES – but I always step back from the stop/shelter to smoke
3. Sometimes
4. Usually
5. Always
- 7 - NA
- 8 - Refused
- 9 - Don't know

These response options are reported below in Table 25. The response options ‘Sometimes’, ‘Usually’ and ‘Always’ have been collapsed into a ‘Yes’ category; any ‘Yes’ response will not be in compliance with the OSFO that restricts smoking within 4m of any transit stop or shelter. Transit users that either never smoke when waiting for a bus, or always step away from the stop or shelter to smoke are already compliant with a by-law requiring a set-back. It is not certain from this measure if respondents step back 4m, however the intention of the behaviour is in alignment with the spirit of the policy.

The response proportions from respondents in Wave 1 that remained in the sample in Wave 2, were not significantly different ($p>0.05$) than those found in the entire Wave 1 sample (the proportions reported were almost identical between groups, see Appendix J).

The general population sample and the targeted sample, have fewer responses for this measure than other environments – presumably because transit use is not common in Woodstock. The number of respondents from the general population sample is slightly higher in Wave 2, presumably because more respondents used transit that year.

In Wave 1, as reported in Table 25 below, the general population sample of smokers reported that most about half (44%) do smoke when waiting for a bus, without stepping away from the shelter or stop. A smaller proportion of smokers interviewed in the targeted sample reported that they smoke while waiting for a bus without stepping back (33%).

In Wave 2 the proportion of smokers, from the general population sample, reporting that they still smoke close to the stop decreased to 19%, approximately half what it had been in Wave 1. Similarly, fewer smokers from the targeted sample, reported in Wave 2, that they smoke near a bus stop (without stepping back), 20%.

Table 25. Wave 1 and Wave 2 - Reported Smoking Behaviour in Transit Environments

Smokers: Will you smoke a cigarette when waiting for a bus - near the shelter or stop post?									
		WAVE 1				WAVE 2			
		NO	Yes, But Step Back	YES	Total	NO	Yes, But Step Back	YES	Total
Smokers – General Population Survey (Telephone)	Count	5	5	8	18	10	7	4	21
	%	27.8%	27.8%	44.4%	100.0%	47.6%	33.3%	19.0%	100.0%
Smokers – Targeted Sample (Face to Face)	Count	2	8	5	15	3	5	2	10
	%	13.3%	53.3%	33.3%	100.0%	30.0%	50.0%	20.0%	100.0%

The results presented in Table 25 indicate that smoking behaviour has been reduced in city transit environments. To understand these changes better GEE modeling was used to analyze the longitudinal response data and model outcomes. A GEE model was built to understand if the change across waves was statistically significant. The model was constructed to predict the likelihood of respondents reporting ‘yes’, a respondent does smoke when waiting for a bus. The small sample size made it difficult to fit a model when all other socio-demographic features were included, so the model only include wave. In Wave 2 smokers were less likely (OR 0.294) to report that they smoke in regulated transit environments, relative to Wave 1. This was found to be statistically significant ($p < 0.001$).

These findings suggest that smoking behaviour has changed in smoking environments, with a reduction in smoking in close proximity to transit stops or shelters.

5.2.1.5 Outdoor Events – Cow-a-palooza

When the survey was designed the research team believed that Cow-a-palooza was held in close proximity to the downtown of Woodstock. In reality the event takes place at a park – within a few hundred metres of the main street, but far enough away to not really be in the ‘downtown’, as would be classified by the people who live in Woodstock. The question in Wave 1 asked about events in the downtown ‘like Cow-a-palooza’ – so respondents could have interpreted that to mean other similar cultural gatherings like Cow-a-palooza, that may be held in the ‘downtown’, however no other examples were given. This is to say that there was some ambiguity for respondents when they interpreted the question because the wording did not perfectly reflect the location of Cow-a-palooza. There were some responses to this question that demonstrate the possible confusion, such as a respondent surveyed face-to-face at Cow-a-palooza said they ‘never’ smoke at events ‘like Cow-a-palooza’. This respondent would only have been approached if they were actively smoking at the event – however the respondent may have been confused by the wording of the question.

In Wave 1, the questions asked to measure smoking behaviour in outdoor special events was worded: “*When visiting an event in downtown Woodstock like Cow-a-palooza, how often will you smoke a cigarette or other lit tobacco?*”, and the response options were ‘never’, ‘sometimes’, ‘usually’ or ‘always’. These response options are reported below in Table 26 for the entire sample collected in Wave 1. The response proportions are reported for smokers who were surveyed in the general population sample and those from the targeted sample.

Response proportions from Wave 1 have been collapsed and reported in Table 27 below to report proportions of smokers who do not smoke at such events (coded as ‘no’ from the ‘never’ response option), or who do smoke at such events (coded as ‘yes’, from the response options ‘sometimes’, ‘usually’, or ‘always’).

In Wave 2 the research team learned that Cow-a-palooza had not been made smoke-free. It had been the hope of the Interagency Council that Cow-a-palooza event would be made smoke-free. The decision of whether or not to register Cow-a-palooza as a smoke-free event by adding it to the OSFO’s Schedule was up to the organizers of the event. Cow-a-palooza is organized by a committee in the community and not by the city. This committee chose not to have Cow-a-palooza added to the schedule for outdoor events that year. The event in 2009 did include more smoke-free areas however these were voluntary and not enforced by the city by-law officers.

In Wave 1, respondents surveyed in the targeted sample were significantly more likely to say that they ‘usually’ or ‘always’ smoked at events like Cow-a-palooza, compared to the random sample of smokers surveyed from the general population sample ($p < 0.05$).

Table 26. Wave 1 Entire Sample – Reported Smoking at Outdoor Events Like Cow-a-palooza

		WAVE 1				
		Never	Sometimes	Usually	Always	Total
Smokers: When visiting an event in downtown Woodstock like Cow-a-palooza, how often will you smoke a cigarette or other lit tobacco?"						
Smokers – General Population Survey (Telephone)	Count	19	33	10	13	75
	%	25.3%	44.0%	13.3%	17.3%	100.0%
Smokers – Targeted Sample (Face to Face)	Count	11	37	13	36	97
	%	11.3%	38.1%	13.4%	37.1%	100.0%

Responses of ‘sometimes’, ‘usually’ or ‘always’, have been re-coded to a ‘yes’ measure, and ‘no’ for response of ‘never’, and presented in Table 27 below. The majority of smokers from both population samples report smoking at outdoor events like Cow-a-palooza. The proportion of smokers from the targeted sample that said they smoke at outdoor events was significantly greater ($p < 0.05$) than the proportion of smokers from the general population that said they smoke at outdoor events.

Table 27. Wave 1 Whole Sample, Reported Smoking Behaviour at Outdoor Events Like Cow-a-palooza, Re-coded to ‘Yes’ or ‘No’

		No	Yes	Total
		Smokers: Responses re-coded – do you smoke when at an outdoor downtown event like Cow-a-palooza?		
Smokers – General Population Survey (Telephone)	Count	19	56	75
	%	25.3%	74.7%	100.0%
Smokers – Targeted Sample (Face to Face)	Count	11	86	97
	%	11.3%	88.7%	100.0%

In Wave 2, the research team changed the wording of the behavioural measure for smoking at outdoor events to explicitly measure smoking at Cow-a-palooza that year (2009). The survey was conducted just days after the event was held so it was hoped that re-call would be good. In Wave 2 the question was asked only to smokers who indicated they had attended Cow-a-palooza that year, “*Did you smoke a cigarette or other lit tobacco while at the event?*”. Proportions are reported in Table 28 below.

In Wave 2, fewer respondents answered this measure because the questions were only asked to respondents who attended Cow-a-palooza in 2009. The proportions of respondents who reported smoking at Cow-a-palooza in Wave 2 are reported in Table 28 below. About half of the respondents from the general population sample reported that they had a cigarette at Cow-a-palooza in 2009. A significantly higher proportion of smokers in the targeted sample reported that they had a cigarette that year at Cow-a-palooza ($p < 0.05$).

Table 28. Wave 2 Sample, Reported Smoking Behaviour at Cow-a-palooza in 2009

Smokers: Previously asked, Did you attend the City of Woodstock’s Cow-a-palooza this year, on August 14th and 15th? [if Yes – respondents then asked]				
Did you smoke a cigarette or other lit tobacco while at the event?				
		No	Yes	Total
Smokers – General Population Survey (Telephone)	Count	9	8	17
	%	52.9%	47.1%	100.0%
Smokers – Targeted Sample (Face to Face)	Count	6	10	16
	%	37.5%	62.5%	100.0%

Since measures are different wave to wave direct comparisons need to be cautious. Further, in Wave 2, only people who had attended Cow-a-palooza were asked about their smoking behaviour at that event. This, however, does not directly measure the impacts of the by-law since Cow-a-palooza was not a smoke-free event. It is, however, a crude measure of how the Cow-a-palooza, limited smoke-free policies may have limited smoking at the 2009 event.

Table 29. Cohort Sample – Proportions of Respondents who Report ‘Never’ Smoking at Events Like Cow-a-palooza (Wave 1) or That They Did NOT Smoke at Cow-a-palooza in 2009 (Wave 2)

Smokers: Did you smoke at the event in downtown Woodstock like Cowapalooza?		
	Wave 1	Wave 2
	No	No
Smokers – General Population Survey (Telephone)	26.5% (n=13)	52.9% (n=9)
Smokers – Targeted Sample (Face to Face)	14.8% (n=4)	37.5% (n=6)

In Table 29 above it is clear that smoking behaviour in Wave 2, or recalled smoking behaviour at Cow-a-palooza in 2009 was less (about half) what was reported in Wave 1 as normal or general smoking behaviour at events like Cow-a-palooza.

There was not a policy change between waves so there is little to conclude for this event or type of environment (outdoor cultural/music events), however the proportions reported in Wave 2 are promising, suggesting that of the general population sample of smokers (that attended Cow-a-palooza in 2009), most did not have a cigarette while at the event.

This is encouraging for organizers of these types of events that a future ‘smoke-free’ event might not be difficult for the majority of smokers.

5.2.1.6 Patio Environments

In Wave 1 and Wave 2, smokers in the general population sample, and targeted sample were asked, “*When visiting an outdoor patio of a restaurant, bar or sidewalk café in Woodstock how often will you have a cigarette?*” The response options were, ‘never’, ‘sometimes’, ‘usually’, and ‘always’. The response proportions for the smokers that remained in the sample in Wave 2 did not differ significantly from the response proportions of the entire sample from Wave 1 ($p < 0.05$, see Appendix J). Response options of ‘never’, and ‘sometimes’ were collapsed into ‘not often’, and response options of ‘usually’, and ‘always’ were collapsed into ‘often’ for reporting below.

In Wave 1, of the smokers surveyed in the general population sample, that remained in the survey in Wave 2, approximately half (44.9%) reported that they ‘usually’, or ‘always’ have a cigarette when visiting a patio (reported as ‘often’ in Table 30 below). Of the smokers surveyed in the targeted sample, who remained in the sample in Wave 2, just more than a third (38.5%) reported that they ‘often’ (usually or always) had a cigarette when visiting a patio.

Table 30. Wave 1 and Wave 2, Reported Smoking Behaviour at Woodstock Patios

Smokers: When visiting an outdoor patio of a restaurant, bar or sidewalk cafe in Woodstock, how often do you smoke?							
		Wave 1			Wave 2		
		Not often	Often	Total	Not often	Often	Total
Smokers – General Population Survey (Telephone)	Count	38	31	69	40	23	63
	%	55.1%	44.9%	100.0%	63.5%	36.5%	100.0%
Smokers – Targeted Sample (Face to Face)	Count	16	10	26	14	10	24
	%	61.5%	38.5%	100.0%	58.3%	41.7%	100.0%

In Wave 2 the proportion from the general population sample, reporting they ‘often’ have a cigarette on a patio was less than in Wave 1. The proportion of smokers reporting they ‘often’ smoked on a patio, from the sample who had been surveyed face-to-face in Wave 1, increased in Wave 2.

The results presented in Table 30 indicate that smoking behaviour has been reduced on patios in Woodstock for smokers from the general population sample, but increased slightly for

smokers from the targeted sample. To understand these changes better GEE modeling was used to analyze the longitudinal response data and model outcomes.

A GEE model was built to understand the change across waves. The results of this model are reported in Table 31 below. The dependent variable for the GEE model was coded as it was in Table 30 above, 'not often' and 'often', and the model was structured to report the likelihood of respondents reporting that they 'often' have a cigarette when visiting a patio in Woodstock.

The results of the GEE model show that wave was not a significant factor, meaning that there was not a significant change in reported smoking on patios across waves. The model showed a trend with age; respondents from the age groups 25-39, 40-54 and 55+ were less likely to report that they had a cigarette 'often', relative to respondents aged 18-24 (this was statistically significant for each age group). Smokers more heavily addicted to cigarettes (with higher HSI scores) were more likely to report that they 'often' had a cigarette when visiting a patio. There were no other statistically significant factors from the model.

Table 31. Summary of the GEE model for Smokers Reported Smoking Behaviour on Patios in Woodstock

When visiting an outdoor patio of a restaurant, bar or sidewalk café in Woodstock, how often do you have a cigarette?					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.665	1.185	.550	2.556
Female	.	.	1	.	.
Age 55+	1	.043*	.213	.048	.951
Age 40-54	1	.022*	.217	.059	.803
Age 25-39	1	.035*	.229	.058	.904
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.200	.562	.232	1.357
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.997	1.001	.491	2.044
Education – Medium and Low	.	.	1	.	.
Place of Residence outside Oxford County	1	.398	1.857	.442	7.792
Place of Residence – Oxford County, not Woodstock	1	.517	.721	.268	1.939
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.280	.653	.301	1.415
General Population	.	.	1	.	.
Wave 2	1	.136	.641	.357	1.150
Wave 1	.	.	1	.	.
H.S.I	1	.006*	1.432	1.111	1.846

* signifies a statistically significant finding, $p < 0.05$)

The results from the GEE model suggest that there was not any significant change in smoking behaviour on patios in Woodstock. This is not surprising given that only a handful of patios (less than 10) in Woodstock were regulated by the by-law. The proportions reported across waves are consistent with this finding – smokers from the targeted sample survey reported having a cigarette ‘often’ more in Wave 2 than in Wave 1. Perhaps some smokers, particularly those known to smoke

in different outdoor environments that were regulated in Wave 2, now have fewer places where they can have a cigarette and therefore environments that permit smoking, such as the patios of restaurants and bars with no roof.

5.2.1.7 Summary of Changes in Air Quality Measures and Evaluation of the By-law to Reduce Involuntary Exposure to Second-hand Smoke

This section reviewed the 6 longitudinal-questions in the survey that measured smoking behaviour in the environments that were, or could have been, regulated by the OSFO. The nature of the by-law, being that many environments have smoking restrictions vs. absolute bans, make it difficult to measure absolute reductions in SHS exposure, however using reported smoking behaviour of smokers was considered a reasonable proxy measure.

Reported ‘never’ smoking in Wave 1 and Wave 2 are summarized in Figure 9 and 10 below for the 5 different environments that were regulated by the OSFO. Figure 9 reports behaviour for the sample of smokers that were surveyed in the general population survey, and Figure 10 reports ‘never’ smoking behaviour for the sample of smokers that were in the targeted sample.

Note, that not reporting ‘never’ in Wave 2 does not necessarily mean that the respondents were not in compliance with the by-law since the questions were worded about frequency of smoking vs. compliance with the specific regulations associated with each environment.

Smokers from the general population sample showed increases in ‘never’ smoking behaviour in each of the 5 environments reported, and these increases in proportions were statistically significant for parks, and recreational fields ($p < 0.05$).

Smokers from the targeted sample reported increases in ‘Never smoking’ behaviour in all outdoor environments except for patios, where reported ‘never’ smoking behaviour actually decreased. Changes in proportions of ‘never’ smoking was also statistically significant for parks, and recreational fields ($p < 0.05$).

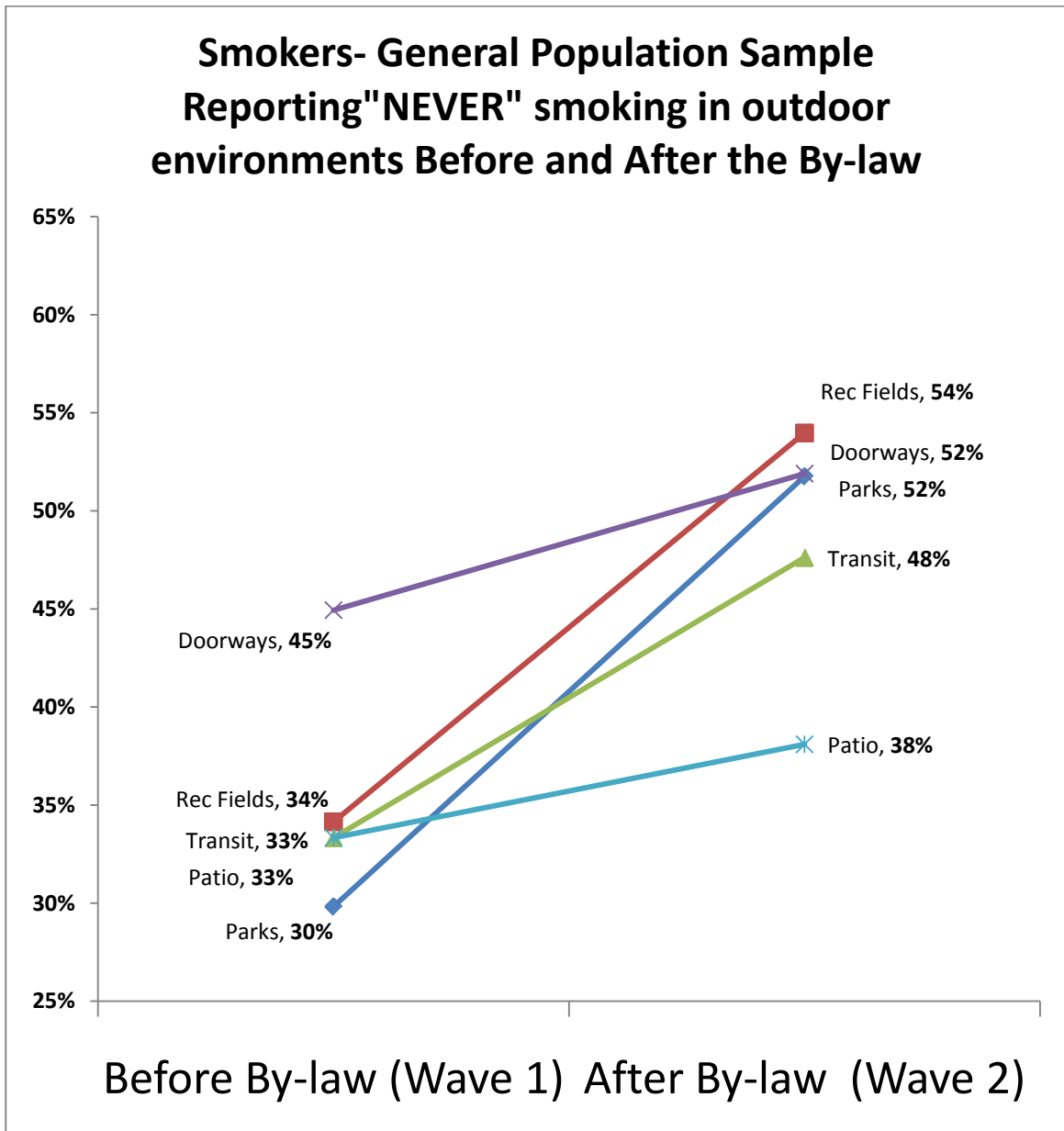


Figure 9. Smokers- General Population Sample Reporting "NEVER" smoking in outdoor environments Before and After the By-law

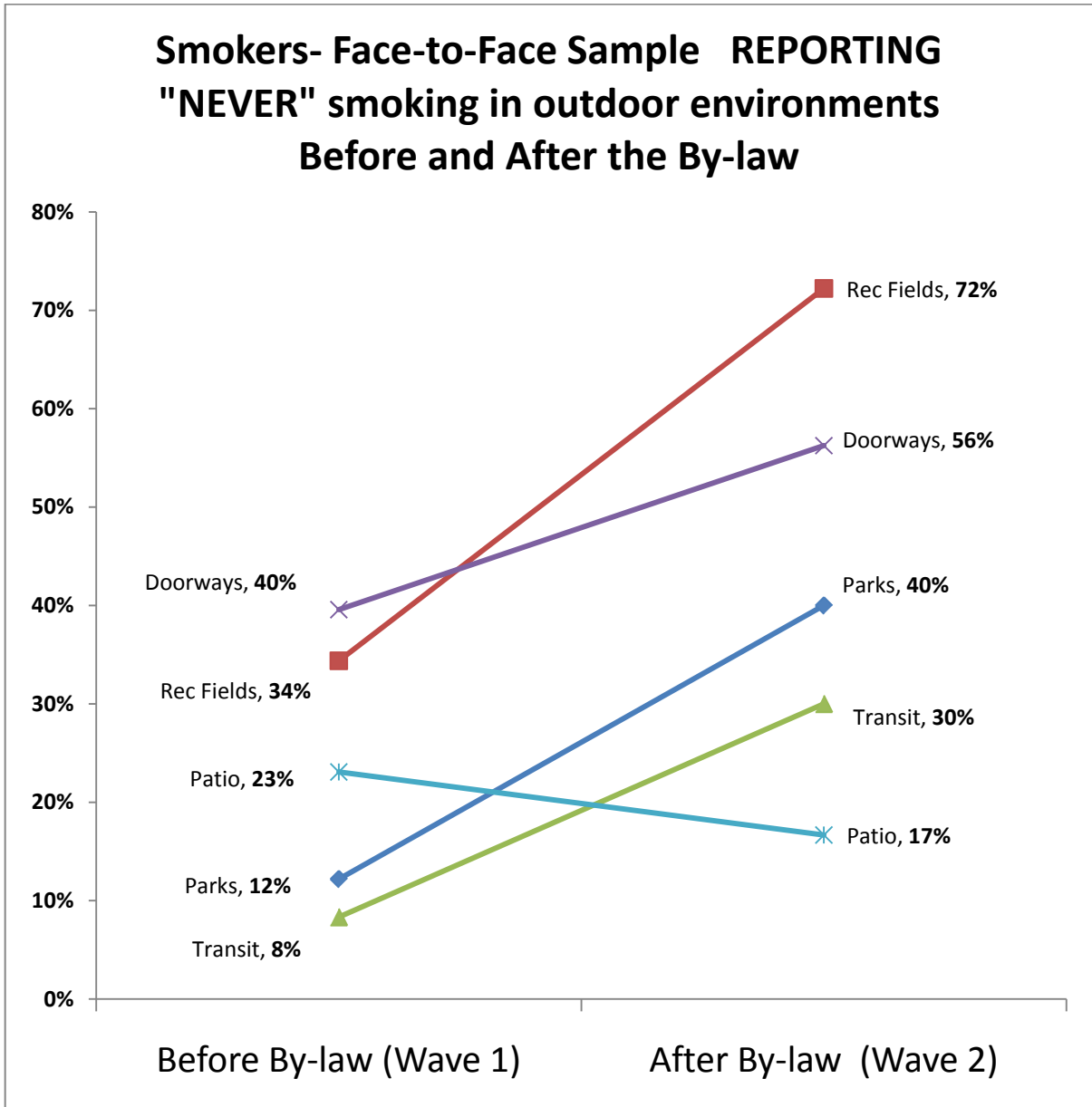


Figure 10. Smokers- Targeted sample Reporting "NEVER" smoking in outdoor environments Before and After the By-law

The above discussed measures were collected to address research objective 1, which asked, “Was the City of Woodstock Outdoor Smoking By-law effective at reducing the involuntary exposure to second hand smoke in the regulated outdoor environments?”

After the Woodstock OSFO was enacted, there was a significant reduction in reported smoking in parks, recreational fields, in doorways, and around transit environments. There was not a significant reduction in smoking on patios for all restaurants, bars and cafés in Woodstock, however, as noted, the OSFO only banned smoking on the patios of the main street. The measures collected to understand smoking behaviour at outdoor events were not truly longitudinal measures, but do suggest that more smokers reported not smoking at Cow-a-palooza in 2009, compared to 2008. This is an encouraging trend for event organizers wishing to regulate smoking at future outdoor events like Cow-a-palooza.

Therefore the OSFO is associated with reductions in smoking behaviour in the environments that were comprehensively regulated. Reduced smoking behaviour suggests there may have been a reduction in involuntary exposure to SHS in these environments; however the measures used are limited.

5.2.2 Effectiveness of the Woodstock by-law to socially denormalize tobacco use

These measures were collected to address Research Objective # 2, which sought to understand if the Woodstock OSFO was effective at socially de-normalizing smoking behaviour. The effect that the OSFO had on the social denormalization of smoking was measured using two different questions, detailed below.

5.2.2.1 Fewer Places Smokers Feel Comfortable Smoking

The first question to measure social-denormalization of smoking asked if smokers agreed or disagreed that “*There are fewer and fewer places where you feel comfortable smoking,*” with the response options ‘strongly disagree’, ‘disagree’, ‘agree’, and ‘strongly agree’. The same question was asked in Wave 1 and Wave 2.

The response proportions from the entire sample from Wave 1 did not differ significantly from the response proportions from the sub-sample that remained in Wave 2 ($p>0.05$, proportions are almost exactly the same, see Appendix J).

The results from the longitudinal measure, responses from Wave 1 and Wave 2, are presented below in Table 32. These responses have been dichotomized, grouping “agree” and “strongly agree” together, and “disagree”, and “strongly disagree” together. The results are presented for smokers from the general population sample and the targeted sample. Only respondents that were smokers in both Wave 1 and Wave 2 were included since people who quit in Wave 2 are no longer smoking. The proportion of smokers reporting that they ‘agree’ or ‘strongly agree’ that there are fewer and fewer places where they feel comfortable smoking, who were from the general population sample, did not differ significantly from the proportion of smokers who reported that they ‘agree’ or ‘strongly agree’, that were part of the targeted sample ($p>0.05$).

Table 32. Wave 1 and Wave 2 – Smokers’ Agreement That There are Fewer Places Where They Feel Comfortable Smoking

Smokers: There are fewer and fewer places where you feel comfortable smoking		
	‘Agree’ or ‘Strongly Agree’	
	Wave 1	Wave 2
Smokers – General Population Sample	89.2% (n=140)	90.9% (n=140)
Smokers – Targeted Sample	93.6% (n=44)	95.8% (n=46)

The measure, “there are fewer and fewer places where you feel comfortable smoking” had approximately 90% agreement for both smokers in the telephone survey and smokers in the face-to-face survey. Proportions agreeing did go up in Wave 2 however the levels of agreement were high and the change was not significant. Given that proportions and actual samples are almost identical, a GEE model was not built for this measure since there was no change across waves and levels are greater than 90% for agreement.

5.2.2.2 Societal Disapproval of Smoking Behaviour

The second question asked all respondents if they agreed or disagreed that “*Society disapproves of smoking*”, with the response options ‘strongly disagree’, ‘disagree’, ‘agree’, and ‘strongly agree’. The same question was asked in Wave 1 and in Wave 2.

The entire sample from Wave 1 did not differ significantly from the sub-sample that remained in Wave 2 ($p>0.05$, proportions are almost exactly the same, see Appendix J).

The results from the longitudinal measure, responses from Wave 1 and Wave 2, are presented below in Table 33. These responses have been dichotomized in the tables below, grouping “agree” and “strongly agree” together, and “disagree”, and “strongly disagree” together. The results are presented for smokers recruited through the random telephone survey and smokers recruited through the face-to-face survey. The proportion of smokers from the general population sample, agreeing or strongly agreeing that society disapproves of smoking, did not differ significantly from the proportion of smokers from the targeted sample, who agreed or strongly agreed ($p>0.05$).

The measure, “Society disapproves of smoking” had approximately 90% agreement for both smokers in the telephone survey sample and smokers in the face-to-face survey sample, in both Wave

1 and Wave 2. Proportions agreeing with this statement stayed the same for the group of telephone survey respondents and went slightly down for the respondents in the face-to-face sample (however the proportional change was not statistically significant, $p>0.05$). See Table 33 for the response proportions.

Table 33. Wave 1 and Wave 2, Agreement – Society Disapproves of Smoking

	Society Disapproves of Smoking	
	Agree or Strongly Agree	
	Wave 1	Wave 2
Non-Smokers		
General Population	87.0%	89.2%
Sample	(n=254)	(n=263)
Smokers		
General Population	86.5%	86.5%
Sample	(n=134)	(n=134)
Smokers	95.7%	87.5%
Targeted Sample	(n=45)	(n=42)
Quitters		
General Population	91.3%	91.7%
Sample	(n=21)	(n=22)
Quitters	92.3%	84.6%
Targeted sample	(n=12)	(n=11)

Given that proportions and actual samples are almost identical, a GEE model was not built for this measure since there was no apparent change.

5.2.2.3 Summary of Social Denormalization measures

From these measures it is apparent that smokers in the surveys have experienced social denormalization of smoking behaviour, given that the overwhelming majority of them feel there are fewer and fewer places where they feel comfortable smoking and agree or strongly agree that society disapproves of smoking. There was not a change in proportions across waves suggesting that the OSFO did not influence how smokers perceive smoking in the context of social norms, however, the measures suggest that smoking behaviour was highly denormalized prior to the by-law.

The respondents from the targeted sample, both the smokers and those that quit between waves, had a small reduction in the proportion who reported that society disapproves of smoking.

This change was not statistically significant ($p>0.05$) however it is interesting that this was the only group to report a change in that direction.

Considering the above results, the Woodstock OSFO was not effective at further socially denormalizing smoking behaviour. However, smoking was already highly denormalized.

5.2.3 Litter and Fire Safety as an argument for Outdoor Smoke-free Ordinances

Fire and litter are often arguments put forward by advocates interested in regulating outdoor smoking in public spaces. Both non-smokers and smokers were asked about litter and fire in terms of how often they notice it (litter) or how often they worry about fires that could be started by discarded cigarette butts (fire).

5.2.3.1 Litter Concerns

The following question was asked of both non-smokers and smokers in both the telephone survey and the survey conducted face-to-face, “*How often do you notice the litter caused by cigarette butts*”, and the response options were, ‘never’, ‘sometimes’, ‘often’, and ‘always’.

The response proportions from the entire sample from Wave 1 did not differ significantly from the response proportions reported by the sub-sample that remained in Wave 2 ($p>0.05$, proportions are almost exactly the same, see Appendix J).

The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 34. These responses have been dichotomized in the tables below, grouping “never” and “sometimes” to a response option of ‘not often’, and the response options “often”, and “always” have been grouped together as ‘often’. The results are presented for non-smokers and smokers from the general population sample, and for smokers from the targeted sample. Smokers that had quit between waves are reported in Wave 2 based on their smoking status and survey mode in Wave 1. The proportion of smokers from the general population survey, saying they ‘often’ see litter, differed significantly from the proportion of smokers from the targeted sample ($p>0.05$) in Wave 1, however the difference in proportions did not differ significantly in Wave 2 ($p<0.05$).

Table 34. Wave 1 and Wave 2, Smokers and Non-Smokers Reported Seeing Litter Often

	Report Seeing Litter Caused by Cigarette Butts 'Often' or 'Always'	
	Wave 1	Wave 2
Non-Smoker General Population Sample (Telephone)	67.90%	59.40%
	(n=203)	(n=177)
Smoker General Population Sample (Telephone)	56.6%	50.50%
	(n=103)	(n=92)
Smoker Targeted Sample (Face-to-face)	70.50%	55.70%
	(n=43)	(n=34)

In Wave 2 the proportion of respondents reporting they saw litter 'often', or 'always' was less for both non-smokers and smokers, compared to Wave 1. This is an interesting trend since reductions were fairly uniform across population/samples.

A GEE model was constructed to understand the change in proportions across waves. The results of the model are presented below in Table 35. The model included smokers and non-smokers (smoking status was included as a factor) given that either smokers or non-smokers are likely to see litter caused by cigarette butts. The dependent variable was dichotomized in the same way it was reported above, 'often' and 'not often'. The model was structured to report the likelihood that respondents would report the re-coded response, 'often' (made for the original response options of 'often' or 'very often').

The results of the model show that respondents were significantly less likely (OR 0.658) to report that they 'often' or 'very often' see litter caused by cigarette butts in Wave 2, relative to Wave 1 ($p < 0.05$). The model shows that smokers, relative to non-smokers, are less likely (OR 0.734) to report they 'often' or 'always' notice cigarette butts however this finding was not statistically significant ($p > 0.05$). Age was the only socio-demographic factor that was significant; older people (aged 55+) were significantly less likely to report they 'often' or 'always' notice litter relative to the youngest age group (ages 18-24), OR 0.263 ($p < 0.05$).

Table 35. Summary of GEE Model – Results for Smokers and Non-Smokers – How Often Do You Notice Litter Caused By Cigarette Butts?

Summary of GEE model results for Smokers and Non-Smokers					
How often do you notice the litter caused by cigarette butts?					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.260	.749	.453	1.238
Female	.	.	1	.	.
Age 55+	1	.021*	.263	.084	.820
Age 40-54	1	.054	.356	.125	1.019
Age 25-39	1	.116	.430	.150	1.230
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.669	1.127	.652	1.948
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.383	.807	.499	1.306
Education – Medium and Low	.	.	1	.	.
Place of Residence outside Oxford County	1	.618	.782	.297	2.060
Place of Residence – Oxford County (not Woodstock)	1	.788	1.084	.602	1.952
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample (Face to Face in Wave 1)	1	.386	1.315	.708	2.443
General Population Sample (Telephone in Wave 1)	.	.	1	.	.
Smokers	1	.342	.734	.388	1.389
Non-Smokers	.	.	1	.	.
Wave 2	1	.004*	.658	.492	.878
Wave 1	.	.	1	.	.
H.S.I	1	.340	1.086	.916	1.287

*signifies a statistically significant factor, alpha 0.05

It is not known why there was a reported reduction in litter as the OSFO was not associated with an increase in ashtrays or increased efforts to clean up waste. The purpose of collecting this measure is to understand how or if to include concerns about litter when advocating for or developing an outdoor smoke-free policy. In Wave 2 the reported observances of litter was still very high for both smokers and non-smokers suggesting it is an issue that will not be contentious given that still more than half of respondents report often seeing cigarette litter.

5.2.3.2 Worry about Fire from Cigarette Butts

The following question was asked of both non-smokers and smokers in the general population sample, and the targeted sample, “*How often do you worry that a cigarette butt could cause a fire?*”, and the response options were, ‘never’, ‘sometimes’, ‘often’, and ‘always’. The exact same questions were asked in Wave 1 and Wave 2 to all respondents.

The response proportions from the entire sample from Wave 1 did not differ significantly from the response proportions from the sub-sample that remained in Wave 2 ($p>0.05$, see Appendix J).

The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 36. These responses have been dichotomized in the tables below, grouping “never” and “sometimes” to a response option of ‘not often’, and the response options “often”, and “always” have been grouped together as ‘often’. The results are presented for non-smokers from the general population sample, and smokers from both the general population sample and the targeted sample. Smokers that had quit between waves are reported in Wave 2 based on their smoking status and sample in Wave 1.

The proportion of smokers saying they ‘often’ worry about fire, from the general population sample, did not differ significantly from the proportion of smokers who reported ‘often’, from the targeted sample ($p>0.05$) in Wave 1 or Wave 2.

In Wave 1, a greater proportion of smokers reported that they worried often or always about the fire a cigarette butt could cause, relative to non-smokers.

Table 36. Smokers and Non-Smokers Reported Worrying ‘Often’, About Fires That Could Be Caused By A Cigarette Butt - Wave 1 and Wave 2

	Report Worrying Cigarette Butts Could Cause a Fire 'Often' or 'Always'	
	Wave 1	Wave 2
Non-Smoker General Population Sample (Telephone)	19.1% (n=57)	21.4% (n=64)
Smoker General Population Sample (Telephone)	28.0% (n=51)	20.9% (n=38)
Smoker Targeted sample (Face-to-face)	23.0% (n=14)	24.6% (n=15)

There was an interesting change in reported ‘worrying’ – in Wave 2, a slightly greater proportion of non-smokers reported that they ‘often’ or ‘very often’ worry about the fire that could be caused by a cigarette butt, relative to Wave 1 (19.1% to 21.4%). However, fewer smokers from the telephone survey reported that they worry about the fire a cigarette could cause (28% to 20.9%).

A GEE model was constructed for this measure to understand the change in proportions across waves of the survey. The results of the model are presented below in Table 37. The model included smokers and non-smokers (smoking status was included as a factor) given that either smokers or non-smokers are likely to worry about fires that could be caused by cigarette butts. The dependent variable, was dichotomized in the same way it was reported above, being ‘not often’ and ‘often’. The model was constructed to report the likelihood of a respondent reporting ‘often’.

The results of the model show that respondents were less likely (OR 0.735) to report that they ‘often’ worry about a fire from a cigarette butt, however this was not statistically significant ($p>0.05$). There were no significant factors related to the dependent variable, reported worrying about fires that could be caused by a cigarette butt.

About a fifth of smokers and non-smokers report worrying often or always about a fire that could be caused by a cigarette butt. This suggests that fire is a concern and could be part of a communication campaign or included as a rationale for OSFO however is unlikely to be the primary rationale for most communities.

Table 37. GEE Model Results for Smokers and Non-Smokers - Reported Worry That A Cigarette Could Cause a Fire

Summary of GEE model results for Smokers and Non-Smokers					
How often do you worry that a cigarette butt could cause a fire? Likelihood of Reporting "Often" or "Very Often"					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	Df	Sig.		Lower	Upper
Male	1	.550	.841	.476	1.484
Female	.	.	1	.	.
Age 55+	1	.473	1.458	.520	4.086
Age 40-54	1	.254	1.762	.666	4.663
Age 25-39	1	.744	.835	.283	2.464
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.229	1.439	.795	2.605
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.311	.737	.409	1.330
Education – Medium and Low	.	.	1	.	.
Place of Residence outside Oxford County	1	.549	.685	.199	2.356
Place of Residence – Oxford County (not Woodstock)	1	.350	1.366	.709	2.632
Place of Residence – Woodstock	.	.	1	.	.
Targeted Population Sample	1	.787	1.096	.562	2.139
General Population Sample	.	.	1	.	.
Smokers	1	.227	.603	.265	1.370
Non-Smokers	.	.	1	.	.
Wave 2	1	.089	.735	.516	1.048
Wave 1	.	.	1	.	.
H.S.I	1	.525	1.060	.886	1.267

* signifies a statistically significant finding, $p < 0.05$)

5.2.3.3 Fire and Litter Summary

Research objective 3 sought to understand if the Woodstock OSFO influenced concerns the public had about litter caused by smoking or fires started as a result of smoking behaviour.

The results of the longitudinal measures suggest that concerns did not change significantly after the OSFO was enacted. However concerns about litter and fire are present for both smokers and non-smokers. Approximately 20% of smokers and non-smokers report 'often' worrying about fire that could be caused by cigarette butts. Fire safety is a deeply held and well understood priority in society so although fire safety may not be the primary rationale for any smoking ban it is an issue that will resonate with a large proportion of people. Litter from cigarette butts is noticed 'often' by most respondents. Approximately 60% of non-smokers and 50% of smokers report 'often' seeing litter from cigarette butts. Therefore an OSFO that aims to address litter will potentially resonate as valid rationale to a large proportion of people.

Therefore these concerns could play an important part in other municipal by-law development rationales. More likely litter concerns are going to be more prominently included in policy arguments in environments like beaches where cleaning up cigarette butts is very challenging and the public will easily associate and understand the need to prevent environmental pollution from entering sensitive marine environments or places where people play (swim) or fish. Fire concerns historically have been included in OSFO in locations where risk of fire presents an immediate and clear threat, such as in communities dependent on forestry resources which could be horribly compromised through accidental fire.

5.2.4 Support for Outdoor Smoke-free Regulations in Different Outdoor Environments

There were 6 measures collected to address research objective 4 – which sought to understand the public’s support for outdoor smoking restrictions in Woodstock, and how the OSFO may have influenced levels of support.

Measures were used to understand support for restrictions in 6 different environments that were regulated by the Woodstock OSFO. These questions were asked of both people who smoke and non-smokers. The same question was asked in each wave. Before this set of questions was asked, the following pre-amble was read to each respondent, “*For each of the following places, please tell me if you think smoking should be allowed in outdoor environments:*

- A. Patios at pubs or bars
- B. Patios at Restaurants
- C. Patios at family restaurants
- D. City Parks
- E. Doorways of Public Buildings
- F. Doorways of Private Buildings

The response options were:

- 1 - All outdoor areas
- 2 - Some outdoor areas
- 3 - No outdoor areas
- 7. Not applicable
- 8. Refused
- 9. Don't know

So a response of ‘all outdoor areas’ means a respondent thinks that smoking should be permitted everywhere outdoors in that environment. A response of ‘some outdoor areas’ aligns with support for restrictions that could be designated smoking areas or no-smoking spaces or buffer zones, and a response of ‘no outdoor areas’ indicates that the respondent supports a 100% smoke-free environment. The responses were dichotomized for presenting the findings and for the GEE models – grouping ‘some outdoor areas’ and ‘no outdoor areas’ together – since these responses are in line with parts of the Woodstock by-law which regulated smoking by making certain areas (buffer zones) smoke-free around park equipment, recreational fields and transit stops.

5.2.4.1 Support for Restrictions on Patios

Support for restrictions on patios was measured for different patio venues, including the patios of restaurants and bars, restaurants, and family restaurants. Support for restrictions in these different types of hospitality environments were measured separately since children are often present at family restaurants but not at bars or pubs. Support was measured across both waves of the survey and asked to each participant. Response options ‘some outdoor areas’ and ‘no outdoor areas’ were grouped and reported as ‘Restrict Smoking’ because ‘some’ or ‘no’ response options indicate support for a tobacco control policy that ‘regulates’ or ‘restricts’ smoking in that environment. Support for 100% smoke-free environments and how that support changed across waves is reported in section 5.2.4.

Support is reported for respondents in the general population sample and the targeted sample. Respondents that quit between waves are reported separately for both the general population survey and the targeted sample survey. The findings from the measures collected about support for smoking restrictions in each type of hospitality venue are reported below.

5.2.4.1.1 Support for Smoking Restrictions on the Patios of Bars and Pubs

The response proportions for the entire sample from Wave 1 did not differ significantly from the sub-sample that remained in Wave 2 ($p > 0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 38.

Table 38. Wave 1 and Wave 2, Support for Smoking Restrictions on Patios of Pubs and Bars

Support for Restrictions - Patio at Pubs or Bars –							
		Wave 1			Wave 2		
		Permit Smoking in All outdoor areas	Restrict Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers – General Population Sample	Count	19	279	298	13	281	294
	%	6.4%	93.6%	100.0%	4.4%	95.6%	100.0%
Smokers – General Population Sample	Count	69	88	157	44	111	155
	%	43.9%	56.1%	100.0%	28.4%	71.6%	100.0%
Smokers – Targeted sample	Count	28	20	48	10	38	48
	%	58.3%	41.7%	100.0%	20.8%	79.2%	100.0%
Quitters – General Population Sample	Count	6	18	24	1	23	24
	%	25.0%	75.0%	100.0%	4.2%	95.8%	100.0%
Quitters – Targeted sample	Count	8	5	13	3	10	13
	%	61.5%	38.5%	100.0%	23.1%	76.9%	100.0%

Non-smokers were almost entirely in favour of restricting smoking on the patios of pubs and bars. The majority of the smokers from the telephone survey were also in favour of smoking restrictions on patios of pubs and bars. Each group experienced an increase in the proportion that supported restrictions in Wave 2, relative to Wave 1.

A GEE model was constructed for this measure to understand the change in proportions across Waves. The results of the model are presented below in Table 39. The model included smokers and non-smokers (smoking status was included as a factor). The dependent variable, support for restrictions, was dichotomized in the same way it was reported above, being ‘anywhere’ (no smoking restrictions), and ‘restrict smoking’ (restricted or no smoking). The model was constructed to report the likelihood of respondents reporting that they support

The model shows that there was a significant change across Waves. Respondents in Wave 2 were significantly more likely (OR 2.521, $p < 0.001$) to report that they support smoking restrictions on the patios of bars and pubs, relative to Wave 1. Heaviness of Smoking Index was a significant covariant ($p < 0.05$); people who were more addicted to smoking were less likely to report that they

support restricting smoking on patios of bars and restaurants. Smokers were less likely to report that they support restrictions (OR 0.503) relative to non-smokers, however this was not statistically significant ($p>0.05$).

Table 39. Summary of GEE Model - Should Smoking Be Allowed in Outdoor Patios of Pubs and Bars? Likelihood of Respondents Supporting Smoking Restrictions.

Support for Smoke-free Patios at Bars and Pubs Reported Likelihood of Respondents Supporting Smoking Restrictions					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.737	.916	.547	1.532
Female	.	.	1	.	.
Age 55+	1	.179	2.132	.707	6.430
Age 40-54	1	.517	1.420	.492	4.094
Age 25-39	1	.614	1.324	.445	3.938
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.388	.779	.442	1.374
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.871	.961	.593	1.557
Education – Medium and Low	.	.	1	.	.
Place of Residence - Outside Oxford County	1	.409	.691	.287	1.662
Place of Residence – Oxford County (not Woodstock)	1	.891	1.042	.576	1.887
Place of Residence - Woodstock	.	.	1	.	.
Targeted sample	1	.656	.877	.490	1.566
General Population Sample	.	.	1	.	.
Smokers	1	.192	.503	.179	1.412
Non-Smokers	.	.	1	.	.
Wave 2	1	<.001*	2.521	1.776	3.579
Wave 1	.	.	1	.	.
H.S.I	1	.025	.832	.708	.977

*signifies a statistically significant finding, alpha 0.05

5.2.4.1.2 Support for Smoking Restrictions on the Patios of Restaurants

The response proportions from the entire sample from Wave 1 did not differ significantly from the response proportions from the sub-sample that remained in Wave 2 ($p>0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2, are presented below in Table 40.

In Wave 1, almost all non-smokers support smoking restrictions on restaurant patios; this proportion did not change significantly in Wave 2 ($p>0.05$). The majority of smokers from the general population sample also support restrictions in Wave 1 (73%, $n=116$), and this proportion increased in Wave 2 (78.5%, $n=124$). In Wave 1, less than half of the smokers in the targeted sample, (48.9%, $n=23$) supported restrictions on outdoor patios, but support for smoking restrictions almost doubled in Wave 2 (87.5%, $n=42$).

Table 40. Support for Restrictions on Patios of Restaurants

Support for Restrictions - Patio at Restaurants							
		Wave 1			Wave 2		
		Permit Smoking in All outdoor areas	Restrict Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers - General Population Sample	Count	10	289	299	12	286	298
	%	3.3%	96.7%	100.0%	4.0%	96.0%	100.0%
Smokers – General Population Sample	Count	42	116	158	34	124	158
	%	26.6%	73.4%	100.0%	21.5%	78.5%	100.0%
Smokers – Targeted sample	Count	24	23	47	6	42	48
	%	51.1%	48.9%	100.0%	12.5%	87.5%	100.0%
Quitters – General Population Sample	Count	3	21	24	1	23	24
	%	12.5%	87.5%	100.0%	4.2%	95.8%	100.0%
Quitters – Targeted sample	Count	4	9	13	3	10	13
	%	30.8%	69.2%	100.0%	23.1%	76.9%	100.0%

A GEE model was constructed for this measure to understand the change in proportions across Waves. The results of the model are presented below in Table 41. The model included

smokers and non-smokers (smoking status was included as a factor). The dependent variable, support for smoking restrictions on patios of restaurants, was dichotomized in the same way it was reported above, being 'anywhere' (no smoking restrictions), and 'restrict smoking' (restrict or allow smoking in some places, or no smoking permitted anywhere). The model was constructed to predict the likelihood of a respondent reporting support for smoking restrictions.

The model shows that there was a significant change across Waves. Respondents in Wave 2 were more likely (OR 1.959, $p < 0.05$) to be supportive of smoking restrictions on patios of restaurants, relative to Wave 1. Heaviness of Smoking Index was also significant ($p < 0.05$); people who were more addicted to smoking were less likely to report that they support restricting smoking on patios of bars and restaurants. There was a trend related to age; people older than 24 were more likely to report that they support smoking restrictions; people aged 55+ were more likely (OR 4.117, $p < 0.05$) compared to people aged 18-24.

Table 41. Summary of GEE Model – Support for Smoke-free Patios at Restaurants, Likelihood of Respondents Supporting Smoking Restrictions

Support for Smoke-free Patios at Restaurants					
Reported Likelihood of Respondents Supporting Smoking Restrictions					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.988	.995	.558	1.775
Female	.	.	1	.	.
Age 55+	1	.014*	4.117	1.335	12.698
Age 40-54	1	.114	2.278	.820	6.326
Age 25-39	1	.034*	3.210	1.090	9.452
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.276	.723	.403	1.297
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.538	.836	.472	1.480
Education – Medium and Low	.	.	1	.	.
Place of Residence - Outside Oxford County	1	.513	.742	.303	1.817
Place of Residence – Oxford County (not Woodstock)	1	.998	.999	.506	1.974
Place of Residence - Woodstock	.	.	1	.	.
Targeted sample	1	.596	.844	.451	1.581
General Population Sample	.	.	1	.	.
Smokers	1	.907	.941	.340	2.610
Non-Smokers	.	.	1	.	.
Wave 2	1	.002*	1.959	1.278	3.001
Wave 1	.	.	1	.	.
H.S.I	1	.001*	.727	.606	.873

*signifies a statistically significant finding, alpha 0.05

5.2.4.1.3 Support for Smoking Restrictions on Patios of Family Restaurants

Respondents were asked the question about support for smoking restrictions on the patios of family restaurants; if they wondered what was meant by ‘family restaurant’, the interviewers were able to further explain with the probe: ‘A family restaurant is a restaurant where children are likely to be present, dining with their families’.

The proportions reported from the entire sample from Wave 1 did not differ significantly from the proportions reported in the sub-sample that remained in Wave 2 ($p>0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 42.

Table 42. Support for Restrictions on Patios of Family Restaurants

Smokers and Non-Smokers: If you think smoking SHOULD be allowed in outdoor: Patios at Family Restaurants?							
		Wave 1			Wave 2		
		Permit Smoking in All outdoor areas	Restrict Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers - General Population Sample	Count	7	292	299	10	289	299
	%	2.3%	97.7%	100.0%	3.3%	96.7%	100.0%
Smokers – General Population Sample	Count	30	127	157	24	134	158
	%	19.1%	80.9%	100.0%	15.2%	84.8%	100.0%
Smokers – Targeted sample	Count	10	38	48	2	46	48
	%	20.8%	79.2%	100.0%	4.2%	95.8%	100.0%
Quitters – General Population Sample	Count	0	24	24	0	24	24
	%	.0%	100.0%	100.0%	.0%	100.0%	100.0%
Quitters – Targeted sample	Count	0	13	13	2	11	13
	%	.0%	100.0%	100.0%	15.4%	84.6%	100.0%

The majority of respondents supported smoking restrictions on patios of family restaurants both in Wave 1 and Wave 2. The respondents from the general population sample, who smoked in Wave 1, but had quit in Wave 2, were 100% in favour of smoking restrictions at family restaurants. In Wave 1 almost all non-smokers also reported they were in favour of smoking restrictions on patios of family restaurants (97.7%, n=292). In Wave 1, Smokers from the general population sample and the targeted sample also reported they support smoking restrictions on the patios of family restaurants, and this support increased in Wave 2. Likewise, the smokers recruited through the face-to-face survey reported in Wave 1 that they were largely supportive of smoking restrictions on patios and in Wave 2 almost all respondents supported smoking restrictions on family restaurant patios.

A GEE model was constructed for this measure to understand the change in proportions across Waves. The results of the model are presented below in Table 43. The model included smokers and non-smokers (smoking status was included as a factor). The dependent variable, support for smoking restrictions on patios of family restaurants, was dichotomized in the same way it was reported above, being 'anywhere' (no smoking restrictions), and 'restrict smoking' (allow smoking only in some places or permit no smoking). The model was constructed to predict the likelihood of supporting smoking restrictions on patios of family restaurants.

The results of the GEE model show that respondents were more likely (OR 1.473) to support restrictions in Wave 2, relative to Wave 1, however this finding was not statistically significant ($p>0.05$). Smokers more heavily addicted to smoking were less likely to report they support smoking restrictions; this finding was statistically significant ($p<0.05$).

Table 43. Summary of GEE Model – Support for Smoke-free Patios at Family Restaurants, Likelihood of Respondents Supporting Smoking Restrictions

Summary of GEE model results for Smokers and Non-Smokers					
If you think smoking SHOULD be allowed in outdoor: Patios at Family Restaurants?					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.874	1.061	.512	2.196
Female	.	.	1	.	.
Age 55+	1	.842	.840	.151	4.665
Age 40-54	1	.386	.490	.098	2.461
Age 25-39	1	.668	.696	.133	3.639
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.294	.694	.352	1.371
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.058	.509	.253	1.023
Education – Medium and Low	.	.	1	.	.
Place of Residence - Outside Oxford County	1	.969	.976	.285	3.339
Place of Residence – Oxford County (not Woodstock)	1	.990	.994	.416	2.375
Place of Residence - Woodstock	.	.	1	.	.
Targeted sample	1	.223	1.655	.735	3.726
General Population Sample	.	.	1	.	.
Smokers	1	.545	1.356	.505	3.641
Non-Smokers	.	.	1	.	.
Wave 2	1	.119	1.473	.905	2.396
Wave 1	.	.	1	.	.
H.S.I	1	.008	.739	.590	.925

*signifies a statistically significant finding, alpha 0.05

5.2.4.1.4 Support for 100% smoke-free patios

Policy makers are interested in how to develop and design smoking restrictions in patio environments. In Table 44 below are the proportions of respondents that support 100% smoke-free patios in Wave 1 and Wave 2. The proportions are reported based on the sample and smoking status of respondents.

Table 44. Changes in Support for 100% Smoke-free Patios, Wave 1 and Wave 2

		Support for 100% smoke-free Patios					
		Bars and Pubs		Restaurants		Family Restaurants	
		Wave 1	Wave 2	Wave 1	Wave 2	Wave 1	Wave 2
Non-smokers – General Population Sample	%	59.9%	54.8%	74.9%	67.6%	89.3%	85.6%
	sample size	179	164	224	202	267	256
Smokers – General Population Sample	%	13.3%	17.7%	31.0%	29.1%	45.6%	48.7%
	sample size	21	28	49	46	72	77
Smokers – Targeted sample	%	16.7%	20.8%	25.0%	31.3%	58.3%	58.3%
	sample size	8	10	12	15	28	28
Quitters - General Population Sample	%	25.0%	33.3%	50.0%	54.2%	75.0%	91.7%
	sample size	6	8	12	13	18	22
Quitters – Targeted sample	%	7.7%	23.1%	38.5%	38.5%	69.2%	61.5%
	sample size	1	3	5	5	9	8

A majority of non-smokers report that they are in favour of 100% smoke-free patios – for each type of hospitality venue, and across both waves. The majority of smokers, from both the general population survey and the targeted sample, do not support 100% smoke-free restrictions on patios for bars or general restaurants, however most do support 100% smoke-free patios at family restaurants.

5.2.4.1.5 Summary of Support for Smoking Restrictions on Patios

There is high support for smoking restrictions on patios of family restaurants. The majority of non-smokers support 100% smoke-free patios on all patio types included in the survey. There is lower support for smoke-free patios of bars and pubs, particularly among smokers..

Changes in levels of support in the general population sample and the targeted sample did not change significantly between waves suggesting that the OSFO did not impact levels of support for smoking restrictions on outdoor patios.

Only a handful of patios were regulated through the Woodstock OSFO, and that those environments were previously regulated through a lease agreement with the city. However policy makers will be interested to know that the majority of non-smokers support 100% smoke-free patios for all hospitality venues.

5.2.4.2 Support for Smoking Restrictions in Parks

The question for measuring support for smoking restrictions in parks and recreational fields was, “Should smoking be allowed in all outdoor areas, some outdoor areas, or no outdoor areas... City Parks”. Support for smoking restrictions in city parks was measured across both waves of the survey and asked to each participant. Response options ‘some outdoor areas’ and ‘no outdoor areas’ were grouped and reported as ‘Restrict Smoking’ because ‘some’ or ‘no’ response options indicate support for a tobacco control policy that ‘regulates’ or ‘restricts’ smoking in that environment. Support is reported based on survey population, and smoking status.

The response proportions reported from entire sample from Wave 1 did not differ significantly from the response proportions reported by the sub-sample that remained in Wave 2 ($p > 0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 45.

Table 45. Support for Smoking Restrictions in Parks – Wave 1 and Wave 2

Smokers and Non-Smokers: If you think smoking SHOULD be allowed in outdoor: City Parks?							
		Wave 1			Wave 2		
		Permit Smoking in All outdoor areas	Restrict Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers - General Population Sample	Count	21	277	298	20	275	295
	%	7.0%	93.0%	100.0%	6.8%	93.2%	100.0%
Smokers – General Population Sample	Count	50	108	158	32	125	157
	%	31.6%	68.4%	100.0%	20.4%	79.6%	100.0%
Smokers – Targeted sample	Count	23	25	48	5	43	48
	%	47.9%	52.1%	100.0%	10.4%	89.6%	100.0%
Quitters – General Population Sample	Count	4	20	24	2	22	24
	%	16.7%	83.3%	100.0%	8.3%	91.7%	100.0%
Quitters – Targeted sample	Count	3	10	13	0	13	13
	%	23.1%	76.9%	100.0%	.0%	100.0%	100.0%

The majority of respondents in both waves support for smoking restrictions in city parks. Non-smokers and people who quit smoking between waves had the highest proportion of support for restrictions in city parks. Almost 90% (n=43) of smokers from the face-to-face survey sample supported smoking restrictions in Wave 2, a significant increase from the 52% (n=25) in Wave 1 ($p>0.05$). The smokers from the general population sample also increased support from 68% (n=108) in Wave 1 to almost 80% (n=125), in Wave 2. To understand these changes a GEE Model was created. A summary of the findings from the model are presented in Table 46 below.

Table 46. Summary of the GEE Model – Support for Smoking Restrictions in City Parks. Likelihood of Respondents Supporting Smoking Restrictions

Summary of GEE model results for Smokers and Non-Smokers					
Reported Likelihood of supporting smoking restrictions in City Parks					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.034*	.516	.280	.951
Female	.	.	1	.	.
Age 55+	1	.075	2.765	.902	8.479
Age 40-54	1	.347	1.646	.582	4.654
Age 25-39	1	.033*	3.250	1.099	9.613
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.749	.903	.483	1.687
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.230	.696	.385	1.257
Education – Medium and Low	.	.	1	.	.
Place of Residence - Outside Oxford County	1	.089	.477	.203	1.118
Place of Residence – Oxford County (not Woodstock)	1	.223	.651	.326	1.299
Place of Residence - Woodstock	.	.	1	.	.
Targeted sample	1	.410	1.302	.696	2.436
General Population Sample	.	.	1	.	.
Smokers	1	.180	.430	.125	1.476
Non-Smokers	.	.	1	.	.
Wave 2	1	<.001*	2.635	1.712	4.056
Wave 1	.	.	1	.	.
H.S.I	1	<.001*	.727	.608	.868

*signifies a statistically significant finding, alpha 0.05

Several independent variables were found to be significant in the model, namely gender, age and Wave. Respondents in Wave 2 were significantly more likely (OR 2.635, $p < 0.001$) to report they support smoking restrictions in parks, relative to Wave 1. Men were less likely to report they support smoking restrictions in parks, OR 0.516, relative to women (this was significant, $p < 0.05$). The age

group 25-39 were more likely than respondents in the youngest age group (18-24) to report they support smoking restrictions in parks (OR 3.250, $p < 0.05$). The age group 25-39 is the most likely to have children of park-going age. The covariate, heaviness of smoking index, was also significant ($p < 0.001$); people more heavily addicted to smoking were less likely to report that they support smoking restrictions in parks.

Support for smoking restrictions in city parks is high among the general population sample and the targeted sample. The support did increase significantly after the Woodstock OSFO, among people who smoke. Support for smoking restrictions in city parks among non-smokers did not change between waves; however support was approximately 93%.

5.2.4.3 Support for Smoking Restrictions in Doorways

Support for smoking restrictions in doorways was measured for both ‘public doorways’, like the city hall or the post office, or for ‘private doorways’, like an office building. Support was measured across both waves of the survey and asked to each participant. Response options ‘some outdoor areas’ and ‘no outdoor areas’ were grouped and reported as ‘Support Smoking Restrictions’ because ‘some’ or ‘no’ response options indicate support for a tobacco control policy that ‘regulates’ or ‘restricts’ smoking in that environment. The response options ‘some outdoor areas’ may have been somewhat unclear to respondents – because ‘some outdoor areas’ could have been interpreted as some doorways versus some spaces around doorways. Most doorway smoking restrictions in Ontario are set-backs, meaning smoking is not permitting unless it is a certain minimum distance from the doorway.

Support is reported in section 5.2.4.3.1 for public doorways and in section 5.2.4.3.2 for private doorways. Proportions are reported based on sample (general or targeted sample), and smoking status.

5.2.4.3.1 Support for Smoking Restrictions in Public Doorways

The response proportions from the entire sample from Wave 1 did not differ significantly from the response proportions reported by the sub-sample that remained in Wave 2 ($p > 0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 47.

Table 47. Support for Smoking Restrictions in Public Doorways

Smokers and Non-Smokers: Support for Smoking Restrictions in Public Doorways							
		Wave 1			Wave 2		
		Permit Smoking in All outdoor areas	Restrict Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers - General Population Sample	Count	3	295	298	5	294	299
	%	1.0%	99.0%	100.0%	1.7%	98.3%	100.0%
Smokers – General Population Sample	Count	5	153	158	11	146	157
	%	3.2%	96.8%	100.0%	7.0%	93.0%	100.0%
Smokers – Targeted sample	Count	4	44	48	1	47	48
	%	8.3%	91.7%	100.0%	2.1%	97.9%	100.0%
Quitters – General Population Sample	Count	0	24	24	0	24	24
	%	.0%	100.0%	100.0%	.0%	100.0%	100.0%
Quitters – Targeted sample	Count	4	9	13	2	11	13
	%	30.8%	69.2%	100.0%	15.4%	84.6%	100.0%

The vast majority of respondents supported smoking restrictions in public doorways in both Wave 1 and Wave 2. All ‘quitters’ from the general population sample supported restrictions in doorways, and almost all non-smokers supported smoking restrictions in public doorways in both waves.

To understand how the proportions changed across waves a GEE model was designed. The results of this model are summarized in Table 48 below. The dependent variable was kept as a dichotomous variable as coded above. The model was structured to predict the likelihood of supporting smoking restrictions.

Table 48. Summary of GEE Model – Support for Smoke-free Public Doorways. Likelihood of Respondents Supporting Smoking Restrictions

Likelihood of Support for Smoking Restrictions in Public Doorway Areas					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	Df	Sig.		Lower	Upper
Male	1	.388	.608	.197	1.878
Female	.	.	1	.	.
Age 55+	1	.783	1.294	.207	8.076
Age 40-54	1	.296	2.733	.415	18.004
Age 25-39	1	.401	2.254	.339	14.989
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.702	1.255	.392	4.011
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.142	.455	.159	1.303
Education – Medium and Low	.	.	1	.	.
Place of Residence - Outside Oxford County	1	.036*	.270	.079	.921
Place of Residence – Oxford County (not Woodstock)	1	.394	1.902	.433	8.343
Place of Residence - Woodstock	.	.	1	.	.
Targeted sample	1	.694	.814	.292	2.268
General Population Sample	.	.	1	.	.
Smokers	1	.862	.856	.149	4.927
Non-Smokers	.	.	1	.	.
Wave 2	1	.901	.955	.458	1.988
Wave 1	.	.	1	.	.
H.S.I	1	.013*	.561	.354	.887

*signifies a significant finding, alpha 0.05.

The summary of the model shows that there was not a significant change in support for smoking restrictions in public doorways across Waves; support was high both waves. Two independent variables were significant, including HSI; respondents more heavily addicted to cigarettes (having a higher score on the HSI) were less likely to report supporting smoking restrictions in public doorways (p<0.05). Respondents from outside of Oxford county were less

likely (OR 0.270) to support restrictions in doorways, relative to residents of the City of Woodstock (p<0.05).

In Wave 1, 81% (n=21) of respondents from outside Oxford county supported public doorway smoking restrictions. In Wave 2, the same proportion, 81% (n=21) supported doorway restrictions. This was significantly different than the respondents from Woodstock, and the respondents from other Oxford County communities (p<0.05). Respondents from outside the county were evenly smokers and non-smokers (n=13 for each group).

5.2.4.3.2 Support for Smoking Restrictions in Private Doorways

The response proportions from the entire sample from Wave 1 did not differ significantly from the response proportions of the sub-sample that remained in Wave 2 (p>0.05, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 49.

Table 49. Support for Smoking Restrictions in Private Doorways

Smokers and Non-Smokers: If you think smoking SHOULD be allowed in Public Doorways							
		Wave 1			Wave 2		
		Permit Smoking in All outdoor areas	Restrict Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers - General Population Sample	Count	4	294	298	6	292	298
	%	1.3%	98.7%	100.0%	2.0%	98.0%	100.0%
Smokers –General Population Sample	Count	13	145	158	13	143	156
	%	8.2%	91.8%	100.0%	8.3%	91.7%	100.0%
Smokers – Targeted sample	Count	5	43	48	3	45	48
	%	10.4%	89.6%	100.0%	6.3%	93.8%	100.0%
Quitters –General Population Sample	Count	2	22	24	0	24	24
	%	8.3%	91.7%	100.0%	.0%	100.0%	100.0%
Quitters – Targeted sample	Count	4	9	13	1	12	13
	%	30.8%	69.2%	100.0%	7.7%	92.3%	100.0%

The vast majority of respondents supported smoking restrictions in private doorways in both Wave 1 and Wave 2. All ‘quitters’ from the general population sample supported restrictions in doorways. Almost all non-smokers from the general population sample supported smoking

restrictions in public doorways in both waves. Between waves the only group that reported a change of more than 5% was the ‘quitters, face-to-face sample”, which increased from 69% (n=9) to 92% (n=12). To understand how the proportions changed across waves a GEE model was designed. The results of this model are summarized in Table 50 below. The dependent variable was kept as a dichotomous variable as displayed above. The model was structured to predict the likelihood of respondents supporting smoking restrictions in private doorways.

Table 50. Summary of the GEE Model – Likelihood of Supporting Smoking Restrictions in Private Doorways

Likelihood of Supporting Policies that Restrict Smoking in Private Doorway Environments					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	Df	Sig.		Lower	Upper
Male	1	.249	.619	.274	1.399
Female	.	.	1	.	.
Age 55+	1	.845	1.160	.263	5.108
Age 40-54	1	.616	1.447	.342	6.127
Age 25-39	1	.115	3.646	.729	18.237
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.944	1.032	.424	2.516
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.300	.648	.286	1.471
Education – Medium and Low	.	.	1	.	.
Place of Residence - Outside Oxford County	1	.046*	.313	.100	.982
Place of Residence – Oxford County (not Woodstock)	1	.583	1.338	.473	3.784
Place of Residence - Woodstock	.	.	1	.	.
Targeted sample	1	.949	1.032	.399	2.668
General Population Sample	.	.	1	.	.
Smokers	1	.686	.679	.104	4.442
Non-Smokers	.	.	1	.	.
Wave 2	1	.293	1.453	.724	2.917
Wave 1	.	.	1	.	.
H.S.I	1	.011*	.663	.483	.910

*signifies a statistically significant finding, alpha 0.05

The summary of the model shows that there was not significant change in support for smoking restrictions in private doorways across Waves. Heaviness of smoking was a significant covariant; smokers more heavily addicted to cigarettes are less likely to support smoking restrictions in private doorways. Similar to public doorways, respondents from outside Oxford county were less likely (OR 0.313) to support smoking restrictions around private doorways, relative to respondents from the city of Woodstock ($p < 0.05$). The proportion of respondents from outside Oxford county that supported smoke-free private doorways in Wave 1 was 81% ($n=21$). This support increased to 92% in wave 2 ($n=24$).

5.2.4.3.3 Summary of Doorway findings

In Wave 2, the majority of respondents, both smokers and non-smokers, support 100% smoke-free doorways. There is little difference between support for restrictions of public or private doorways. These results suggest that policy makers may not need to treat private or public doorways differently when they consider regulation.

There is little evidence that the Woodstock OSFO influenced support levels for doorway restrictions generally as levels of support for restrictions were very high during both waves.

5.2.4.4 Woodstock OSFO Impact on Reported Support for Smoke-free Environments

There is high support, from both smokers and non-smokers, for regulating smoking in almost all of the outdoor environments included in the survey.

There was a significant increase in reported support for smoking restrictions, from smokers in the general population survey, for patios of bars and pubs, and for city parks. There was an increase in support for patios of restaurants and family restaurants, although these increases were not statistically significant ($p>0.05$). Details are shown in Figure 11 below.

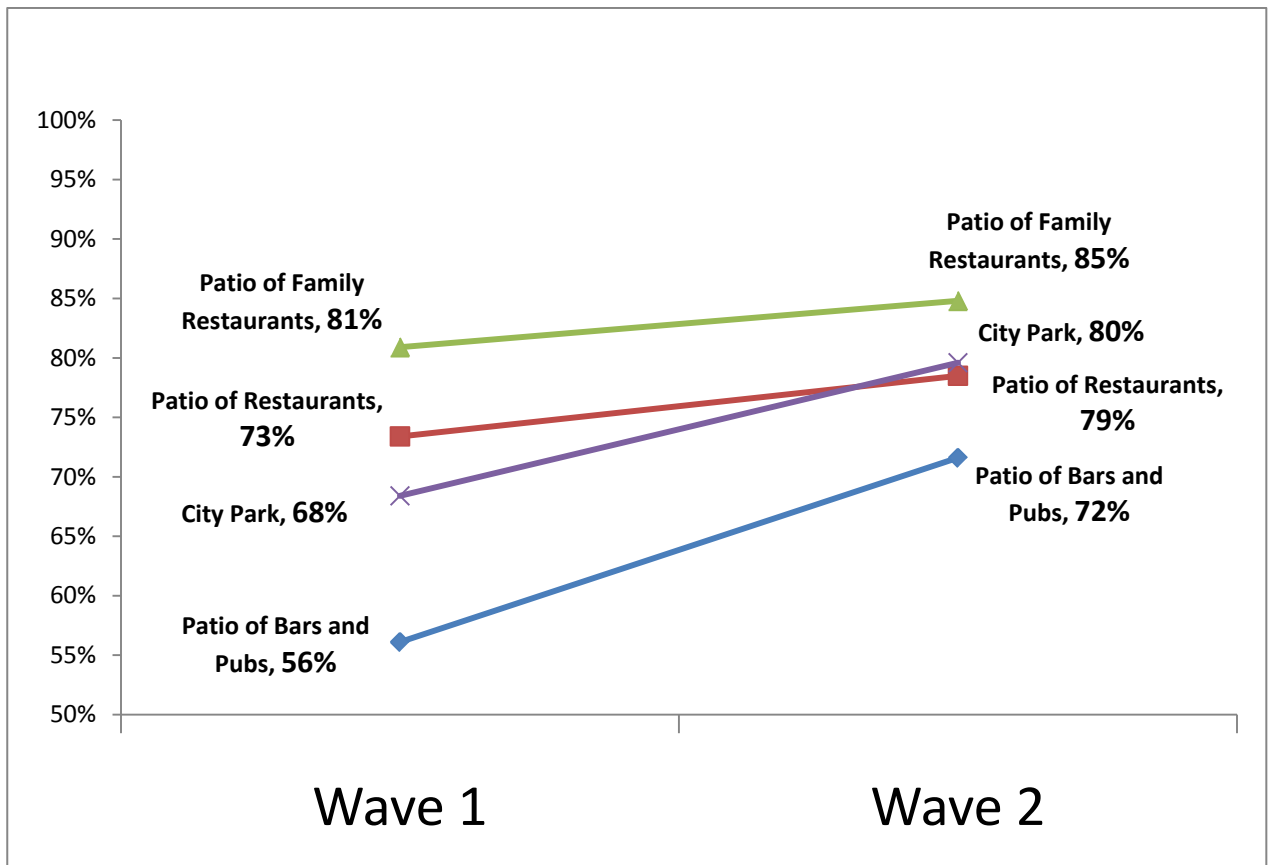


Figure 11. Smokers from the General Population Sample, Reported Support for Smoking Restrictions in Regulated Environments, Wave 1 and Wave 2

The GEE models, which were used to understand longitudinal changes in support for smoking restrictions across waves, found that there was a statistically significant increases in support

for smoking restrictions in patio environments of pubs/bars, restaurants and city parks. There was no statistically significant change in support for smoking restrictions in doorways (public or private), or the patio environments of family restaurants, however support was high for those environments in both Wave 1 and Wave 2.

The change in support for restrictions on patios happened despite the OSFO only regulating smoking on a handful of patios. It is therefore more likely that the increased support for smoking restrictions on patios is more a general societal trend than an impact from the OSFO. However, Woodstock city parks were environments in Woodstock that regulated smoking. Signage about the OSFO was placed in each park with play equipment. The impacts of the OSFO to increase support for smoking restrictions in parks is therefore more reasonable.

5.2.5 Changes in Smoking Behaviour and Personal Smoking Restrictions

There were three questions asked to measure how the OSFO may have influenced smoking behaviour in the regulated environments, and in respondents' personal spaces (home and vehicle). The first measure was only asked of smokers in Wave 1 and Wave 2 (quitters were removed because their compliance with the OSFO was because in Wave 2 they were non-smokers, not because they chose to comply with the policy). The other two measures were asked of each respondent.

5.2.5.1 Anticipated or reported compliance with the OSFO

Prior to the question being asked about compliance, interviewers delivered the following reminder: *"I am now going to ask you a few questions about your smoking habits when you are in the public areas of Woodstock. And please remember that your responses from this survey are completely confidential."* This was done to increase the likelihood of the respondent providing an honest response. This reminder was delivered in both Wave 1 and Wave 2.

In Wave 1 smokers were asked, *"Do you think it is likely that you will always follow the by-law restricting smoking in outdoor spaces?"*, and the response options were, "Yes, all the time", "No, there would be sometimes I would not follow the bylaw". In Wave 2 a similar question was asked, *"Do you always follow the by-law restricting smoking in outdoor spaces"*. *Responses are reported for smokers, telephone sample, smokers, face-to-face sample, and also for 'quitters'.*

The response proportions from the entire sample from Wave 1 did not differ significantly from the proportions reported in the sub-sample that remained in Wave 2 ($p > 0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 51.

Table 51. Anticipated or Reported Compliance with the OSFO, Smokers Wave 1 and Wave 2

Smokers Wave 1: Do you think it is likely that you will always follow the bylaw restricting smoking in outdoor spaces?							
Smokers Wave 2: Do you always follow the by law restricting smoking in outdoor spaces?							
		Wave 1			Wave 2		
		Yes	No, not always	Total	Yes	No, not always	Total
Smokers – General Population Sample	Count	77	75	152	81	76	157
	%	50.7%	49.3%	100.0%	51.6%	48.4%	100.0%
Smokers – Targeted sample	Count	25	23	48	20	27	47
	%	52.1%	47.9%	100.0%	42.6%	57.4%	100.0%

The proportion of smokers from the general population sample, who believed they would always be compliant with the OSFO, did not differ significantly from the proportion of smokers from the targeted sample who believed they would always be in compliance with the OSFO. This was true for Wave 1 and Wave 2. Approximately half of respondents from each group reported that they would always comply with the Woodstock OSFO.

A GEE model was created to understand if the small changes observed across waves were significant. The summary of this model is below in Table 52. The dependent variable for the GEE model was dichotomous as presented in Table 51 above (‘Yes’, or ‘No’). The model was structured to predict the likelihood of saying “No”, there would be sometimes when they did not always comply with the Woodstock OSFO.

Table 52. Anticipated and Reported Compliance with the OSFO

Smokers only – Do you anticipate that you will always follow the OSFO? (Wave 1) and Do you always follow the OSFO? (Wave 2) - Likelihood of saying No					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	Df	Sig.		Lower	Upper
Male	1	.167	1.445	.857	2.436
Female	.	.	1	.	.
Age 55+	1	.005*	.239	.087	.655
Age 40-54	1	.081	.439	.175	1.106
Age 25-39	1	.862	.919	.352	2.394
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.551	.843	.482	1.477
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.239	1.359	.815	2.266
Education – Medium and Low	.	.	1	.	.
Place of Residence – Outside Oxford County	1	.731	1.193	.437	3.260
Place of Residence – Oxford County (not Woodstock)	1	.404	.761	.400	1.446
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.146	.633	.342	1.172
General Population Sample	.	.	1	.	.
Wave 2	1	.296	1.168	.873	1.562
Wave 1	.	.	1	.	.
H.S.I	1	.002*	1.333	1.116	1.592

*signifies a statistically significant independent variable

The summary of the model shows that there was not a statistically significant change between reported compliance in Wave 2, relative to anticipated compliance with the OSFO in Wave 1 ($p > 0.05$). Heaviness of smoking was a significant covariant; smokers more heavily addicted to cigarettes are more likely to say “No,” there will be times they do not follow the by-law ($p < 0.05$). Age was also a significant independent variable, with respondents aged 55+ being less likely (OR 0.239) to report “No”, there will be times they do not follow the by-law.

These findings are relevant to policy makers who may believe that by-laws such as the Woodstock OSFO will not be followed or observed given the limited ability to actively enforce smoking in the 'great outdoors'. Approximately half the respondents reported they will always follow the by-law. This is a promising finding however does represent an opportunity to improve compliance. Understanding when and where smokers would not be compliant is a logical addition for future evaluation efforts.

5.2.5.2 Personal Smoking Restrictions

Questions were asked about personal smoking restrictions in homes and vehicles. There are some ‘missing’ responses, non-applicable responses for the personal vehicle policies; some respondents in the sample reported that they do not have a personal vehicle so clearly do not have smoking restriction policies.

5.2.5.2.1 Home Smoking Restrictions

The same question was asked in Wave 1 and Wave 2 to both non-smokers and smokers. The question was worded “Which of the following best describes smoking inside your home?”, and the response options were, “Smoking IS allowed anywhere in your home”, “Smoking is NEVER allowed ANYWHERE in your home,”, or “Something in between”.

The proportions reported from the entire sample from Wave 1 did not differ significantly from the proportions reported in the sub-sample that remained in Wave 2 ($p>0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 53.

Table 53. Personal Smoking Restrictions, HOME, Smokers and Non-Smokers, Wave 1 and Wave 2

		Smokers and Non-Smokers: Which of the following best describes smoking inside your home?									
		Wave 1					Wave 2				
		Allowed Anywhere	Allowed Nowhere	Something in between	Total	Allowed Anywhere	Allowed Nowhere	Something in between	Total		
Non-smokers - General Population Sample	Count	4	278	17	299	2	280	16	298		
	%	1.3%	93.0%	5.7%	100.0%	.7%	94.0%	5.4%	100.0%		
Smokers - General Population Sample	Count	24	89	45	158	26	88	44	158		
	%	15.2%	56.3%	28.5%	100.0%	16.5%	55.7%	27.8%	100.0%		
Smokers - Targeted sample	Count	15	25	8	48	8	28	12	48		
	%	31.3%	52.1%	16.7%	100.0%	16.7%	58.3%	25.0%	100.0%		
Quitters - General Population Sample	Count	2	18	4	24	0	21	3	24		
	%	8.3%	75.0%	16.7%	100.0%	.0%	87.5%	12.5%	100.0%		
Quitters - Targeted sample	Count	2	11	0	13	1	12	0	13		
	%	15.4%	84.6%	.0%	100.0%	7.7%	92.3%	.0%	100.0%		

Personal policies that restrict smoking in homes differ across smokers and non-smokers. Almost all non-smokers do not permit smoking in their homes; 93% in Wave 1 (n=278), and 94% in Wave 2, (n=280). Most smokers from the general population sample reported that they have smoke-free homes (56% in Wave 1, n=89, and 56% in Wave 2, n=88). This represented no change in personal policies between waves for smokers from the telephone survey sample.

The smokers from the targeted sample, however, did see a small increase in the proportion of houses that reported smoking restrictions in their homes. In Wave 1, 69% of respondents from the face-to-face survey, (n=33), reported that their home was either 100% smoke-free or had some restrictions (something in-between). In Wave 2 this proportion increased to 83% (n=40). This change in proportions, however, is not statistically significant ($p>0.05$).

The respondents who were classified as quitters were more likely to have smoke-free homes in Wave 1, compared to smokers who did not quit. In Wave 2, the proportion of smoke-free homes among quitters did not differ significantly from the proportion of non-smokers ($p>0.05$).

The targeted sample of smokers is known to smoke in at least one of the outdoor environments. It is interesting that the general population sample of smokers did not report an increase in personal smoking restrictions in their home, but the face-to-face smokers did (albeit a modest increase).

To understand how the proportions changed across waves a GEE model was designed. There was little change in proportions for policies for non-smokers so the model was built with only smokers. The sample (general or targeted sample) was included as a factor. The results of this model are summarized in Table 54 below. The dependent variable was made dichotomous by combining the 'smoking is allowed' and the 'something in-between' responses, since the goal for public health is to have 100% smoke-free homes. The summary of the model's findings is presented below in Table 54. The model was constructed to predict the likelihood of reporting a 100% smoke-free home.

Table 54. Summary of GEE Model, Reported Smoke-free Homes, Smokers – Likelihood to Report Smoking is “Never” allowed

Smokers only – Is Smoking Allowed in your Home – Likelihood of saying ‘NEVER’, Relative to ‘Allowed’ or ‘Something’ in between					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	Df	Sig.		Lower	Upper
Male	1	.004*	2.601	1.362	4.969
Female	.	.	1	.	.
Age 55+	1	.214	.436	.118	1.615
Age 40-54	1	.189	.425	.119	1.524
Age 25-39	1	.614	.707	.183	2.723
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.036*	.470	.232	.954
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.611	.859	.477	1.546
Education – Medium and Low	.	.	1	.	.
Place of Residence – Outside Oxford County	1	.301	2.012	.535	7.568
Place of Residence – Oxford County (not Woodstock)	1	.286	1.442	.736	2.828
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.227	1.650	.732	3.721
General Population Sample	.	.	1	.	.
Wave 2	1	.313	1.125	.895	1.415
Wave 1	.	.	1	.	.
H.S.I	1	<.001*	.540	.428	.681

*signifies a statistically significant variable, alpha 0.05

Several independent variables were found to be significant in this model including gender, HSI, and the presence of children in the house. Wave was not a significant factor ($p>0.05$). Respondents with no children in the household (aged 17 or younger), were less likely to say smoking was ‘Never’ permitted in their home (OR 0.470, $p<0.05$) relative to households with children. Men were more likely to say smoking was ‘Never’ permitted in their household, OR 2.601, relative to

women ($p < 0.05$). Respondents more heavily addicted to cigarettes, those with higher scores on the HSI were less likely to report that smoking was ‘Never’ permitted in their home.

5.2.5.2.2 Personal Vehicle Restrictions

The same question was asked in Wave 1 and Wave 2 to both non-smokers and smokers. The question was worded “Which of the following best describes smoking inside your vehicle?”, and the response options were, “Smoking is allowed anywhere in your vehicle”, “Smoking is NEVER allowed ANYWHERE in your vehicle,”, or “Something in between”.

The response proportions reported from the entire sample from Wave 1 did not differ significantly from the response proportions from the sub-sample that remained in Wave 2 ($p > 0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 55.

Table 55. Personal Smoking Restrictions, Person VEHICLES, Smokers and Non-smokers, Wave 1 and Wave 2

		Wave 1					Wave 2				
		Allowed in your vehicle	Never Allowed in your vehicle	Something in between	Total	Allowed in your vehicle	Never Allowed in your vehicle	Something in between	Total		
Non-smokers - General Population Sample	Count	2	271	15	2	3	269	17	289		
	%	.7%	94.1%	5.2%	.7%	1.0%	93.1%	5.9%	100.0%		
Smokers – General Population Sample	Count	54	46	45	54	45	42	59	146		
	%	37.2%	31.7%	31.0%	37.2%	30.8%	28.8%	40.4%	100.0%		
Smokers – Targeted sample	Count	14	6	21	14	17	11	13	41		
	%	34.1%	14.6%	51.2%	34.1%	41.5%	26.8%	31.7%	100.0%		
Quitters – General Population Sample	Count	4	10	7	4	0	16	7	23		
	%	19.0%	47.6%	33.3%	19.0%	.0%	69.6%	30.4%	100.0%		
Quitters – Targeted sample	Count	1	4	4	1	0	10	2	12		
	%	11.1%	44.4%	44.4%	11.1%	.0%	83.3%	16.7%	100.0%		

Smoking restrictions in personal vehicles differed between smokers and non-smokers. Most non-smokers ‘never’ permit smoking in their vehicle, 94% in Wave 1 (n=271) and 93% in Wave 2 (n=269). Smokers from the general population sample, in Wave 1, were almost evenly split between permitting smoking anytime (37%, n=54), never (32%, n=46), or something in-between (45%, n=45). In Wave 2 smokers from the general population sample shifted slightly towards further smoking restrictions in vehicles, with fewer reporting that smoking was no restricted in their vehicle (31%, n=45), a reduction of 6%. The smokers from the targeted sample survey reported fewer restrictions in Wave 2, with more respondents reporting that smoking was permitted, 42% (n=17) compared to 34% (n=14) in Wave 1. The respondents who quit between Wave 1 and Wave 2 had the greatest reported increase in the proportion who ‘never’ allow smoking in their vehicle, going from 48% (n=10) to 70% (n=16) for the respondents from the general population survey, and 44% (n=4) to 83% (n=10) in the targeted sample survey.

To understand how the proportions changed across waves a GEE model was designed. There was little change in proportions for policies for non-smokers so the model was built with only smokers. The sample (general or targeted sample) was included as a factor. The results of this model are summarized in Table 56 below. The dependent variable was made dichotomous by combining the ‘smoking is allowed’ and the ‘something in-between’ responses, since the goal for public health is to have 100% smoke-free vehicles. The summary of the model’s findings is presented below in Table 56. The model was constructed to predict the likelihood of reporting a 100% smoke-free vehicle.

Table 56. Summary of GEE Model, Reported Smoke-free Vehicles, Smokers – Likelihood to Report Smoking is “Never” Allowed

Smokers only – Is Smoking Allowed in your Vehicle – Likelihood of saying Never, Relative to Always or Something in between					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	Df	Sig.		Lower	Upper
Male	1	.337	.751	.419	1.347
Female	.	.	1	.	.
Age 55+	1	.086	2.996	.856	10.484
Age 40-54	1	.442	.628	.192	2.053
Age 25-39	1	.929	1.056	.320	3.486
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.058	.524	.269	1.021
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.003*	.400	.219	.733
Education – Medium and Low	.	.	1	.	.
Place of Residence – Outside Oxford County	1	.555	.683	.193	2.419
Place of Residence – Oxford County (not Woodstock)	1	.246	.670	.340	1.319
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.539	1.264	.598	2.673
General Population Sample	.	.	1	.	.
Wave 2	1	.034*	1.378	1.024	1.853
Wave 1	.	.	1	.	.
H.S.I	1	.008*	.752	.610	.928

*signifies a statistically significant variable, alpha 0.05

Respondents in Wave 2 were significantly more likely, OR 1.378, to report that smoking was ‘Never’ permitted in their private vehicle, relative to Wave 1 ($p < 0.05$). Education was a significant independent variable, with respondents of higher education less likely to report that smoking was ‘Never’ permitted in their vehicle, relative to respondents of low or medium education level ($p < 0.05$). Heaviness of smoking was also a significant factor; people who are more addicted to smoking are less likely to report that smoking is ‘never’ permitted in their vehicle.

The increase likelihood of reporting ‘never’ may in part be due to the amendment to the Smoke-free Ontario Act in January 2009. As of January 21, 2009, smoking was prohibited in vehicles if someone aged 16 or younger was in the vehicle.

5.2.5.3 Summary of Changes in Smoking Behaviour and Personal Smoking Restrictions

These measures were intended to address part of research objective 5, as outlined in section 2.2. This objective deals with understanding if the Woodstock OSFO impacted smoking behaviour and asks if there was an increase in smoke-free policies in homes and personal vehicles after the OSFO was enacted.

Approximately half of smokers surveyed reported they follow the Woodstock OSFO 100% of the time. There was not an increase in smoke-free policies in homes after the OSFO. There was a small increase in smoking restrictions in personal vehicles, however this may be more because of the amendment to the Smoke-free Ontario Act than the Woodstock OSFO.

5.2.6 Measures of Changes in Anticipated and Reported Use of Facilities, Businesses and Attendance at Public Events

Measures in Wave 1 were collected to understand anticipated impacts the Woodstock OSFO would have on respondents' decisions to use city services and facilities after smoking was regulated in those environments including parks and recreational fields, transit stops and shelters, and public or private buildings with smoke-free doorways. A measure also collected anticipated impacts on respondents' decision to visit city businesses such as the restaurants with smoke-free patios along Dundas Street after the OSFO made them smoke-free. These same measures were collected in Wave 2 however the questions asked about current reported impact with the environments now regulated. Therefore the measures were not identical across waves, since the questions were altered slightly, but the intent of what they are measuring is the same. These 5 measures and the wording of the questions are described below. It

Measures were also collected across both waves to understand how policies that prohibit smoking at outdoor cultural events, such as Cow-a-palooza, would impact respondents' decisions to attend these events. It has been noted above that the OSFO did not have Cow-a-palooza added to its schedule so the question was collected over two years without Cow-a-palooza becoming a smoke-free event, although more smoking restrictions were in place after Wave 1.

5.2.6.1 Anticipated and Reported Impact of the OSFO on the Use of City Parks and Recreational Fields

In Wave 1 the question was worded, "How do you anticipate the new smoking restrictions will impact your use of Parks or Fields? Would you say...", and the response options were, 'I will go to the park or rec field more often', 'I will go to the park or rec field less often', or 'the restrictions will not affect how often I go to the parks or fields'. In Wave 2 the question was re-worded to, 'How have the new smoking restrictions impacted your use of Parks or Fields? Would you say...'

The response proportions from the entire sample from Wave 1 did not differ significantly from the response proportions from the sub-sample that remained in Wave 2 ($p > 0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 57. Response proportions are reported for the general population sample and the targeted sample.

Table 57. Anticipated and Reported Impact of the OSFO on Use of Parks and Recreation Fields

Smokers and non-smokers were asked: How will the new smoking restrictions impact your use of Parks or Fields , would you say you (will or do), “Go more”, “Go less”, or your use (will or is) not be affected?”									
		Wave 1				Wave 2			
		Go MORE often	Go LESS often	Will not be affected	Total	Go MORE often	Go LESS often	Have not be affected	Total
Non-smokers - General Population Sample	Count	83	3	213	299	21	2	272	295
	%	27.8 %	1.0 %	71.2%	100.0%	7.1%	.7%	92.2%	100.0%
Smokers –General Population Sample	Count	4	34	119	157	2	17	138	157
	%	2.5%	21.7 %	75.8%	100.0%	1.3%	10.8 %	87.9%	100.0%
Smokers – Targeted sample	Count	0	10	38	48	0	6	42	48
	%	.0%	20.8 %	79.2%	100.0%	.0%	12.5 %	87.5%	100.0%
Quitters – General Population Sample	Count	4	2	18	24	5	0	19	24
	%	16.7 %	8.3 %	75.0%	100.0%	20.8%	.0%	79.2%	100.0%
Quitters – Targeted sample	Count	0	3	10	13	1	0	12	13
	%	.0%	23.1 %	76.9%	100.0%	7.7%	.0%	92.3%	100.0%

In Wave 1, almost all non-smokers reported that they will either not be affected (71%, n=213) or go to parks/rec fields more (28%, n=83). Approximately 22% (n=34) of the smokers from the general population sample and similarly 21% (n=10) of the targeted sample anticipated that the restrictions would result in them visiting parks or rec fields less. In Wave 2, a smaller proportion of non-smokers, 7% (n=21) reported that they attend parks and rec fields more, with over 92% (n=272) reporting that the OSFO did not affect their usage. Approximately 11% of the general population sample and 12% of the targeted sample of smokers reported in Wave 2 that they use parks and rec fields less after the OSFO. Although this is a relatively small proportion of smokers, it is a concern given that parks with play structures are places for children, and it is important to understand if someone is not taking their children to the park as a result of this smoking restriction. Of the group of smokers in Wave 2 that reported they now attend parks less (n=23), 6 had children (younger than 18) in their household. In both Wave 1 and Wave 2, respondents were asked to report how frequently they visit parks while supervising children. Only 2 of the 6 respondents with children reported in Wave 2 that they visit parks less frequently than they had reported in Wave 1 (the other 4 reported the same frequency in both Waves). Of these two

respondents, one had a child that was 12 years old – so presumably this child is no longer taken to the park and supervised by their parent while they use play structures. The other respondent had an 8 year old child in Wave 2. This respondent reported in Wave 1 that they visited the park at least weekly, while in Wave 2 they reported that they now visits the park less than monthly. The respondent in Wave 1 reported that they ‘sometimes’ smoked when visiting the park, and in Wave 2 reports that now she ‘never’ smokes while visiting the park (these measures were reported in section 5.2.1.1). Therefore, it appears that one smoker with a child now visits city parks less often than they did with their child before the by-law was enacted. The other smokers with children may visit less frequently after the by-law also, but this was not captured in the measure of reported frequency of use.

To understand more generally the change or reported use of parks across waves, a GEE model was built for smokers. The dependent variable was made dichotomous, combining the response options ‘Go More’, with ‘No Change’, and ‘Go Less Often’. The model was structured to predict the likelihood of reporting that the smokers go less often to parks and rec fields. The summary of the findings from the GEE model are presented below in Table 58.

Table 58. Summary of GEE Model for Smokers, Likelihood of Reporting They Use Parks and Rec Fields Less, Relative to Using Them More or the Same

Summary of GEE model results for Smokers					
How have the new smoking restrictions impacted your use of PARKS or FIELDS? Likelihood of reporting 'Use Less', relative to using them more or the same					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.028*	2.349	1.096	5.031
Female	.	.	1	.	.
Age 55+	1	.818	.854	.223	3.274
Age 40-54	1	.208	2.302	.629	8.418
Age 25-39	1	.862	.884	.221	3.544
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.091	1.885	.904	3.932
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.966	1.016	.484	2.136
Education – Medium and Low	.	.	1	.	.
Place of Residence – Outside Oxford County	1	.143	2.583	.724	9.213
Place of Residence – Oxford County (not Woodstock)	1	.477	.724	.297	1.766
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.625	.801	.330	1.948
General Population Sample	.	.	1	.	.
Wave 2	1	<.001*	.323	.195	.535
Wave 1	.	.	1	.	.
H.S.I	1	.041*	1.259	1.009	1.570

*signifies a statistically significant variable, alpha 0.05

The summary of the GEE model shows that smokers in Wave 2 were significantly less likely (OR 0.323) to report that they use parks 'Less often', compared to what their anticipated use reported in Wave 1 (p<0.05). Males were significantly more likely (OR 2.349) to report that they use parks and rec fields less often, relative to females (p<0.05). Respondents more heavily addicted to cigarettes, those who scored higher on the HSI were more likely to report that they use parks and rec fields 'less often' (p<0.05).

5.2.6.2 Anticipated and Reported Impact on Use of City Transit

In Wave 1 the question was worded, “The city of Woodstock outdoor smoking by law (will) prohibit(s) smoking on sidewalks within 4 metres of transit shelters or transit stops. How do you anticipate the new smoking restrictions will impact your decision to use transit? Would you say...”, and the response options were, ‘I will use transit more often’, ‘I will use transit Less often’, or ‘the restrictions will not affect how often I use transit’. In Wave 2 the question was re-worded to, ‘How have the new smoking restrictions impacted your use of city Transit? Would you say...’, and the response options were “I am MORE likely to use transit’, ‘I am LESS likely to use transit’, and “I have not been affected’.

The response proportions from the entire sample from Wave 1 did not differ significantly from the response proportions from the sub-sample that remained in Wave 2 ($p>0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 59. Response proportions are reported for the general population sample and the targeted sample.

Table 59. Anticipated and Reported Impact of the OSFO on Use of City Transit

Smokers and Non-Smokers: The city of Woodstock outdoor smoking by law prohibits smoking on sidewalks within 4 metres of transit shelters or transit stops. How has this impacted your decision to use transit? Would you say:									
		Wave 1				Wave 2			
		Use MORE often	USE LESS often	Will not be affected	Total	Use MORE often	USE LESS often	Have not be affected	Total
Non-smokers - General Population Sample	Count	37	3	252	292	18	7	248	273
	%	12.7%	1.0%	86.3%	100.0%	6.6%	2.6%	90.8%	100.0%
Smokers –General Population Sample	Count	3	18	132	153	3	3	144	150
	%	2.0%	11.8%	86.3%	100.0%	2.0%	2.0%	96.0%	100.0%
Smokers – Targeted sample	Count	0	3	39	42	0	1	43	44
	%	.0%	7.1%	92.9%	100.0%	.0%	2.3%	97.7%	100.0%
Quitters – General Population Sample	Count	1	0	22	23	4	0	19	23
	%	4.3%	.0%	95.7%	100.0%	17.4%	.0%	82.6%	100.0%
Quitters – Targeted sample	Count	0	1	10	11	1	0	11	12
	%	.0%	9.1%	90.9%	100.0%	8.3%	.0%	91.7%	100.0%

In Wave 1, almost all non-smokers from the general population sample reported that the OSFO will either not affect their decision to use transit (86.3%, n=252), or will encourage them to use transit more (12.7%, n=37). Approximately 12% (n=18) of the smokers from the general population sample anticipated in Wave 1 that the restrictions would result in them using transit less. In Wave 2, a small proportion of non-smokers, 2% (n=3) reported that they use transit more, and another 2% reported that they use transit less (n=3) as a result of the OSFO. Almost all of the smokers from the targeted sample (97.7%, n=43) reported that the OSFO had not affected their use of transit.

To understand the change (anticipated or reported) use of transit across waves, a GEE model was built for smokers. The dependent variable was made dichotomous, combining the response options ‘Use More’, with ‘Not Affected’, and ‘Use Less Often’. The model was structured to predict the likelihood of reporting that the smokers use transit less often. The summary of the findings from the GEE model are presented below in Table 60.

Table 60. Summary of GEE Model for Smokers, Likelihood of Reporting They Use City Transit LESS, Relative to Using Transit More or the Same

Summary of GEE model results for Smokers					
How have the new smoking restrictions impacted your use of City Transit? Likelihood of reporting 'Use Less', relative to using them more or the same					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.496	1.445	.501	4.167
Female	.	.	1	.	.
Age 55+	1	.821	1.327	.114	15.381
Age 40-54	1	.719	1.579	.132	18.961
Age 25-39	1	.422	2.796	.227	34.382
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.696	1.231	.434	3.489
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.886	.925	.320	2.671
Education – Medium and Low	.	.	1	.	.
Place of Residence – Outside Oxford County	1	.217	2.646	.564	12.413
Place of Residence – Oxford County (not Woodstock)	1	.179	.350	.076	1.617
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.224	.421	.104	1.695
General Population Sample	.	.	1	.	.
Wave 2	1	<.001*	.162	.058	.449
Wave 1	.	.	1	.	.
H.S.I	1	.072	1.333	.975	1.824

*signifies a statistically significant variable, alpha 0.05

The summary of the GEE model shows that smokers in Wave 2 were significantly less likely (OR 0.162) to report that they use transit 'Less often', compared to what their anticipated use reported in Wave 1 (p<0.05). No other factor was found to be significant in the model.

5.2.6.3 Patios on Dundas Street

In Wave 1 the question was worded, “The City of Woodstock outdoor smoking bylaw will prohibit smoking on sidewalk areas of downtown cafés along Dundas Street. How do you anticipate the new smoking restrictions will impact your decision to visit these venues, would you say...”, and the response options were, ‘I will use transit more often’, ‘I will use transit Less often’, or ‘the restrictions will not affect how often I use transit’. In Wave 2 the question was re-worded to, ‘The City of Woodstock outdoor smoking by-law prohibits smoking on sidewalk areas of downtown cafés along Dundas Street – How has this impacted your decision to visit these venues? Would you say...’ and the response options were, ‘I am MORE likely to visit the cafes along Dundas Street’, or ‘I am LESS likely to visit’, OR ‘I have not been affected.’

The response proportions from the entire sample from Wave 1 did not differ significantly from the response proportions from the sub-sample that remained in Wave 2 ($p>0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 61. Response proportions are reported for the general population sample and the targeted sample.

Table 61. Anticipated and Reported Impact of the OSFO on Visiting Patios on Dundas Street

Smokers and Non-Smokers: The City of Woodstock outdoor smoking bylaw will prohibit smoking on sidewalk areas of downtown cafés along Dundas Street – How will this impact your decision to visit these venues in the future? Would you say: I will be more , likely to visit, I will be less likely to visit or I will not be affected?									
		Wave 1				Wave 2			
		MORE Likely To Visit	LESS Likely to visit	Will not be affected	Total	MORE Likely To Visit	LESS Likely to visit	Will not be affected	Total
Non-smokers - General Population Sample	Count	155	7	135	297	121	8	164	293
	%	52.2%	2.4%	45.5%	100.0%	41.3%	2.7%	56.0%	100.0%
Smokers –General Population Sample	Count	6	60	92	158	6	38	114	158
	%	3.8%	38.0%	58.2%	100.0%	3.8%	24.1%	72.2%	100.0%
Smokers – Targeted sample	Count	0	19	29	48	0	16	30	46
	%	.0%	39.6%	60.4%	100.0%	.0%	34.8%	65.2%	100.0%
Quitters – General Population Sample	Count	3	3	18	24	7	0	16	23
	%	12.5%	12.5%	75.0%	100.0%	30.4%	.0%	69.6%	100.0%
Quitters – Targeted sample	Count	0	5	8	13	3	0	10	13
	%	.0%	38.5%	61.5%	100.0%	23.1%	.0%	76.9%	100.0%

There is a difference is reported behaviour between smokers and non-smokers for this measure. In Wave 1, 52% (n=155) of the non-smokers from the general population survey reported that they anticipated they were more likely to visit downtown patios after the OSFO. In Wave 2 over 40% of the non-smokers reported that they were more likely to visit patios on Dundas Street (n=121). In Wave 1, 38% (n=60) of the smokers from the general population sample anticipated that they were less likely to visit downtown patios after they were regulated. In Wave 2, a smaller proportion, 24% (n=28) of smokers from the general population sample reported that they do visit downtown patios less.

To understand the change between anticipated and reported patronage of smoke-free patios across waves, a GEE model was built for smokers. The dependent variable was made dichotomous, combining the response options ‘Likely to Visit More’, with ‘Not Affected’, and ‘Likely to Visit Less Often’. The model was structured to predict the likelihood of reporting that the smokers report that they

are less likely to visit the patios. The summary of the findings from the GEE model are presented below in Table 62.

Table 62. Summary of GEE Model for Smokers, Likelihood of Reporting They are LESS Likely to Visit Downtown Patios along Dundas Street

Summary of GEE model results for Smokers					
How have the new smoking restrictions impacted your likelihood of visiting Downtown Patios along Dundas Street?					
Likelihood of reporting 'Less Likely to Visit', relative to More Likely or not affected					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.970	1.011	.570	1.795
Female	.	.	1	.	.
Age 55+	1	.919	1.072	.277	4.156
Age 40-54	1	.298	1.981	.547	7.173
Age 25-39	1	.332	1.940	.509	7.396
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.779	.920	.515	1.644
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.027*	1.886	1.073	3.315
Education – Medium and Low	.	.	1	.	.
Place of Residence – Outside Oxford County	1	.223	1.686	.728	3.906
Place of Residence – Oxford County (not Woodstock)	1	.420	.757	.385	1.488
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.360	.736	.381	1.419
General Population Sample	.	.	1	.	.
Wave 2	1	<.001*	.463	.327	.656
Wave 1	.	.	1	.	.
H.S.I	1	<.001*	1.550	1.278	1.879

*signifies a statistically significant variable, alpha 0.05

The summary of the GEE model shows that smokers in Wave 2 were significantly less likely (OR 0.463) to report that they are “likely visit patios Less often”, compared to what their anticipated use reported in Wave 1 (p<0.05). Respondents that had a higher education were significantly more likely (OR 1.886) to report that they are ‘Less Likely to Visit’ the patios along Dundas Street (p<0.05) relative

to respondents with low or medium education levels. Respondents that were more addicted to cigarettes, those with a higher HSI value were significantly more likely to report that they a “less likely” to visit patios along Dundas Street.

5.2.6.4 Public and Private Doorways

The same measure was used to understand anticipated and reported impacts the OSFO would have on regulated doorway environments. There was no distinction made with this measure between public or private doorways. In Wave 1 the question was worded, “The city of Woodstock outdoor smoking by law will prohibit smoking on sidewalks within 9 metres of doorways for all public buildings like city hall, and for private businesses that elect to make their doorway areas smoke free. How do you anticipate this will impact your decision to visit these venues in the future? Would you say..”, and the response options were, ‘I will be more likely to visit, ‘I will be less likely to visit’, or ‘I will not be affected’. In Wave 2 the question was re-worded to, ‘How has this impacted your decision to visit these venues? Would you say...’, and the response options were, “I am MORE likely to visit”, “I am LESS likely to visit,’ and “I have not been affected”.

The response proportions from the entire sample from Wave 1 did not differ significantly from the response proportions from the sub-sample that remained in Wave 2 ($p>0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 63. Response proportions are reported for the general population sample and the targeted sample.

Table 63. Anticipated and Reported Impact of the OSFO on Visiting Venues with Smoke-free Doorways

Smokers and Non-Smokers: The city of Woodstock outdoor smoking by law prohibits smoking on sidewalks within 9 metres of doorways for all public buildings like city hall, and for private businesses that elect to make their doorway areas smoke free. Wave 1: How will this impact your decision to visit these venues? Would you say: Wave 2: How has this impacted your decision to visit these venues? Would you say:									
		Wave 1				Wave 2			
		MORE Likely To Visit	LESS Likely to Visit	Will not be affected	Total	MORE Likely To Visit	LESS Likely to Visit	Have not been affected	Total
Non-smokers - General Population Sample	Count	107	5	185	297	79	4	212	295
	%	36.0%	1.7%	62.3%	100.0%	26.8%	1.4%	71.9%	100.0%
Smokers –General Population Sample	Count	6	16	135	157	5	13	140	158
	%	3.8%	10.2%	86.0%	100.0%	3.2%	8.2%	88.6%	100.0%
Smokers – Targeted sample	Count	0	5	43	48	0	4	42	46
	%	.0%	10.4%	89.6%	100.0%	.0%	8.7%	91.3%	100.0%
Quitters – General Population Sample	Count	2	1	21	24	5	0	19	24
	%	8.3%	4.2%	87.5%	100.0%	20.8%	.0%	79.2%	100.0%
Quitters – Targeted sample	Count	0	3	10	13	1	0	12	13
	%	.0%	23.1%	76.9%	100.0%	7.7%	.0%	92.3%	100.0%

There is a difference in reported behaviour between smokers and non-smokers for this measure. Most respondents, smokers and non-smokers, report that smoke-free doorway policies will not affect whether or not they visit a venue in Woodstock. In Wave 1, however, more than a third, 36.0% (n=107) of the non-smokers from the general population survey reported that they anticipated they will be more likely to visit venues with smoke-free doorways after the OSFO. In Wave 2, less but still more than a quarter of the non-smokers (26.8%, n=79) reported that after the OSFO was enacted, it is more likely that they will visit venues with smoke-free doorways (n=79). In Wave 1, 10.2% (n=16) of the smokers from the general population sample anticipated that they were less likely to visit venues with smoke-free doorways. In Wave 2, a smaller proportion, 8.2% (n=13) of smokers from the general population sample reported that after the OSFO they are less likely to visit venues with smoke-free doorways.

To understand the change between anticipated and reported patronage of businesses/services with smoke-free doorways, a GEE model was built for smokers, since smokers were more likely to report that the OSFO may negatively impact their decision to visit venues with smoke-free doorways. The dependent variable was made dichotomous, combining the response options 'More Likely to Visit', with 'Not Affected', and 'Less Likely to Visit'. The model was structured to predict the likelihood of respondents reporting that they are 'less likely to visit' venues with smoke-free doorways. The summary of the findings from the GEE model are presented below in Table 64.

Table 64. Summary of GEE Model for Smokers, Likelihood of Reporting They are LESS Likely to Visit Downtown Patios along Dundas Street

Summary of GEE model results for Smokers					
How have the new smoking restrictions impacted your likelihood of visiting venues with smoke-free Doorways?					
Likelihood of reporting 'Less Likely to Visit', relative to 'More Likely to Visit' or 'Not affected'					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.297	1.699	.627	4.599
Female	.	.	1	.	.
Age 55+	1	.408	2.162	.348	13.414
Age 40-54	1	.553	1.772	.268	11.735
Age 25-39	1	.983	1.022	.142	7.367
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.986	.992	.416	2.370
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.867	.924	.364	2.345
Education – Medium and Low	.	.	1	.	.
Place of Residence – Outside Oxford County	1	.030*	3.230	1.122	9.303
Place of Residence – Oxford County (not Woodstock)	1	.976	1.016	.373	2.766
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.842	.916	.385	2.176
General Population Sample	.	.	1	.	.
Wave 2	1	.101	.609	.337	1.101
Wave 1	.	.	1	.	.
H.S.I	1	.004*	1.496	1.139	1.965

*signifies a statistically significant variable, alpha 0.05

The summary of the GEE model shows that smokers in Wave 2 were less likely (OR 0.609) to report that they are “Less Likely” to visit venues with smoke-free doorways, compared to what respondents reported in Wave 1 (anticipated use) however this finding was not statistically significant ($p > 0.05$). Respondents that were from a community outside of Oxford County were significantly more likely (OR 3.230) to say that they are “less likely” to visit venues with smoke-free doorways ($p < 0.05$)

relative to respondents from Woodstock. Respondents that were more addicted to cigarettes, those with a higher HSI value, were significantly more likely to report that they a “less likely” to visit venues with smoke-free doorways.

5.2.6.5 Outdoor Events

The question asked to understand impact on outdoor events was worded the same in each Wave because no event had been added to the Woodstock outdoor events Schedule. Therefore the measure collects opinion over time with no change in policy.

In Wave 1 the question was worded, “The City of Woodstock outdoor smoking bylaw will prohibit smoking at events like Cow-a-palooza and Sidewalk Days – how will this impact your decision to attend this event in future years? Would you say...”, and the response options were, “I will be MORE likely to attend”, “I will be LESS likely to attend’, or ‘I will not be affected”. In Wave 2 the wording was changed slightly to, “The City of Woodstock outdoor smoking bylaw can prohibit smoking at events like Cow-a-palooza and Sidewalk Days. If the city made these events smoke-free, how would this impact your decision to attend these events this year? Would you say...”, and the response options were changed slightly to be, “I was MORE likely to attend’, ‘I was Less likely to attend’, or “I was not affected’.

The response proportions from the entire sample from Wave 1 did not differ significantly from the response proportions from the sub-sample that remained in Wave 2 ($p>0.05$, see Appendix J). The results from the longitudinal measure, responses from Wave 1 and Wave 2 are presented below in Table 65. Response proportions are reported for the general population sample and the targeted sample.

Table 65. Anticipated and Reported Impact of the OSFO on Attending Smoke-free Outdoor Events

Smokers and Non-Smokers: If the City made these events smoke-free, how would this impact your decision to attend these events this year? Would you say... you would go More, go Less or Not Be Affected?									
		Wave 1				Wave 2			
		MORE Likely To Attend	LESS Likely to Attend	Will not be affected	Total	MORE Likely To Attend	LESS Likely to Attend	Will not be affected	Total
Non-smokers - General Population Sample	Count	102	3	194	299	102	1	193	296
	%	34.1%	1.0%	64.9%	100.0 %	34.5%	.3%	65.2%	100.0 %
Smokers –General Population Sample	Count	5	51	102	158	5	44	107	156
	%	3.2%	32.3 %	64.6%	100.0 %	3.2%	28.2%	68.6%	100.0 %
Smokers – Targeted sample	Count	0	17	31	48	1	17	29	47
	%	.0%	35.4 %	64.6%	100.0 %	2.1%	36.2%	61.7%	100.0 %
Quitters – General Population Sample	Count	3	3	18	24	8	0	16	24
	%	12.5%	12.5 %	75.0%	100.0 %	33.3%	.0%	66.7%	100.0 %
Quitters – Targeted sample	Count	0	4	9	13	5	1	7	13
	%	.0%	30.8 %	69.2%	100.0 %	38.5%	7.7%	53.8%	100.0 %

There is a difference is reported behaviour between smokers and non-smokers for this measure. Most respondents, smokers and non-smokers, report that a policy which prohibits smoking at outdoor events is not likely to affect their attendance (at least 60% of respondents from each group reported this). However, smokers and non-smokers differed in their proportions of respondents that thought such a policy would affect their decision to attend outdoor events.

In Wave 1, more than a third, 34.1% (n=102) of the non-smokers from the general population survey reported that they anticipated they were more likely to visit venues outdoor events if smoking was prohibited through the Woodstock OSFO. In Wave 2, approximately the same proportion of non-smokers reported that they would be more likely to attend smoke-free outdoor events (35.4, n=102). In Wave 1, 32.3% (n=51) of the smokers from the general population sample anticipated that they were less likely to attend outdoor events if smoking at those events was regulated. In Wave 2, approximately the same proportion, 28.2% (n=44) of smokers from the general population sample reported that they are less likely

to attend outdoor events that prohibit smoking. People who quit between waves reported very similar proportions to non-smokers in Wave 2.

To understand the change in anticipated and reported visitation/attendance at smoke-free outdoor events, a GEE model was built for smokers, since smokers were more likely to report that they are less likely to attend outdoor smoke-free events, and this impact needs to be understood since it could represent an impact on attendance at city sponsored events, which are intended to be accessible. The dependent variable was made dichotomous, combining the response options 'More Likely to Attend, with 'Not Affected', and 'Less Likely to Attend. The model was structured to predict the likelihood of smokers reporting that they are less likely to attend outdoor events that have prohibited smoking. The summary of the findings from the GEE model are presented below in Table 66.

Table 66. Summary of GEE model for Smokers, Likelihood of reporting they are LESS likely to Attend Outdoor Events if Smoking is Regulated

Summary of GEE model results for Smokers					
How have the new smoking restrictions impacted your likelihood of attending outdoor events where smoking has been regulated?					
Likelihood of reporting ‘Less Likely to Visit’, relative to ‘More Likely to Visit’ or ‘Not affected’					
Parameter	Hypothesis Test		Odds Ratio	Interval for Odds Ratio	
	df	Sig.		Lower	Upper
Male	1	.673	1.133	.636	2.019
Female	.	.	1	.	.
Age 55+	1	.357	1.842	.502	6.763
Age 40-54	1	.096	2.974	.823	10.748
Age 25-39	1	.241	2.245	.581	8.672
Age 18-24	.	.	1	.	.
No Children (under 18) in Household	1	.703	.884	.470	1.663
Children (under 18) in Household	.	.	1	.	.
Education – High	1	.411	1.260	.726	2.185
Education – Medium and Low	.	.	1	.	.
Place of Residence – Outside Oxford County	1	.740	1.196	.415	3.440
Place of Residence – Oxford County (not Woodstock)	1	.851	1.061	.572	1.968
Place of Residence – Woodstock	.	.	1	.	.
Targeted sample	1	.856	1.062	.552	2.043
General Population Sample	.	.	1	.	.
Wave 2	1	.085	.745	.533	1.042
Wave 1	.	.	1	.	.
H.S.I	1	.001*	1.334	1.118	1.592

*signifies a statistically significant variable, alpha 0.05

The summary of the GEE model shows that smokers in Wave 2 were less likely (OR 0.745) to report that they are “Less Likely” to attend outdoor events where the smoking is prohibited, relative to what respondents reported in Wave 1 (anticipated use) however this finding was not statistically significant ($p > 0.05$). The only statistically significant factor was heaviness of smoking. Respondents that were more addicted to cigarettes, those with a higher HSI value, were significantly more likely to report that they a “less likely” to visit outdoor events that prohibit smoking.

5.2.6.6 Summary of Measures of Changes in Anticipated and Reported Use of Facilities, Businesses and Attendance at Public Events

The key finding from this set of questions was that the OSFO did not negatively impact the use of city environments, such as parks and recreation fields, transit, or public buildings with smoke-free doorways. The majority of smokers and non-smokers reported that the OSFO did not affect their decisions to use, visit or attend events because of the anticipated regulation or enacted OSFO. Approximately 11% of smokers from the general population sample did report in Wave 2 that they are now less likely to use parks and recreation fields. This measured impact may or may not be considered acceptable by policy-makers.

In Wave 1, a large proportion of non-smokers anticipated, for some regulated environments such as parks and recreation fields, and transit, and doorways, that they would use or visit smoke-free spaces more once the by-law was in place. However, after the OSFO was in place fewer non-smokers reported that the OSFO would make it more likely that they visit or use these spaces. There were two exceptions, being patio environments and outdoor events. A relatively large proportion of non-smokers, in Wave 2, reported that they would be ‘more likely’ to visit smoke-free patios and outdoor events if smoking was prohibited. This is interesting since these 2 environments were not fully regulated by the OSFO. Patios – only along Dundas Street – were made smoke-free through the OSFO with the overwhelming majority of outdoor patios being allowed to have smoking provided they were in compliance with the provincial law (which permits smoking if there is no roof). The outdoor event, Cow-a-palooza, the example given in both waves, was not added to the schedule for the by-law. The results from this survey show that more than 40% of non-smokers would be more likely to patronize outdoor patios if they were smoke-free, and 35% of non-smokers would be more likely to attend outdoor events if smoking was prohibited.

Smokers from the general population sample reported that a policy making patios and outdoor events smoke-free would make them less likely to visit. In Wave 2, after the OSFO was enacted, 24% of these smokers reported that they would be less likely to smoke-free patios, and 28% reported they would be less likely to attend outdoor events.

5.3 Wave 2 Specific Measures

In the Wave 2 survey, 6 measures were collected to measure support for the OSFO and to understand if the OSFO had influenced smoking behaviour. Some measures were asked of all participants and some questions are specifically for smokers and quitters. These questions were asked to inform research objectives 4 and 5, specifically to understand how the OSFO had influenced respondents' reported support or opposition to the by-law, and reported smoking behaviour.

Questions that measured support for or opposition to the OSFO asked about the by-law's restrictions, and whether or not the OSFO was good for their community and the health of the children in their community. Questions that measured if the OSFO had influenced smoking behaviour asked smokers about their intentions to quit and if the by-law had helped them to cut down on the number of cigarettes they smoked per day. Quitters were asked if the OSFO had helped them to stay quit.

5.3.1 Reported Support for OSFO

Wave 2 of the survey included 3 questions to measure support for, or opposition to the by-law, and if participants in the survey believed the by-law was good for the community, and if the by-law was good for the health of the children in the community. These questions were asked of each respondent.

The results are presented as proportions, based on smoking status and the sample respondents were in (general population or targeted sample).

The preamble to these questions was: *The City of Woodstock passed a bylaw almost a year ago, September 2008, that restricts smoking in 7 different outdoor areas including parks and recreational fields. The bylaw prohibits smoking within 30 metres of playground equipment in city parks and within 15 metres of a recreation field when it is being used.*

5.3.1.1 Support for the outdoor smoking restrictions in the 7 outdoor environments

The first measures in this series asked: *'Do you support or oppose the restrictions on 7 outdoor smoking environments in Woodstock?'* and the response options were, 'strongly oppose', 'oppose', 'support', or 'strongly support'.

The proportions are reported in Table 67 below, reported based on smoking status and population sample.

Table 67. Support of Opposition for the Smoking Restrictions on 7 outdoor environments in Woodstock

<i>Do you support or oppose the restrictions on 7 outdoor smoking environments in Woodstock?</i>						
		Strongly Oppose	Oppose	Support	Strongly Support	Total
Non-smokers - General Population Sample	Count	9	12	89	188	298
	%	3.0%	4.0%	29.9%	63.1%	100.0%
Smokers – General Population Sample	Count	18	28	84	27	157
	%	11.5%	17.8%	53.5%	17.2%	100.0%
Smokers – Targeted sample	Count	2	12	25	8	47
	%	4.3%	25.5%	53.2%	17.0%	100.0%
Quitters – General Population Sample	Count	1	1	9	13	24
	%	4.2%	4.2%	37.5%	54.2%	100.0%
Quitters – Targeted sample	Count	1	1	4	6	12
	%	8.3%	8.3%	33.3%	50.0%	100.0%

Most non-smokers and smokers reported they were supportive of the restrictions. Only 7% of non-smokers said they either opposed or strongly opposed the OSFO (n=21). The general population sample of smokers was largely supportive of the by-law also – with 70.7% reporting that they support or strongly support the OSFO (n=111). Similarly 78.7% (n=37) of the smokers from the targeted sample surveyed were supportive or strongly supportive of the OSFO. People who quit smoking between waves were also very supportive of the by-law, with more than half reporting that they ‘strongly support’ the new by-law.

5.3.1.2 Reported Agreement that the OSFO has been a good thing for the community

The second measure asked respondents, “The restriction on smoking in 7 different outdoor areas including parks and recreational fields has been a good thing for the community. Do you...?” And the response options were, ‘strongly disagree’, ‘disagree’, ‘agree’, and ‘strongly agree’. The results are presented below in Table 68.

Table 68. Agreement that the OSFO was good for the community

<i>The restriction on smoking in 7 different outdoor areas including parks and recreational fields has been a good thing for the community. Do you...?</i>						
		Strongly Disagree	Disagree	Agree	Strongly Agree	Total
Non-smokers - General Population Sample	Count	3	12	127	156	298
	%	1.0%	4.0%	42.6%	52.3%	100.0%
Smokers – General Population Sample	Count	6	34	91	26	157
	%	3.8%	21.7%	58.0%	16.6%	100.0%
Smokers – Targeted sample	Count	1	10	30	6	47
	%	2.1%	21.3%	63.8%	12.8%	100.0%
Quitters – General Population Sample	Count	0	3	10	11	24
	%	.0%	12.5%	41.7%	45.8%	100.0%
Quitters – Targeted sample	Count	1	0	5	6	12
	%	8.3%	.0%	41.7%	50.0%	100.0%

The majority of smokers and non smokers agree or strongly agree that the OSFO was good for the community. More than three quarters of smokers from the general population survey (74.6%, n=117) agreed or strongly agreed that the by-law was good for the community. Almost four fifths of smokers from the targeted sample agreed, or strongly agreed that the OSFO was good for the community. Almost

all non-smokers agreed or strongly agreed the OSFO was good for the community (95%, n= 283). Similarly, almost all respondents who quit between waves agreed the OSFO was good for the community (89%, n=32).

5.3.1.3 Reported Agreement that the OSFO was good for the health of the children of Woodstock

The final question in Wave 2 included to measure support for the idea that the by-law had been good for children in Woodstock. The question was, “*The restriction on smoking in 7 different outdoor areas including parks and recreational fields has been good for the health of the children in the community. Do you...*”, and the response options were, ‘strongly disagree’, ‘disagree’, ‘agree’, and ‘strongly agree’. The results are presented below in Table 69.

Table 69. that the OSFO was good for the health of the Children in the community

		Strongly Disagree	Disagree	Agree	Strongly Agree	Total
<i>The restriction on smoking in 7 different outdoor areas including parks and recreational fields has been good for the health of the children in the community. Do you...?</i>						
Non-smokers - General Population Sample	Count	3	9	97	183	292
	%	1.0%	3.1%	33.2%	62.7%	100.0%
Smokers – General Population Sample	Count	4	24	83	44	155
	%	2.6%	15.5%	53.5%	28.4%	100.0%
Smokers – Targeted sample	Count	1	6	25	15	47
	%	2.1%	12.8%	53.2%	31.9%	100.0%
Quitters – General Population Sample	Count	1	0	10	13	24
	%	4.2%	.0%	41.7%	54.2%	100.0%
Quitters – Targeted sample	Count	0	1	4	8	13
	%	.0%	7.7%	30.8%	61.5%	100.0%

The overwhelming majority of smokers and non-smokers agreed and strongly agreed that the OSFO had been good for the health of children in the community. Almost all the non-smokers from the general population survey agreed or strongly agreed (95.9%, n=280) that the OSFO had been good for the

health of the children in the community. Most smokers, from the general population sample agreed, or strongly agreed (81.9%) that the by-law was good for the health of the children, and 85.1% of the targeted sample of smokers agreed or strongly agreed. The respondents who quit between waves had levels of support similar to non-smokers, with 94.6% reporting they agree or strongly agree that the OSFO was good for the health of the children in the community.

5.3.1.4 Summary of Wave 2 only measures of support

The community was very supportive of the OSFO and the majority of respondents agreed that the by-law had been good for the community and for the health of the community. In particular, respondents agreed that the by-law had been good for the health of the children of Woodstock.

5.3.2 Measures for Smokers and Quitters – Reported Changes in Smoking Behaviour

Three measures were collected in Wave 2 to understand how the OSFO may have influenced or supported changes in smoking behaviour, specifically how the OSFO may have affected smokers' intentions to quit, influenced the number of cigarettes smoked, and supported people who quit smoking to stay quit.

5.3.2.1 Reported Changes in Quit Intentions for Smokers

The measure developed to understand quit intentions asked smokers in Wave 2, “*Has the smoke-free law made you more likely to quit smoking?*”. The response options were, ‘yes’, and ‘no’. Response proportions are below in Table 70.

Table 70. Did the OSFO make Smokers More Likely to Quit Smoking?

		Yes	No	Total
<i>Has the smoke-free law made you more likely to quit smoking</i>				
Smokers – General Population Sample	Count	23	130	153
	% within	15.0%	85.0%	100.0%
Smokers – Targeted sample	Count	12	35	47
	% within	25.5%	74.5%	100.0%

More than 25% of the smokers from the targeted sample (n=12) reported that the OSFO had made it more likely that they would quit smoking, and 15% of the smokers from the general population sample (n=23) reported that the by-law had made it more likely that they would stop smoking. The targeted sample is known to smoke in at least one of the outdoor environments that was regulated by the by-law; this population has been impacted by the restrictions which may explain the higher proportion of respondents reporting that the by-law has influenced their intention to quit smoking.

5.3.2.2 Quitting Behaviour and the OSFO

A similar measure to what was reported in 5.3.2.1 was asked only to quitters about the OSFO and if the by-law had helped the quitters to stop smoking. The question was worded, ‘*Did the smoke-free law help you to quit smoking?*’. Proportions from these measures are included in Table 71 below.

Table 71. People who Quit Smoking: Did the OSFO Help you quit?

		Yes	No	Total
<i>Did the smoke-free law help you to quit smoking?</i>				
Quitter- General Population Sample	Count	7	12	19
	%	36.8%	63.2%	100.0%
Quitter – Targeted sample	Count	3	6	9
	%	33.3%	66.7%	100.0%

More than a third of the participants who quit between Wave 1 and Wave 2 said that they OSFO helped them to quit. The proportion was slightly higher for participants from the general population sample, however the proportions of ‘quitters’ from the targeted sample who reported the OSFO helped them to quit smoking did not differ significantly ($p>0.05$).

Quitters only were then asked “*Has the smoke-free law helped you stay a non-smoker?*” and the response options were, ‘yes’, and ‘no’. The proportions are reported below in Table 71.

Table 72. Quitters – Has the OSFO helped you stay a non-smoker?

		Has the smoke-free law helped you stay a non-smoker?		
		Yes	No	Total
Quitter- General Population Sample	Count	8	11	19
	%	40.0%	55.0%	100.0%
Quitter – Targeted sample	Count	6	4	10
	%	60.0%	40.0%	100.0%

Approximately half of the ‘quitters’ surveyed reported that the OSFO had helped them to stay a quitter. Of the respondents who quit from the general population sample, 40% (n=8) reported that the OSFO helped them stay quit. A higher proportion of quitters from the targeted sample reported the OSFO helped them stay quit (60%, n=6).

5.3.2.3 Reported Changes in the Number of Cigarettes Smoked

The final measure collected only in Wave 2 asked of smokers, “*Has the smoke-free law made you cut down on the number of cigarettes you smoke?*”, and response options were ‘yes’, and ‘no’. The findings are presented below in Table 73, for smokers from the general population sample and the targeted sample.

Table 73. Smokers – Has the OSFO Helped you Cut Down on the Number of Cigarettes you Smoke?

<i>Has the smoke-free law made you cut down on the number of cigarettes you smoke?</i>				
		Yes	No	Total
Smokers –	Count	46	109	155
General Population Sample	%	29.7%	70.3%	100.0%
Smokers –	Count	20	28	48
Targeted sample	%	41.7%	58.3%	100.0%

Almost a third of the smokers, recruited in the general population sample reported that the OSFO had helped them cut down on the number of cigarettes they smoke (30%, n=46). A slightly higher proportion of smokers recruited through the targeted sample reported that the OSFO had helped them cut down on the number of cigarettes they smoke (42%, n=20). The difference between these proportions was not statistically significantly different (p>0.05).

5.4 Results of the Qualitative Study

The qualitative study was designed to address research objective #7, which asked “*How universal are the findings from the Woodstock By-Law?*” This study sought to understand why and how the city undertook the designing, enacting, and enforcing of a comprehensive OSFO. This qualitative study also sought to identify any specific lessons or findings from the process undertaken that would be applicable or helpful to other communities. The qualitative study involved key informant interviews with identified public health and city staff and an elected official who were involved in different aspects of the by-law, from development to enforcement.

This study used the framework approach to analyse the collected data, meaning to analyse the transcripts and quotes collected through the interviews with the key informants. The framework approach involves 5 steps, including 1) data familiarization, 2) identifying a thematic framework, 3) indexing, 4) charting and finally 5) mapping and interpretation. These steps were described in the Analysis section above.

Below are details of the sample, and the findings from each of the 5 steps in the framework approach and a summary of findings as they relate to the research objectives.

5.4.1 Sample Characteristics

The sample included six key informants (participants), three from Oxford County Public Health, 2 from the City of Woodstock, and one elected official from Woodstock City Council. Participant identities were represented by letters and numbers; for example, the 3 participants from public health were identified as PH1, PH2, and PH3. The participants from the city of Woodstock were identified as ME1, and ME2 (municipal employee), and the elected official was simply EO1.

The elected official chosen voted in favour of the new by-law – as did all members of council. The other key informants had worked in the community for a range of time – from less than 2 years to more than 20 years. Some key informants lived in Woodstock and others commuted in for their job.

5.4.2 Data Familiarization and Emergent Thematic Framework

The familiarization step draws on both a priori research questions that are linked to the aims, and objectives of the study, and issues raised by the participants through the interviews. Consistent with a framework approach, the focus group transcripts were listened to, transcribed, read and re-read. This ensured the researchers involved with the study had familiarized themselves with the data and the issues and ideas discussed by the participants. This was done by both the principal investigator (RDK) and a research assistant familiar with the framework approach (CM).

Based on the data familiarization, and the research objectives identified prior to starting this research effort, the data were grouped into the following 3 broad groups or themes:

- 1) Conditions unique to Woodstock,
- 2) Implementation processes
- 3) Partnerships

Following the identification of the broad themes, sub-themes were identified. These themes and sub-themes been summarized in Table 74 below.

Table 74. Qualitative Data Themes and Sub-themes

Index	Theme
1.	Unique conditions to Woodstock
1.1	Economic Prosperity
1.2	Progressive and Proactive City Council
1.3	High smoking prevalence, proximity to tobacco growing activities
1.4	Success of Last Smoke-free By-law
2.	Implementation Processes
2.1	Incremental and Strategic Policy Development
2.2	Consistencies with city priorities
2.3	Evidence Based Planning
2.4	Innovation of effective policy mechanisms (Schedules A and B)
2.5	Minimal funding required
2.6	Enforcement / administration of by-law effective, easy
2.7	Focus on it being ‘the right thing to do’
3.	Partnerships
3.1	Interagency Involvement and Partnership
3.2	History of Co-operation

5.4.3 Indexing and Charting

Each quote collected in the research process was then re-examined and assigned a classification index number to match one of these themes and sub-themes, as itemized in Table 74 above. After all quotes were indexed, the groups of quotes were charted in order. That is, all quotes for each theme and sub-theme were moved into tables allowing the different quotes to be presented together. The quotes’ provider was indicated in a column. The complete set of indexed quotes can be found in Appendix K.

The themes and their sub-themes are discussed below supported by quotes.

5.4.3.1 Unique Conditions to Woodstock

The first theme that emerged from the key informant interviews was the different aspects of Woodstock that may or may not be unique to that community. This theme explores some interesting community characteristics including recent economic prosperity, what motivated the City Council, some community smoking prevalence, and the history of previous smoke-free policies. These themes are explored to understand if there was anything specific to Woodstock at the time when this policy was developed that would present a challenge for other communities interested in replicating or developing similar policies. It is important to understand what the conditions were like, and how 'ready' the community was.

One of the measures suggested by the IARC handbook for evaluating tobacco control policies is to assess the state of existing smoke-free policies prior to a new regulation. The state of tobacco control regulation, particularly smoke-free policies, is detailed below.

These ideas were explored by the research measure #39, which was asked of each key informant.

Why was Woodstock ready for the by-law?

Probes:

- *Did the recent enactment of other legislation (such as the Smoke-free Ontario Act) make it easier or harder to pass such a by-law?*
- *Did the local data on smoking rates in Woodstock or Oxford County help justify such a by-law?*
- *What were the economic conditions of the community when the by-law was created?*

5.4.3.1.1 Economic Prosperity

One issue that was identified by the research team was to understand what impact, if any, the recent financial investments in the manufacturing sector in Woodstock may have played in the decision of council to pass a very comprehensive and leading policy. Was it the case that City Council, buoyed up with confidence, felt they were in a position to take political risks? Or did the recent investment not impact the behaviour of Council?

Woodstock was the location of the most recent assembly plant from Toyota in North America. The plant announcement arguably re-defined Woodstock as a major player in the North American automotive world and promised to bring economic health and prosperity to many Woodstock households. The investment also ensured that the area municipality will have an increased industrial tax base for years

to come. Informant PH2 described what getting the plant meant for the community and how it may have been the impetus to start re-shaping Woodstock:

“I think that was a very proud moment for [the mayor] when they announced the plant to come in because it brings stability it brings prestige and pride as well. And I think [the outdoor smoke-free by-law] is a by-product, you know what other things can happen in order to make the city look better to the people who live within the community and the people who are outside of the community.”

Other key informants agreed the plant announcement had helped the community of Woodstock to feel secure with stable employment, however there was not a clear sense that this new investment played a direct part at all in the development or passing of the OSFO. This was communicated clearly by EO1 who said *“Did Toyota help us do a smoking by-law? No. Not at all. In fact a lot of this action happened before the Toyota announcement.”*

Woodstock is unique in lots of different ways. EO1 also described the nature of the City Council as being pragmatic and interested in getting things done. This, it was argued, is consistent with Woodstock and its history. The community has relied on its own innovation and ingenuity given its lack of other physical resources. This was explained by EO1:

“We’ve always been innovative in a sense that we’ve had to try harder, I mean we don’t have a whole lot of [natural] resources so we have to find unique ways of creating a lifestyle here in our city. It’s always been there- the public isn’t aware of our innovation in terms of our industrial community, I think at one point there was one robot for every two citizens.”

Woodstock, therefore, did have some unique economic conditions around the time of the development of the OSFO, and the community including the City Council felt a sense of pride and saw opportunities at that time to advance and improve the community. However the elected official interviewed did not feel there was a direct causal link from the economic investment and the development of the OSFO.

5.4.3.1.2 Progressive and Proactive City Council

Woodstock City Council was not the first community in Ontario to develop and pass a by-law that regulated smoking in public outdoor spaces, but at the time the Woodstock OSFO was passed, it was the most comprehensive by-law, regulating more environments than any other by-law in Ontario. There was a sense that the Woodstock City Council had a history of being progressive and proactive in the past with respect to tobacco control. Informant PH1 provided the example of the city regulating smoking

through the lease options to patios on the main street, and being one of the first communities in south western Ontario to have a comprehensive indoor smoke-free by-law. PH1 went on to say, “...*the [Woodstock city] council has been more open maybe than other councils in terms of pushing that envelope.*”

Informant PH3 added that the council likes to put Woodstock on the map for being innovative and proactive. Informant PH3 further described the importance of community groups, public health advocates and citizens to engage city councils on this subject. This engagement involves communicating with them, as PH3 describes below.

“First of all ask the question, go to council and ask, because honestly we were a bit surprised when we initially wrote the letter and thought, oh you know it will be years down the road that we’ll even get a reply. We might even have to write a second or third letter, but they responded right away so I think the first lesson is ask the question. People are open and receptive now, things are really developing quickly. Ask the question and you will probably get a positive response.”

The key informants from Public Health suggest that council’s openness to these ideas was a helpful characteristic of the community that helped enact the OSFO.

5.4.3.1.3 High smoking prevalence, proximity to tobacco growing activities

There are some aspects of Woodstock that do make it different from other communities, but these features may also make them an unlikely place to have a very comprehensive outdoor smoke-free by-law. Specifically, the community has high levels of smoking prevalence (relative to the rest of the province, and neighbouring communities), and is also in close physical proximity to tobacco growing communities in the southern part of Oxford County.

The research team wondered if the OSFO was part of a larger plan by the health unit to address high rates of smoking prevalence. With higher rates, one could argue, that a health unit may need to have more aggressive or more comprehensive tobacco control measures to bring the community closer to provincial averages. When asked about the role the higher smoking rates played in the by-law development informant PH3 explained that this potential barrier wasn’t even well understood, “*We didn’t even have a good sense of what the smoking stats were until a couple years ago because they would tease out Oxford from different health status reports- we never had anything Oxford specific.*”

ME1 explained the extent to which the high smoking rates were considered when designing and developing on the by-law, “*We didn’t concern ourselves with whether we were a higher smoking community or a lower smoking community. [Passing the by-law] was going to be a decision of council’s*

to whether or not they wanted to pass this by-law, and they were really the only ones we concerned ourselves with. It was a unanimous decision, even the smokers on council [voted in favour of passing the by-law].”

With respect to the issue of tobacco growing in the community, Informant PH2 indicated that passing such an OSFO in Woodstock, or any municipality in Oxford county “... [Is] *a huge success story because of the barriers you do face in terms of the tobacco industry here in Oxford county*”. However other informants suggested that the tobacco industry influence is present, but not a dominant force in Woodstock.

Despite smoking rates being quite high in Woodstock, the analysis did not show that this was either a motivator or rationale for the by-law, nor was it considered a reason to not go ahead with the policy.

5.4.3.1.4 Success of Last Smoke-free By-law

It was detailed in section 1.6, Woodstock passed a comprehensive public and workplace by-law that banned smoking in all enclosed public places including restaurants, bars, bingo halls, and other hospitality venues, and all other places of employment (including volunteers). This by-law was not among the first such by-laws in Ontario but was in the first-half, being implemented 3 years after the first such by-law came into effect (in near-by Waterloo Region). The Smoke-free Ontario Act came into force in 2006, which did not change smoke-free spaces significantly in Woodstock, however did further regulate outdoor patios of bars and restaurants requiring all patios with a roof to be smoke-free.

Some informants agreed that the OSFO built on the community’s successful tobacco control policy history. Informant EO1 explained that in 2003 there was good compliance, “*Very few people wanted to challenge it... we had strong public support [for the 2003 by-law]. We had vocal minority that said, ‘it’s my right’ [to smoke]. And I think the public became intolerant of that [sentiment].*” Informant EO1 went on to describe why the public supported the 2003, was because of the indisputable harm SHS can cause, “*I think that’s what made it happen [knowledge about the harms of SHS], and that’s the context in which you say ‘your behaviour impacts me and I shouldn’t have to have that kind of behaviour’.*”

5.4.3.2 Implementation Process

The second theme that emerged from the key informant interviews was the importance of the different steps taken in the implementation process. There are many steps to take before a community has a by-law in place and enforced. The key informants were interviewed about the process that was

undertaken to create community interest and support for an OSFO, to have the city design and draft a by-law, have council vote and pass the by-law and then implement and enforce it. Each of these processes engaged different strategies by different key informants. This theme was explored to understand if the processes undertaken by the community in Woodstock were unique or if they were a standard public health policy development process that could be similarly followed by another community.

Many of these ideas were explored using measure 39, 40, 41, and 42:

What do you think were the critically important steps in the creation of the by-law

Probes:

- *Public involvement – allowing public input?*
- *How did the city and the health unit work together?*
- *The role of scientific evidence to inform public health policy?*

Who was the by-law primarily designed to protect or support?

Probes:

- Workers? Children? Parents? Smokers? Non-Smokers?

How effective have the optional Schedules in the by-law been (private doorways and special events)?

Describe the first year of enforcement

5.4.3.2.1 Incremental and Strategic Policy Development

The Woodstock OSFO was building on, and expanding the environments regulated by previous smoke-free legislation. Some of the key informants discussed how this incremental approach was a key strategy in the success of the OSFO. The Woodstock OSFO was implemented 5 years after the community's indoor smoke-free public/workplace by-law, and 2 years after the Province's Smoke-free Ontario Act. Some informants discussed how it was strategic to build on previous policies, and continue to incrementally expand smoke-free spaces. Informant PH2 explained how the previous success helped to ensure the OSFO was successful, "*I think it was an easy sell to the municipal government because of the smoke-free [Ontario] Act,*", PH2 went on to explain that the creation of similar policies in other parts of the province also helped pass the OSFO in Woodstock, "*[it was relatively easy] because of what municipalities have done across Ontario in recent years.*" This point referred to by-laws in places like Collingwood, Ontario.

Some key informants talked about the importance of other OSFO in Ontario. The Woodstock OSFO was not the first outdoor smoking ban, making the Woodstock by-law perhaps seem less radical or unconventional in a provincial context. Several key informants described Woodstock as being ‘conservative’, so it could be difficult for a council in such a community to have public support for a policy that appeared partisan or originating from an advocacy group that represented minority voices. Some key informants discussed the benefits for council passing the first comprehensive by-law in the province which demonstrated leadership among municipalities in a policy domain that was already established. Being first might have been difficult, but being among the first – and being the most comprehensive - was an appropriate strategy for Woodstock.

Timing was also important when public discussions about the by-law began with the Interagency Council and City Council. Informant PH3 described, “*When [the Interagency Council] wrote the letter requesting [City Council] look at the smoke-free parks issue it was shortly after some kids in Toronto had been in the newspaper about wanting the Santa Claus parade to be smoke-free. It did get a fair bit of press around here. The Interagency Council thought that at that point it was time to get moving again, .. our focus has always been protect the children.*” As well as timing, the focus or framing of the message was also highlighted by some key informants as an important strategy. Focusing the message on children and children’s health was considered important. The Woodstock Santa Claus Parade was one of the suggested outdoor events that could be regulated under the by-law, and included in the initial communication from the Interagency Council to City Council. Including this focus ensured that the message was consistent with the priorities of the Interagency Council (protect children). Informant PH3 discussed the benefit of building on the momentum that can be generated by the media, “*...When there’s press about something smoke-free, then you strike, taking advantage of what’s going on in other places and of course giving the impression that we can’t be left out here. Woodstock wants to be the leader.*”

The importance of staying focused on health and particularly children’s health was described further by Informant ME1, who described the different policy options that were provided to council to consider when they voted on a policy.

“[One by-law] option focused on children and where they congregate. The next option, which takes it to a higher extreme, was no smoking anywhere in a park or even on municipal properties. But to get there you have to decide that some adult walking on a trail with their dog can’t smoke and that becomes a much more difficult argument. Or someone sitting in a car on municipal property, sitting alone in their car and not being able to smoke. It’s hard to build an argument, a health impact, and influencer or impact in either of those scenarios. So if we were to recommend going [with the more

comprehensive option] *then I think we wouldn't have met with much success. I think the arguments are much stronger going the way we went, at least as an initial step.*"

Informant ME1 discusses the idea that this OSFO may further develop and be made more and more comprehensive, but there is a strategy to starting with a clear and easily defended policy position.

Finally, Informant ME1 provided insight into a strategy for policy development. ME1's advice is to not focus undue effort on pre-policy support studies or assessments, but rather to enact a law and enforce it:

"Don't presume to think this needs to be a major undertaking. The amount of effort you put in to actually implementing should be more than the amount of effort you put in to the actual passing of this and that's what we've found and that's the way it should be. Your resources and getting the signage out and information and publications out is where you really want to focus."

5.4.3.2.2 Consistencies with city priorities

Every community works to project an image or a 'brand' that helps define who they are. Informant PH1 describes Woodstock's look and feel, and how the OSFO fits with this image. PH1 said, *"Our moniker is the friendly city and I think [the new OSFO] plays into that, definitely, there's a perception and I think a good one that it's a friendly city, that it is family oriented, you know it's a good place to raise families"*.

5.4.3.2.3 Evidence Based Planning

The Interagency Council presented City Council with science-based evidence about the harms of outdoor tobacco smoke and included with their letter a published, peer-reviewed manuscript from a team of air quality scientist from Stanford University in California. Informant PH3 explains: *"[the Interagency Council] sent a copy of the whole [peer-reviewed] article with the letter in September 2007. I wondered myself how much of an impact that particularly scientific evidence had because that was hot off the press... And [the Interagency Council] included the surgeon general's report from 2006"*

Informant PH1 explained the importance of using evidence based knowledge in developing the OSFO. When asked if the recently published peer-reviewed article that demonstrated outdoor smoking could negatively impact air quality, PH1 responded *"The study helped, that there is no safe level of secondhand smoke always good to continuously push that because there are still people out there that don't buy that so using the study and the scientific basis helps as well"*

Informant ME1 agreed that the evidence from peer-reviewed science was important because establishing this issue as primarily a health concern was important, *“Health has got to play a priority in why we do this stuff.”*

Key informants agreed that the use of credible and current science was helpful in advancing this policy with the City Council, particularly when the evidence demonstrated a public health risk.

5.4.3.2.4 Innovation of effective policy mechanisms (Schedules A and B)

The city staff charged with the responsibility of drafting the by-law developed a mechanism – two schedules, one for doorways and one for outdoor special events – that could have environments added to the list of spaces regulated and enforced by the city without the need to have council vote. These innovative schedules made it possible to implement a by-law that regulated smoking in outdoor environments within the authority of the city, namely parks and rec fields, sidewalk areas for downtown patios, doorways of public buildings and transit stops, and allow for outdoor environments to be added by other properties or event organizers. The key informants discussed this innovation and the role it played in ensuring the by-law was passed. Informant PH1 agreed that this was an effective way to write the by-law stating, *“I think it’s important that they’ve made [the by-law] simple, the schedule, the way its set up, you don’t have to vote on every single property that comes forward, what they do is just bring it to council- here’s an edition to schedule and it’s in, it’s done, all you have to do is request it, so it makes it simple from a perspective of approval.”*

Informant ME2 described how the schedule for smoke-free doorways has been used by business owners to not only address smoking but also issues of loitering. *“There was history [at that business] with loitering. We had already had requests from property owners to deal with those issues. Then when they got wind of the by-law and putting the two together as well as the police dealing with trespassing. I wouldn’t say we’ve cleaned it up but we’re getting compliments”.*

The city staff in Woodstock have been approached by numerous other communities, interested in how they structured the by-law, specifically the schedules. ME2 said, *“We’ve been surprised by how many people have called and been interested in exploring the [policy] options- ... not only with doorways but with properties being totally smoke-free.”* The concept of the schedules is therefore being used in other communities for not just doorways or special events but also whole properties.

5.4.3.2.5 Minimal funding required

One of the concerns of other communities is budget and how much cost is associated with promoting and signing a by-law. These details were provided by some of the key informants involved with the implementation of the policy. The OSFO was a city policy but it clearly had public health

involvement. The funding and staff time required to promote was shared across the city and the county. Informant PH1 explained, “*through Interagency Council and Public Health we were able to assist [the city] in terms of promotion. [Public Health] certainly [was] willing to spend some time and some money to do signage, ads in papers, and brochures, and those types of things to take a little pressure off of [the city].*” The Interagency Council receives money from the county to function.

Informant ME1 indicated that any funds that are required should be focused on public relation efforts, as describe: “*Your resources and getting the signage out and information and publications out is where you really want to focus*”. However, relative to other policies that cities or other area municipalities may be involved with costs are minimal, as described by Informant PH2, “*This policy doesn’t really have any financial implications which councils love, it has a little in terms of staffing but really it’s one that’s a win-win for everyone.*”

The informants were cognizant that the minimal costs could be shared across organizations and were focused on public relation efforts such as signage. This was important in considering why council was able to support it.

5.4.3.2.6 Enforcement / administration of by-law effective

Enforcement of by-laws is often a major concern for municipal councils considering implementing a new policy. The key informants each reported that enforcement of the OSFO has not been a concern or a burden on the city or county staff. Informant PH2 said about the by-law’s enforcement “*it’s been relatively easy in terms of enforcing.*” Informant PH1 explained, “*For the most part [the by-law has] been self enforcing, it’s complaint driven because we don’t have the bodies to get out there and walk around and we’ve literally had one complaint. Does that mean nobody is smoking, I’m sure people are smoking out there, I think it’s very, very minimal, and it’s been self enforced, so it’s been successful in that sense.*”

Different key informants explained how the fine set by the city in the OSFO was important. A fine of \$100 is not insignificant, and therefore may act as a deterrent, but the fee is not so high that people may wish or need to ‘fight’ the ticket in the courts (and perhaps not need to pay it). The fines set by the province for the Smoke-free Ontario Act, for example, can be in excess of \$300, which has resulted in more citizens deciding to contest the tickets, as explained by PH3, “*..The Smoke-free Ontario [Act], once [the tobacco control enforcement officers] write a ticket then they spend all this time in court. Recently both guys spent a day and nothing happened, the case didn’t come up- they have to be there [in court] so that’s a challenge. The fact that they made the \$100 fine affordable so most people would tend to pay up and move on*”.

Informant ME2 explained the number of fines given to smokers based on the city's OSFO since it came into effect and after the grace period in the fall of 2008, "...About 22 [tickets]. *Mostly at that location- the [name of business]. But a few here and there.*"

The consensus of the key informants was that enforcement is an important part of the by-law but has not been a burden to the city or resulted in significant time spent in the court system. This is credited in part to the fine 'price-point' of \$100.

5.4.3.2.7 Focus on it being 'the right thing to do'

When deciding why to enact an OSFO, City Councils may be motivated by the idea of passing a policy that will be popular and widely supported. Most citizens do not smoke and therefore, presumably policies that restrict smoking will be liked and supported by non-smokers. Some area municipalities may decide to first try and understand what the level of support may be for these kinds of policies from their constituents. Informant EO1 provided some insight into that perceived need.

"There's a whole argument about whether you should enact legislation after the public has provided broad consent or which may be following and whether or not you need to provide leadership which is in advance of public. Every municipality, every government waivers in that regard. The role of the [City Council] is to communicate the intent of what we are trying to achieve to elicit as best as possible the broad community not just the people at the margins of the argument and to take advantage of opportunity."

Informant EO1 is suggesting that councils and elected officials need to find a policy solution that is going to be consistent with their community's needs and to ensure these motivations are communicated. Informant EO1 is saying that if an OSFO is about building a healthy community and protecting children, and if that is consistent with what the city is trying to accomplish, then that is how the policy should be communicated, rather than suggesting the policy is being proposed by an interest group or vocal minority.

Informant PH1 described the motivation to enact the by-law really was predicated on the idea that there was an opportunity to do better, that the community could improve their smoke-free regulations by expanding the by-law. PH1 said, "*I think the first critical step was the Interagency Council came to a decision that the status quo wasn't good enough and there was room to move in terms of by-law.*"

Informant ME1 provided some advice to other municipalities by keying into the deep rationale behind the Woodstock by-law.

"I think a lot of municipalities get too caught up in what the public reaction is and when it comes to something like this. I don't think you need to concern yourself with that.

It's the right thing to do and I don't think there's a debate about it. I think a lot of municipalities spend a lot of time to ascertain the acceptance in the community like this. And to me I think that's a waste of effort. Just get the job done. Its time, you should not be allowed to smoke. I have a small child and I take him to the playground and I find it offensive when somebody is smoking near me. So I thought [the by-law] made a lot of sense and so did council... [The by-law's] not perfect by any stretch of the imagination but I think we accomplished quite a bit and we're happy with it."

Key informants provided the advice that it is wise to focus on the deep values that are held in a community and to enact OSFOs because it's the right thing to do.

5.4.3.3 Effective Partnerships

The final theme that emerged through the key informant discussions was the role of co-operation between agencies and government. There was evidence provided by the key informants that effective partnerships have been established in Woodstock and that these relationships were important in the success of the OSFO. Partnerships included the members of the Interagency Council, which is a partnership of different agencies, NGOs, and governments charged with the responsibility of public health and tobacco control for the community of Woodstock. There was also the important partnership and relationship between the city and the county – specifically the health unit. There is a history of co-operation between these entities that was established prior to the public places/work places smoke-free by-law (2003) and the relationships and trust have been maintained. This is in part due to the fact that most of the membership is the same.

5.4.3.3.1 Interagency Involvement and Partnership

Involvement across the city, health unit, and the Interagency Council was credited by different key informants as a helpful part of the OSFO development. Informant ME1 described the overall process of policy development, *"It's been a partnership through the whole exercise, right from the very beginning."*

Informant PH1 described the Interagency Council and its range of membership, *"The Interagency committee includes myself, [PH3], a tobacco enforcement officer, representation from Canadian Cancer Society, the Ontario Lung Association, and these are local representatives and also interested parties from the community so we have a couple volunteers who sit on that committee as well"*. The Interagency Council is a credible voice in the community with members concerned with health and the well being of the community of Woodstock. The insight and experience of the members of the

Interagency Council were helpful in the creation of the by-law as described by Informant PH1, “*Interagency Council and public health were able to be right at the table and say here are some suggestions and here’s some thoughts from our point of view. Here’s [the] Collingwood example [of an OSFO].*”

The Interagency Council was also helpful in promoting the by-law and doing some of the leg-work around community buy-in. Informant PH1 described that role, “*through Interagency [Council] and public health, we were able to assist [the city] in terms of promotion and I think that helped as well so while they were focusing on the by-law and we certainly had input into that we were willing to spend some time and some money to do signage ads in papers and brochures and those types of things to take a little pressure off of them in that sense, so that helped too in terms of partnership*”.

There was also evidence that the co-operation between the city and the public health unit was important. Informant PH2 described the importance of this working relationship, “*I would say [the city and public health relationship] is good in the sense the by-law was passed and has been implemented successfully and is being monitored and people are accepting it. So that’s an indication of a successful partnership. And there really hasn’t been any barriers, the city of Woodstock devotes some enforcement time as well as public health so there’s a working relationship and partnership with municipality and oxford county public health.*” The unique partnership between the city and county permits both by-law enforcement staff to enforce some smoke-free environments; however the OSFO can only be enforced by the city by-law officer.

5.4.3.3.2 History of Co-operation and Trust

Informant PH2 described the roles that these agencies played in the community to advocated and push for an OSFO in Woodstock, “*Public health plays an important part in advocating for these by-laws across the community and the Interagency Council on tobacco plays a very important role, so you have these advocates from the Canadian Cancer Society, Heart and Stroke, and local physicians who advocate on behalf of citizens across the community. So all these individuals play very important roles in making the by-law happen.*”

The Interagency Council’s history in the community and the work they had done historically was helpful in the process. Informant PH1 said, “*The history there is that Interagency Council has been around for a number of years including the time when by-laws were being developed... before there was any provincial legislation. So they had done a lot of promotion at that time to get a by-law out here locally.*” PH1 then added, “*People knew who Interagency was... I think there was trust.*”

Informant PH3 described one of the members of the Interagency Council who was a leader and effective change agent, “[There is] *a physician on our [Interagency Council]. He’s a retired physician.*

He's one of those people that just needles everybody, in a very nice way. He'll say something and get you thinking. He's been a real driving force in the Interagency Council at keeping us on track in terms of protecting the children and just going forward and making sure there is that protection for the whole youth...That kind of a community activist so he's been a real bonus to have on the Interagency Council."

Informant PH2 described how certain staff members in the health unit are well known and trusted members of the Woodstock community and how that was likely a contributing factor in the success of the OSFO. PH2 said, *"And I think [PH1 and PH3's history in the community] is why this has been a success story, you know some people who are very dedicated- [PH1 and PH3] know Woodstock inside out and have been a member of the community for many years so they know what makes the community tick."*

Informant PH1 described the trust and working relationship between the city and the health unit, *"[Public Health has] a good relationship [with the city] its certainly from Interagency's perspective in terms of getting the by-laws back before smoke-free Ontario that relationship had already been made."*

The people who worked on the OSFO in Woodstock had a history of co-operation and a high level of trust. This was important for the development and enactment of the OSFO.

5.4.4 Mapping and Interpretation

Finally, the thematic charts were examined with the goal of finding associations and explanations for the findings; a process referred to as 'mapping and interpretation' in the framework approach.

Woodstock is unique in many different ways. It is a community with a strong industrial manufacturing sector which is healthy and growing. This is unique in Canada and much of North America given recent trends that have seen many production plants close and jobs lost to other markets. However key informants did not feel that the community's economic health or recent success was a direct cause or necessary antecedent for the development of the OSFOs. However, the overall healthy economy and rosy outlook likely created conditions where it was easier to pass such a by-law, as suggested by staff from Oxford County Public Health.

It does appear that the City Council in Woodstock was motivated by the opportunity to create one of the first and the most comprehensive OSFO in Ontario. The fact that other communities had passed similar, albeit less comprehensive by-laws, also made it easier for the council since it appeared that they were not trail-blazing in an area that could be perceived over-regulation (or 'nanny-state-like), rather they were taking an established policy idea and getting it right.

Woodstock is also unique as a community in that it has relatively high rates of smoking and is in close physical proximity to tobacco growing communities. However, these conditions again did not seem to influence (either encourage or discourage) the creation of the OSFO.

The OSFO developed in Woodstock followed a standard public health policy development plan that included involvement from the community through the Interagency Council on Tobacco, and open dialogue and meaningful involvement between the health unit, the city staff, and elected officials. Recent scientific evaluation of outdoor smoke from credible and recognized research institutions and health authorities were helpful in validating the need for this policy and linking its purpose to health and particularly the need to protect children from second-hand smoke.

Part of the success of this by-law was in the innovative and flexible schedules that allow the by-law to regulate more and more environments easily without the need for council involvement. The costs associated with promoting this by-law and getting the community 'ready' were minimal, and shared across the city, health unit and Interagency Council. These groups had a trusted relationship, based on their history of working together on the previous, successful 2003 public/workplace smoking by-law. This co-operation includes a close working relationship between the enforcement officers at the city and at the county.

What was clear from the transcripts was how important some key individuals were to the process of enacting this OSFO. The volunteers with the Interagency Council, and Public Health used their knowledge of Woodstock, and strategically engaged the community, and City Council. The key messages that were used included the scientific evidence around outdoor SHS, and the need to protect children. These messages aligned well with the overall priorities of the city, to create a healthy and sustainable community, to continue to move things forward and make things better, and to value families and their health.

The key informants reduced the argument to this – restricting smoking in the outdoor environments identified is simply the right thing to do. Woodstock, as a city and as an organization, also prides itself on getting a job done, and the staff proceeded swiftly and effectively to design, enact and enforce a workable by-law.

5.4.5 How the findings inform the Research Objective

Research objective 7 sought to understand how universal the findings from the Woodstock OSFO were, and what lessons could be learned from the Woodstock process.

The city of Woodstock undertook the designing, enacting and enforcing of the by-law to protect children, and to improve their community's health, because those are important priorities for cities and

within their scope. Essentially the agents involved in this process were motivated to do what they could to improve public health because that is ‘the right thing to do’.

Woodstock is a unique community in that any community is unique. At the time the OSFO was being developed, the city was experiencing a healthy economy and prosperous outlook at the time. Some other features and community attributes that make Woodstock unique, may make it an unlikely community for an early, comprehensive and successful outdoor smoking by-law to be designed, enacted and enforced. These attributes include a high prevalence of smokers, and a community near tobacco growing operations. Other aspects of Woodstock that were relevant to understand was the established working relationship between the city and the public health unit, the history of successful smoke-free policies, and an active and engaged citizen lead Interagency Council on tobacco use.

The following conditions or aspects of the community have been identified as important to the development of the OSFO and need to be considered when the idea of ‘universality’ is considered.

First, this OSFO was an amendment to a previous smoking by-law that had restricted smoking in a variety of indoor public and workplaces. The OSFO also was enacted after a provincial law made all workplaces and public places in the province smoke-free, and regulated smoking on outdoor patios. These earlier policies and law were important to have in place as the OSFO was seen as an incremental expansion of the by-law. The lessons from this evaluation would be limited to a policy development process that saw the outdoor spaces regulated after the indoor spaces. Doing all spaces at once may have different effects.

Second, there was an established and healthy working relationship between different agents in the community, namely the city, the health unit and the Interagency Council on Tobacco.

Thirdly, key individual advocates played critical roles in the policy development process including public health staff, volunteers in the community and city staff. These individuals were often known in the community, trusted and knowledgeable about processes and mechanisms to advance policy.

The findings from this qualitative study suggest that many other communities with advanced smoke-free indoor regulations may apply directly what was learned in Woodstock to their community. It would be difficult to find a municipality in Canada that did not agree that it was important to build a healthy and sustainable community. There are likely no City Councils that would feel children’s health should not be protected, or a community that would refute the findings of the US Surgeon General or senior researchers from Stanford University.

6.0 DISCUSSION

To the best of our knowledge this research represents the most comprehensive study to evaluate an outdoor smoke-free policy in the world. The study provides evidence that OSFOs are widely supported by both smokers and non-smokers, do not negatively impact the use of environments regulated and are associated with positive changes in smoking behaviour including quitting.

Further the OSFO was enacted in a community with relatively high smoking prevalence rates and in close proximity to tobacco growing activities.

Each of the seven research objectives are discussed below in section 6.1. Sections 6.2-6.4 address how OSFO may support the pillars of tobacco control, protection, cessation and promotion. How OSFO may support Canadian tobacco control goals and international obligations are discussed in section 6.5. The study's limitations are discussed in section 6.6. The implications of this study for other cities and towns are discussed in section 6.7. Overall study conclusions are discussion in section 6.8.

6.1 Research Objectives

This dissertation had 7 research objectives which were outlined in section 2.2. The first six objectives were addressed through the quantitative surveys collected in 2008 and 2009 with smokers and non-smokers in Woodstock, Ingersoll and other Ontario communities. The final research objective was addressed through the qualitative key informant interviews that were conducted with decision-makers and policy.

6.1.1 Improvements in Air Quality

The OSFO is associated with reductions in smoking behaviour in the environments that were comprehensively regulated by the OSFO including city parks, recreational fields, and transit environments.

Doorways were not comprehensively regulated, however, reported smoking behaviour in these environments also decreased. It is possible that the public believes that the OSFO regulated all doorway environments. It is also possible that the OSFO, which regulated dozens of doorways in the city, resulted in a shift in norms for many smokers who, after the by-law was in place, smoke away from doorways whether or not they are part of the city's schedule.

There was not a reduction in smoking behaviour in outdoor patio environments in Woodstock. The targeted sample of smokers reported an increase in smoking on outdoor patios. This environment was only partially regulated by the OSFO and the patios that were regulated had been previously made smoke-free by a leasing agreement with the city so there was not expected to be a significant change in

smoking behaviour on patios. The measures used to understand smoking at Cow-a-palooza was not truly longitudinal however the reported proportions of ‘never’ smoking behaviour did increase in Wave 2 suggesting that this event could be regulated with success.

The measures used to understand smoking behaviour in the environments regulated by the by-law did not truly measure possible involuntary exposure to second-hand smoke in those environments. The measures collected reported smoking behaviour in different environments. Although a reduction in smoking behaviour in those environments means that less tobacco smoke pollution was introduced in those environments, it does not mean that there was a direct reduction in exposure to second-hand smoke. In theory, smokers before the OSFO may have always smoked sufficiently far away from non-smokers that there was no increased exposure.

Future evaluation efforts may wish to consider altering measures (questions) to better understand smoking behaviour in relation to exposure. Such questions might ask if smokers alter their behaviour when they are near non-smokers, children or other people. Using different research and evaluation methods, such as observational studies and air quality monitoring efforts are other possibilities for better understand how an OSFO may impact air quality and reduce exposure to SHS.

6.1.2 Social Denormalization

The Woodstock OSFO is not associated with increased social denormalization of smoking behaviour with the measures used in this evaluation. However the results of the evaluation suggest that smoking is already highly denormalized. It is possible that the outdoor smoking restrictions enacted through the Woodstock OSFO were already in close alignment with the beliefs or attitudes of smokers and therefore the restrictions did not further denormalize the behaviour. When considering the measure ‘there are fewer and fewer places you feel comfortable smoking’, it is possible that smokers already felt uncomfortable smoking in the regulated outdoor environments so the by-law did not make it further uncomfortable for smokers. On the contrary, since the OSFO placed rules about where smokers could smoke in these environments, the OSFO may have actually made it less uncomfortable for smokers since the policy specifies where smokers may be to smoke. Future policy evaluations may consider trying to measure if these types of policies – particularly those that establish smoke-free zones or buffers - provide comfort for smokers since these types of policies not only create smoke-free spaces but communicate where it is permissible to smoke.

Future evaluation measures may wish to consider developing specific measures for outdoor smoking such as ‘there are fewer and fewer places outdoors where I feel comfortable smoking’.

6.1.3 Litter and Fire

Concerns about litter and fire caused by cigarette butts did not change significantly after the OSFO was enacted. Concerns about litter were generally higher than concerns or fears of fires and therefore may be a more important or strategic argument for tobacco control policy advocates.

Understanding how many fires have been caused by discarded cigarettes in a community or region would likely help to communicate the relevance of restricting smoking on the basis of possible fires, property loss and harm to people, pets and other animals. Further, estimates from the city or whatever agency is responsible for cleaning up litter caused by smoking would further validate using this as a rationale for communities considering restricting or banning smoking.

Since OSFO typically move smoking from one environment, such as a park, to another environment, such as the sidewalk beside the park, issues of litter can simply be moved from one space to another. Restricting or banning smoking in a city recreational field, for example, may move the smoking to neighbouring properties which could be houses or businesses. Smoking bans on school properties, for example, typically moves smoking to adjacent properties. Therefore any strategy to reduce litter needs to include adequate ashtrays and strategic placement to not encourage smoking or make the behaviour more visible. Further proper ashtrays can play a role in ensuring that cigarette butts are discarded properly and are less likely to cause a fire. Ashtrays, however, may act as a visual queue to smokers and prompt smoking or normalize smoking in that environment.

The Woodstock OSFO did not change the level of concern about fire or litter caused by smoking behaviours, however these issues are relevant and important for municipalities to consider when planning their OSFO. In addressing fire and litter concerns, decision-makers need to ensure that other tobacco control priorities like social denormalization are not compromised.

6.1.4 Support for OSFOs

Support for the Woodstock OSFO was high approximately one year after it was enacted, both among non-smokers and smokers. There was near universal agreement that the Woodstock OSFO was good for the health of the children of Woodstock; this is consistent with the ‘child effect’ discussed by Thompson et al. (2008), who found that smoke-free policies predicated on the need to protect children were widely supported.

Support for smoking restrictions in different outdoor environments was very high among non-smokers. The majority of non-smokers support 100% smoke-free patios for each type of hospitality venue included in the measures (bar/pub, restaurant, and family restaurant). Although most smokers do not support 100% smoke-free patios, significantly more smokers supported smoking restrictions on patios in Wave 2 relative to Wave 1.

Support for smoking restrictions in city parks and doorways was also high for both smokers and non-smokers and support did not change significantly across waves.

Therefore the Woodstock OSFO was associated with increases in support for regulation among smokers for some environments, notably patios and parks. Support did not change significantly for regulation in public or private doorways however levels of support for smoking restrictions in these environments was already very high.

6.1.5 Changes in Smoking Behaviour and Personal Restrictions

Approximately half of smokers reported that they will ‘always’ follow the Woodstock OSFO. There was a slight reduction in the proportion of smokers who reported they would ‘always’ follow the by-law in Wave 2, however the change was not statistically significant. This is important to understand given a commonly voiced concern of policy makers is that OSFO are difficult to enforce. This suggests that these sorts of by-laws can be largely self-enforcing and that citizens still value being law-abiding.

There was not a change in the proportion of smokers that reported they had smoke-free homes after the OSFO was enacted. There was a small increase in smoking restrictions in personal vehicles however the Woodstock OSFO coincided with a provincial law that restricted smoking when children were in the vehicle. Therefore the Woodstock OSFO is not associated with increases in personal smoking restrictions.

There were direct associations with the by-law and increased quit intentions, and reported reductions in the number of cigarettes smoked. Further the by-law was credited with helping some smokers to quit and helping those people who quit with staying quit. These findings are very encouraging to support smokers with cessation and demonstrate that an OSFO can help support quitting. Public health authorities, such as local health units, are often charged with the mandate to improve smoking prevalence rates. These findings will help justify health units working to advocate for smoke-free outdoor policies.

6.1.6 Unintentional Consequences of the OSFO

Unintentional consequences resulting from the Woodstock OSFO were minimal. Prior to the policy coming into force, some smokers reported that they believed or anticipated that the by-law would influence their decision to visit regulated environments however, in most cases this did not happen.

There was the single respondent, that had a child, that reported that they now visit parks while supervising children less since the Woodstock OSFO. This person, however, still takes their child to the park – just less frequently. Policy makers will need to decide if this proportion of smokers represents an unacceptable level of unintentional consequences. It was also noted that several non-smokers and ‘quitters’ now use parks more often. It is interesting that the respondents who quit between waves

reported an increased use of parks; it is possible that the smoking restrictions in park environments represented a space recent-quitters could visit without some of the visual cues that might tempt a relapse into smoking. Or perhaps the new regulations help recent-quitters know they are ‘not allowed’ to smoke in those environments which may help them to stay quit.

6.1.7 Woodstock Specific Conditions and Universality of Findings

Several conditions in Woodstock were identified as being important for the development and enactment of the OSFO however none are unique to Woodstock. First, being a community that already had comprehensive indoor restrictions was identified as important to the success of the OSFO. Secondly, the working relationship between the city and the health unit as well as the Interagency Council on Tobacco and Health were also identified as important in this by-law development process. Finally, the dedicated and committed individuals involved in the process, including staff, managers and citizens were also important to the development of the OSFO.

The Woodstock OSFO followed similar processes, that were identified as important in the development of indoor smoking restrictions specifically public relation efforts with community stakeholders, placement of appropriate signage to communicate the by-law in the environments regulated, and enforcement including fines.

There were no features or characteristics in Woodstock that were discovered through the process evaluation that would suggest similar ordinances would not be successful in other communities. On the contrary, Woodstock had several unique characteristics that were more likely to make an OSFO less successful, including a smoking prevalence rate nearly twice the provincial average and being in close geographic proximity to tobacco growing activities. However, these issues did not work as an impediment to the creation, enactment or enforcement of the by-law.

The findings from this study will be relevant to other jurisdictions that have existing comprehensive indoor smoke-free regulations, with a mandate to protect public health, and value children.

6.2 Protection Strategies

Smoke-free policies have historically been enacted to protect people from the involuntary exposure to SHS. The results of this study demonstrate that OSFOs can help improve air quality by reducing smoking behaviour in the regulated environments. This may help protect people from SHS exposure in a range of outdoor settings.

Compliance with the OSFO was relatively high – approximately 50% of smokers reported they would comply with the OSFO all of the time.

6.3 Cessation Strategies

The findings of this study show that OSFOs help some smokers to cut down in the number of cigarettes they smoke per day, increases quit intentions and has been helpful to both support quitting and to stay quit. In particular, the majority of smokers that were recruited in the target sample, who quit between waves, reported that the OSFO had helped them to stay quit.

6.4 Promotion Strategies

The findings demonstrate that smoking is highly socially denormalized in Woodstock. The measures used in this study suggest that smokers feel less and less comfortable smoking and feel that society disapproves of smoking. This survey did not include a youth sample; youth are often the motivation for tobacco control promotion strategies. Therefore future evaluation efforts interested in understanding how OSFO may denormalize smoking or encourage a social milieu or anti-smoking sentiment, may wish to conduct a pre-post study with youth.

6.5 Canada's Federal Tobacco Control Strategy

Canada's Federal Tobacco Control Strategy has ambitious goals, to reduce the prevalence of Canadian youth smoking to 9%, to increase the number of adults who quit smoking by 1.5 million and to reduce the prevalence of Canadians exposed daily to SHS to 20%. This evaluation demonstrates that OSFO could play a part in each of these goals, and could be part of the next generation of tobacco control policies.

6.6 Study Limitations

First, this study did not have a comparison community that was studied during the same time period. It is therefore difficult to conclude to what extent the reported changes in behaviour or support can be directly attributed. Further, there were no other surveys conducted in other communities at a similar time that collected measures about smoking behaviour in outdoor environments that could be used to compare the findings of this evaluation; the Ontario Tobacco Use Survey and the Canadian Tobacco Use Monitoring Survey have minimal content for outdoor smoking, limited simply to support or witnessed smoking in outdoor environments. However, many measures relevant to this study directly asked respondents about the Woodstock by-law, therefore measures of support and changed smoking behaviour attributed to the by-law are well understood.

Secondly, some measures were not collected longitudinally such as general support for the Woodstock by-law or support for policies that protect children's health. Therefore it is difficult to know how these measures may have changed. However, support for the by-law, or agreement that the by-law was good for the health of the children of Woodstock, was very high approximately one year after the by-law was enacted.

Thirdly, some questions indirectly collected measures of interest. For example, it is important to understand how smoke-free policies impact exposure to second-hand smoke. The measures used in this evaluation measured smoking behaviour instead of exposure to SHS. Although these questions provided important insight into smoking behaviour, they did not always directly address the research objectives identified in the IARC Framework. Future evaluations of OSFO may wish to develop new measures, and include observational studies to better understand policy impacts on air quality, litter and other known issues relevant to outdoor smoking.

6.7 Study Implications

The findings from this study have implications for other communities considering enacting a similar outdoor smoke-free ordinance. This study will help tobacco control advocates and public health professionals to communicate to policy makers that OSFO can help support each pillars of tobacco control and improve the health of a community. Further, this can be accomplished knowing that there will be minimal impact on use of facilities and the policy will be widely supported by citizens.

6.8 Conclusions

Support for the Woodstock comprehensive outdoor smoking by-law is high among smokers and non-smokers. The overwhelming majority of residents interviewed supported the by-law and felt that the by-law was good for the health of the children of Woodstock. The by-law has not had negative impacts on use of facilities including parks and recreational fields. Further, a third of smokers reported that the outdoor by-law has helped them to cut down how much they smoke and almost a fifth of smokers reported that the by-law has made them more likely to quit smoking. Approximately half of the quitters in the sample also reported the by-law helped them to stay quit. These findings suggest that expanding smoke-free ordinances to include a range of outdoor environments will be supported by citizens, and will help smokers to reduce how much they smoke, encourage quitting and help those that quit to stay quit. The findings from the key informant interviews suggest that other jurisdictions should explore expanding their smoke-free ordinances to include outdoor environments, particularly environments frequented by children.

APPENDIX

Appendix A – Oxford Interagency Council on Smoking and Health Correspondence to CAO of the City of Woodstock

Oxford Interagency Council on Smoking and Health
410 Buller Street, Woodstock, ON N4S 4N2
519-539-9800 Ext. 205



Paul Bryan-Pullham
C.A.O., City of Woodstock
500 Dundas, P.O. Box 40
Woodstock, ON N4S 7W5

September 14, 2007

BMF	REC'D	F.Y.L.
COPY/FAK	SEP 19 2007	PLS. INVD.
FILE	C.A.O.	REPOR

Dear Mr. Bryan-Pullham

On behalf of the Oxford Interagency Council on Smoking and Health, I am writing to ask the City of Woodstock to consider an amendment to the Woodstock Workplaces and Public Places Bylaw that would restrict tobacco use in city owned recreation areas, building entrances and public events. Suggested no smoking zones could be applicable to parks, soccer fields and playgrounds and for community events and parades. There could be designated "smoking" areas at events away from the crowds. Recent Letters to the Editor show considerable support for creation of increased restrictions.

The Woodstock Smoke-Free Bylaw and Smoke-Free Ontario Act have been very successful in providing protection from second-hand smoke exposure to workers, especially those in the hospitality sector. However, children and spectators at public events are not protected from drifting tobacco smoke in outdoor areas. People entering building where smokers are gathered are not protected and there is the danger of smoke being drawn into a building when the doors are opened.

A recent study from Stanford University found that "a person sitting or standing next to a smoker outdoors can breathe in wisps of smoke that are many times more concentrated than normal background pollution levels." As well the 2006 US Surgeon General's Report found that even brief exposures to secondhand smoke may have adverse effects on the heart and respiratory systems and increase the severity of asthma attacks, especially in children.

Collingwood and Uxbridge are two Ontario municipalities that have made amendments to their bylaws to offer protection from second-hand smoke for children using recreation facilities and at outdoor public events such as parades. Woodstock City Council has shown leadership in protecting citizens from exposure to second-hand smoke and can again lead the field in protecting citizens from exposure to second-hand smoke by considering an amendment to the current bylaw.

Members of the Interagency Council and Oxford County Public Health Staff are available to assist with development of the amendment and strategies for implementation.

Sincerely

Appendix B - Woodstock Knowledge Exchange Video

There is a video that tells the story of the Woodstock Outdoor Smoke-free by-law – posted on YouTube at the following link:

<http://www.youtube.com/watch?v=3PnND5os5Fo>



Smoke-free Outdoors: The Woodstock Story

Appendix C - Rationale presented to the research funder on why Woodstock is the right community to study

Below are excerpts from communications with the funder (CTCRI- the Canadian Tobacco Control Research Initiative) in a communication from July 15, 2008, about why Woodstock is an appropriate community to study – the review panel asked the research team to present a detailed description of Woodstock, in terms of its demographic characteristics and then identify 1 additional municipality in each of the other 6 Ontario Tobacco Control Area Networks (TCANs).

10. Please provide relevant demographic characteristics for the city of Woodstock and how these characteristics can be used to generalize findings to other municipalities. Please compare these characteristics to 1 municipality in each of the other 6 Ontario TCANs.

In our initial application we identified that Woodstock is a mid-sized community and that findings from this survey may be easily generalized for other mid-sized communities. Of course all communities are unique however there are several features of Woodstock that can be found as a similarity across Ontario (and Canada). We have taken a good crack at trying to answer the above question – although we acknowledge and understand that with any of our choices it is possible that there could be 30 reasons why they are not like Woodstock.

The process of considering these concerns, however, is valuable to our research committee – because we understand that this work is not only an independent piece of

research to ask an empirical question – it is a part of the national tobacco control policy effort and what we are doing has to be relevant to other communities. Therefore it is fair that we consider which other communities might share similarities.

The story of the Woodstock bylaw is in itself worth studying – because it came about largely by the work of a Public Health Nurse who had studied the issue of outdoor tobacco smoke and the benefits of social demoralization, and made a presentation to the City of Woodstock town Council. The efforts of this policy advocate were supported by research but the ability to advocate, develop and succeed in the creation of the policy was a person who was in tune with her council and built support from her colleagues at the City. She met with Councilors before the vote to address concerns they had and made sure she knew her facts.

We continue to work closely with this public health worker – Carol Bossonberry – because we also understand that she will be one of the best advocates for helping other similar communities. And if she has the results of an evaluation that can assist in telling the story (pre-post bylaw), then she will be better able to encourage her colleagues – or highlight learnings from the process. So one of the characteristics that is common in all of the TCANs in Ontario – is the committed public health professionals that can help realize these sorts of policies.

HOW WOODSTOCK DESCRIBES ITSELF: -- from the city's website:

Woodstock offers a quality of life that is second to none. As the largest centre in Oxford County, Woodstock offers all of the services and amenities expected of a medium-sized Canadian city. Woodstock also offers many unexpected surprises. History is preserved not only in Woodstock's Museum and County Courthouse, but also in downtown buildings and beautiful Victorian heritage homes. In fact, Woodstock is the only municipality in all of Ontario to still have all of its magnificent original public buildings.

Woodstock and Oxford community profile:

From Statistics Canada, and the material developed by their Economic Development Office – we have identified the following demographic characteristics –

Population of approximately **100,000** in Oxford County – where the city of Woodstock has a population of approximately 40,000. The other settlement areas in the county are Tillsonburg and Ingersoll.

Woodstock is the largest city in Oxford County and has 'high urban dominance' – meaning that it services the larger surrounding area. Indicators of urban dominance are the presence of commercial, financial, and service industries. People in Oxford County are likely to visit Woodstock often for shopping, government services, employment and cultural events. Woodstock has its own newspaper and health care services (hospital).

Woodstock and Oxford County have a significant primary economic production (agriculture) as well as a mix of light and heavy industrial processes (auto parts manufacturing and the new Toyota plant), and service industries and government (including health care). Woodstock is branded 'family friendly' – with 62 parks and 35 playgrounds and numerous recreational opportunities. It also has a tradition of coming together as a community for community events like Cowapalooza (an outdoor celebration of music).

Woodstock is also neighbored by slightly large mid-sized cities (London and Kitchener-Waterloo) and is not far from Toronto.

Considering the aspects of the bylaw we tried to identify communities that have a (smaller) transit system, numerous parks and recreational fields and a healthy downtown.

We have tried to identify communities from other TCANs across the province that would be appropriate comparison communities. There are of course differences – from landscape, to cultural make up, education levels to job sectors – but we have used the following condition –

Would a local board of health or local city council find similarities between their community and Woodstock? This of course is conjecture as we don't know – but that is what we have tried to guess.

TCAN – NORTH WEST:

We identified the community of ***Thunder Bay***.

Thunder Bay has a similar population to Oxford County (109,140) and like Woodstock, has high urban dominance because it is a centre that provides numerous services for a large community. Thunder Bay does not have as strong an agricultural component to their economy but it does have other primary industries including forestry. Manufacturing in Thunder Bay is of similar size (approximately 6,000 workers in this field in 2001). Thunder Bay has the largest public art gallery in the north. Woodstock is in the process of expanding their public art gallery to be a leader in southern Ontario. Both communities also value their heritage and place in the province's history. The city is well positioned to attract families with 124 green spaces. It also has a transit system. Thunder Bay – because of its history as two communities, has disparate downtowns but they do exist.

TCAN – CENTRAL WEST:

We identified the community of **St. Catharines**

St. Catharines also has a history of automotive manufacturing, is close to significant agricultural production and is in close proximity to other larger centres. It has a population of about 130,000 so similar in size to Oxford County.

St. Catharines has a transit commission and numerous parks and recreational facilities (there are 11 large urban parks). It also has a scenic downtown and festivals throughout the year (including outdoor theatre).

TCAN – TORONTO:

Toronto is unique in the world for many reasons.

This was the most difficult for the team to consider – given that all the former smaller cities were amalgamated in 1998. For the purposes of this exercise we selected one of the 'old' communities that still has a strong sense of spatial and social identity – **East York**. East York was a smaller centre (about 112,000) with 3 high schools and a formerly semi-autonomous borough (the only one in Canada).

East York was a community of working families. As a community it has a history of being socially conscious and pragmatic in terms of policies. The community has very active neighbourhood associations and is the location of numerous NGOs.

Operating on the principle that the Ontario Municipal Act permits local councils to enact bylaws that provide health and protection – the community of East York could be designated smoke-free in different outdoor areas.

TCAN – CENTRAL EAST:

We identified the community of **Kawartha Lakes**

Kawartha Lakes – like Oxford County – has one large centre (Lindsay) and two other main settlements (Bobcaygeon, and Fenelon Falls). Lindsay is home to manufacturing (Union Carbide) but also a community that services a surrounding agricultural community. Lindsay has events like Cowapalooza (the fall fair in Lindsay is the 3rd largest in Ontario), and Bobcaygeon and Fenelon Falls also have annual Midnight Madness Stree Sales events where the main street is shut down (like Woodstock's Sidewalk Days).

Lindsay also has a small public transit system and numerous parks including water front parks. It's historic downtown is very similar to Woodstock, with old Victorian buildings and homes, and historic public buildings (courthouse, city hall, library, post office).

TCAN – EASTERN:

We identified the community of **Kingston**:

Kingston is again a large centre that supports the surrounding area. It has agricultural production nearby and has a significant manufacturing sector in the city (ALCAN). Kingston has a population now of approximately 117,207. Kingston is also near the 401, east of Toronto so would have a similar level of connectedness to neighbouring communities. Kingston is also a community that prides itself on being good for raising a family with parks and festivals.

Kingston has a transit system and numerous parks and trail systems and waterfront beaches. Kingston has a beautiful downtown with older buildings and, like Woodstock, a real sense of history.

TCAN – NORTH EAST:

We identified the community of **North Bay**

North Bay is another community that services a larger area – the Health Unit area has a population of 122,848 (North Bay has a population of about 60,000). North Bay has a small transit system and over 72 parks and recreational fields.

North Bay has numerous outdoor family-oriented events throughout the year including North Bay Summer in the Park, Music in the City (downtown outdoor concerts).

Of course the evaluation of the Woodstock bylaw could equally inspire other smaller or larger communities. The evaluation studies of the New York City smoke-free law were inspirational to Minister Micheál Martin in Ireland, who then worked to make Ireland the first country to implement a comprehensive smoke-free law. The evaluation studies of the Ireland ban (including our own ITC Project evaluation study) were used by the next country in Europe to adopt an (almost) comprehensive smoke-free law, which was Italy. An outside observer would have been hard-pressed to predict that Italy would have been the next country to go smoke-free.

Perhaps Woodstock, Ontario will inspire places similar to itself or very different -- we cannot be certain. But we do know it is important to all communities making these policy decisions to have the answers that we hope to provide in this evaluation.

In summary, we care about the issue of generalization, but acknowledge that we cannot be certain that other communities – mid-sized or otherwise – will think the findings are relevant to their circumstances. As a research team we are comfortable and confident that Woodstock is an appropriate community because of the characteristics we have highlighted – which do not only incorporate the community's demographic characteristics but also the spirit of the bylaw. Oxford County Health Unit was able to garner support for this bylaw to the City of Woodstock town council on the merits of being a family friendly policy. The City of Woodstock is in the process of creating both a concept and reality of itself as a healthy and vibrant community. We feel this is the feature that will likely have broad resonance across communities regardless of their population, economic make-up or geographical location. We know a local city councilor or member of a board of health could conclude that Woodstock differs from their own community in many ways, but all cities want to be livable, and healthy, and supportive of their children, and the commonality in that aspiration will make the Woodstock experience with an outdoor smoking ban more viable as a possibility for those other communities.

To take a slightly different perspective on the potential for generalization of the Woodstock experience, we should point out that Woodstock does not seem to have the characteristics of a community that would act as a disincentive to other communities to use the Woodstock experience as a guide for their own policy activities. For years, California's comprehensive tobacco control program was seen by some as not relevant for guiding policy action in other U.S. states because, after all, to paraphrase the stereotype (which I am OK with paraphrasing even though I am from the San Francisco Bay Area): "California is filled with those tree-hugging liberal crazies who are way out of touch with midstream America." This view that California was very different led to initial resistance in looking beyond the surface feature differences to the fact that the comprehensive approach to tobacco control, with an underlying theme of social denormalization, was in fact an effective approach. Over the years, of course, the California approach has been hailed in many circles as the proper way, but (I suspect) much of the moderation of the initial negativity has arisen because other states (e.g., Massachusetts, Florida, Arizona) also adopted the same kind of comprehensive program.

In contrast, I think it is fair to say that Woodstock has none of the pre-existing negative attributes that would prevent generalizability on that dimension, and, as documented in above, many really positive attributes that would increase the potential generalizability and likelihood of transfer to other communities—in Ontario, in Canada, and possibly beyond.

Having said all this, our goal in planning and conducting the Woodstock evaluation is to endow the effort with the strong methods, protocol, conceptualization of the issues and with a survey instrument that is created to capture the specific and broader elements of the impact of the outdoor ban, and

then apply appropriate analytic techniques whose results are then articulated in our report, shaped by the team's expertise and experience in the evaluation of tobacco control policies, including smoke-free laws. We cannot affect the perceptions of others who will determine whether the Woodstock experience is relevant to their own communities.

Appendix D - Pre-OSFO General Population Survey, Wave 1

Telephone Survey 2008

***** INTRODUCTION *****		
001	Intro1	<p><i>Interviewer Note: See HelpScreens for answers to any questions about survey.</i></p> <p>Hello, my name is [-----], and I'm calling from the University of Waterloo Survey Research Centre on behalf of a national team of health researchers.</p> <p>We are conducting a research study on the outdoor smoking ban by-law in Woodstock. We are not asking for money or selling anything. Can I ask someone 18 YEARS OF AGE OR OVER a few questions to see whether anyone in your house qualifies for the survey? <i>Note; If they say no smokers in household:</i> This is a survey of smokers and non-smokers.</p> <p style="text-align: center;">1 Continue - current respondent 2 Child - no adult available 3 No adult in household 4 No, Respondent refuses interview</p> <p>If response=1, go to HHQuest1. If response=2, go to child. If response= 3, go to TrmScr2. If response= 4, go to Elig1.</p>
002	child	<p>Ask if Intro1=2.</p> <p>If non-smoker quota is open: I would like to speak to an adult aged 18 or older in your household – when would be a better time to call back to speak to them?</p> <p>If non-smoker quota is closed: I would like to speak to an adult aged 18 or older in your household who smokes – when would be a better time to call back to speak to them?</p> <p style="text-align: center;">1 Schedule Callback 2 Refused</p> <p><i>/ If necessary, say / Could you please tell me their name so that I know whom to ask for?</i></p> <p>If response=1, record callback info and go to TrmScr3. If response=2, go to TrmScr2. If response=3, go to TrmScr 3</p>

003	Elig1	<p>Ask if Intro1=4.</p> <p><i>If necessary: See Help Screens for additional background information.</i></p> <p>This is an important survey because it is being conducted among smokers as well as non-smokers throughout Woodstock and Oxford County. Each respondent is important to us to ensure we have a good representative sample. We will send you a gift certificate for Tim Hortons as a token of appreciation. Could I ask you a few more questions to see if anyone in your household is eligible?</p> <p>1 Respondent continues to refuse 2 Respondent agrees to answer questions</p> <p>If response=1, go to HHComp1a. If response=2, go to HHQuest1.</p>
004	HHComp 1a	<p>Ask if Elig=1.</p> <p><i>If necessary: See Help Screens for additional background information.</i></p> <p>I understand. But before we hang up, could you help us by answering just two very short questions?</p> <p>1 Yes 2 No</p> <p>If response=1, go to HHComp1b. If response=2, go to Thank you for your time. Good-bye.</p>
	HHComp 1b	<p>Ask if HHComp1a=1.</p> <p>How many people aged 18 or older live in your household, including yourself?</p>

		<p>1. <i>Enter number.</i> 2. Don't Know/Refused</p> <p>If response=0, go to TrmScr3. If response>0, go to HHSmoker. If response=DK/ R, go to Thank you for time. Good-bye.</p>
005	HHSmoker	<p>Ask if HHComp1b>0.</p> <p>How many of the [people 18 or older in your household] currently smoke cigarettes, either daily or less than every day, including yourself?</p> <p>1. <i>Enter number.</i> 2. Don't Know/Refused</p> <p><i>This could be any form of cigarette (manufactured or roll-your-own) but excludes pipes, cigars and marijuana.</i></p> <p>Thank you for your time. Good-bye.</p>
007	HHquest1	<p>Ask if Intro1=1 or Elig1=2.</p> <p>Thank you. I first need to ask a few questions about the household in order to select someone for the survey.</p>
008	BK411	<p>How many people aged 18 or older live in your household, including yourself?</p> <p>1. <i>Enter number.</i> 2. Don't Know/Refused</p> <p>If doesn't know (DK) or refuses to answer (refusal), Note: We ask this to ensure we have a representative sample of households in Oxford County.</p> <p>If still refuses, go to trmscr4.</p> <p>If response=0, go to TrmScr3 If response=1, go to BK431a. If response>1, go to BK431b.</p>

009	BK431a	<p>Ask if BK411=1.</p> <p>Do you currently smoke cigarettes, either daily or less than every day?</p> <p>1 Yes</p> <p>2 No</p> <p>If response=1, go to Elig2b.</p> <p>If response=2, go to Recruitment if non-smoker quota open, or to TrmScr9.</p>
	BK431b	<p>Ask if BK411 > 1.</p> <p>How many of the [BK411] people in your household, including yourself, currently smoke cigarettes, either daily or less than every day?</p> <p><i>This can be any form of cigarette (manufactured or roll-your-own), but excludes pipes, cigars and marijuana.</i></p> <p>1. Enter Number</p> <p>2. Don't Know/Refused</p> <p>If response > BK411, go to Error Screen.</p> <p>If response = 1 or > 1, go to NextBS1.</p> <p>If response = 0, go to Next NS1 if non-smoker quota open, or to TrmScr9 .</p> <p>If doesn't know (DK) or refuses to answer, go to TrmScr2 .</p>
010	houseCmp	(Derived variable: Household composition)
	NextNS1	<p>I'd like to speak to the person in your household who is at least 18 years old and whose birthday is coming up next. Would that be you?</p> <p>1 Yes, go to Rcrtmnt.</p> <p>2 No, go to NextBD2</p>
011	NextBS1	BK431=1: I'd like to speak to the smoker in your

		<p>household who is at least 18 years old. Would that be you?</p> <p>BK431>1: I'd like to speak to the smoker in your household who is at least 18 years old whose birthday is coming up next. Would that be you?</p> <p>1 Yes</p> <p>2 No</p> <p><i>Add if necessary: We need to select somebody at random. With each call we make, we ask to speak to the person whose birthday is coming up next. This helps us to ensure that we have a representative sample as some groups of people are less likely to answer the phone.</i></p> <p>If response=1, go to Rcrtmnt.</p> <p>If response=2, go to NextBD2.</p>
012	NextBD2	<p>May I speak to that person (next-birthday person) now?</p> <p>1 Yes</p> <p>2 No (refusal)</p> <p>3 Appointment.</p> <p>If response=1, go to Intro2.</p> <p>If response=2, go to Conv1.</p> <p>If response=3, go to Callback1.</p>
013	Conv1	<p>Ask if NextBS2=2.</p> <p>Each respondent is important to us to ensure we have good representation of Woodstock and Oxford County. We will send you a \$5 Tim Horton's gift card to participants to thank you for your time.</p> <p><i>If necessary, say Could we call back to ask them a few questions to see if they are eligible for the study?</i></p> <p>1 Yes</p> <p>2 No (refusal)</p> <p>3 Appointment.</p> <p>If response=1, go to Intro2 .</p> <p>If response=2, go to Thank you for your time. Good-bye.</p>

		If response=3, go to Callback1a.
014	CB1	<p>When would be a better time to call back to speak to that person?</p> <p><i>Enter date and time of callback.</i></p> <p><i>If refuses, say:</i></p> <p>Each respondent is important to us to ensure we have good representation of Woodstock and Oxford County. We will send you a \$5 Tim Horton's gift card to participants to thank them for their time.</p> <p><i>Could we call back to ask them a few questions to see if they are eligible for the study?</i></p> <p>If continues to refuse, go to TrmScr1 (CS28).</p> <p>Otherwise, go to Callback1b.</p>
015	CB1Trm	<p>Could you please tell me their name so I know who to ask for?</p> <p>GSet callback and go to TrmScr 3.</p>
016	Intro2	<p>Ask when speaking to next-birthday smoker (i.e. if Conv1=2 or NextBS2=1).</p> <p>Hello, my name is [-----], and I'm calling from the University of Waterloo Survey Research Centre on behalf of a national team of health researchers.</p> <p>We are conducting a survey on the outdoor smoking ban by-law in Woodstock. We are not asking for money or selling anything. The survey will take about 10 minutes and all responses will be kept absolutely confidential.</p> <p>This study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Waterloo. Participation is voluntary and you may stop at any time. The answers you provide to the following questions will be kept absolutely confidential. You can omit any question that you do not</p>

		<p>wish to answer. This call may be monitored by my supervisor at the University of Waterloo Survey Research Centre to assess my performance. We will send you a \$5 gift card for Tim Hortons as a token of appreciation.</p> <p>Is now a good time to start the survey?</p> <p>1 Yes, continue</p> <p>2 No (refusal)</p> <p>3 Not available right now; make appointment.</p> <p>If response=1, go to Sex.</p> <p>If response=2, Thank you for your time. Good-bye.</p> <p>If response=3, make callback.</p>
	Rcrtmnt	<p>You are eligible for this survey. It will take less than 10 minutes. We will send you a \$5 gift card for Tim Hortons as a token of appreciation.</p> <p>Participation is voluntary and you may stop at any time. The answers you provide to the following questions will be kept absolutely confidential. This call may be monitored by my supervisor at the University of Waterloo Survey Research Centre to assess my performance. Is now a good time to start the survey?</p> <p>1 Yes, go to Sex</p> <p>2 No, refusal, Thank you for your time. Good-bye.</p> <p>3 No, callback, set call back.</p>
<p>***** SCREENER SECTION *****</p>		
020	Sex	<p>Record sex -- Ask only if unsure.</p> <p>1 Female</p> <p>2 Male</p>
021	birthYr	<p>What year were you born?</p>

		<p>1. <i>Enter year of birth.</i></p> <p>2. Refused/Don't Know</p> <p>If response > [current year-18] (respondent too young), go to Check18.</p> <p>If response < [current year-18] (respondent is 18 or over), go to Age.</p> <p>If response = [current year-18] (respondent turns 18 this year), go to birthMo.</p> <p>If respondent doesn't know or refuses, go to TrmScr6 (CS30).</p>
	<p>birthMo</p>	<p>Ask if respondent was born in [current year-18]:</p> <p>What month were you born?</p> <p>01 January</p> <p>02 February</p> <p>03 March</p> <p>04 April</p> <p>05 May</p> <p>06 June</p> <p>07 July</p> <p>08 August</p> <p>09 September</p> <p>10 October</p> <p>11 November</p> <p>12 December</p> <p>13 Refused/Don't know</p> <p>If response <= [current month] (respondent 18 or older), go to Age.</p> <p>If response > [current month] (respondent too young), go to Check18.</p> <p>If refused or can't say, go to TrmScr6 .</p>
	<p>Check18</p>	<p>If BK431=1, go to TrmScr5 .</p>

		<p>Ask if BK431 > 1.</p> <p>/ If BK431 = 2 / If possible, I'd like to speak to the other smoker in the household who is 18 years of age or older</p> <p>/ If BK431 > 2 / If possible I'd like to speak to another smoker in the household who is 18 years of age or older and whose birthday is next.</p> <p>1 Yes, gets next respondent now</p> <p>2 Yes, but not available now</p> <p>3 No, refuses</p> <p>If response = 1, go to Intro2.</p> <p>If response = 2, go to Callback1a.</p> <p>If response = 3, go to TrmScr1.</p>
	Age	<i>Derived variable — age at recruitment (continuous).</i>
	Agegrp	<p>Derived variable — age at recruitment (categories).</p> <p>1 18-24</p> <p>2 25-39</p> <p>3 40-54</p> <p>4 55 and up</p>
022	BK501	<p>[if part of the Smoker sample]</p> <p>[non smokers are not asked these questions—skip to FB01a]</p> <p>Have you smoked 100 or more cigarettes over your lifetime?</p> <p>1 Yes</p> <p>2 No</p> <p>8 Refused</p> <p>9 Don't Know</p> <p><i>100 cigarettes = 5 packs of 20 cigarettes OR 4 packs of 25 cigarettes.</i></p> <p>IF THE RESPONDENT CAN'T ANSWER FOR ANY REASON OR REFUSES TO ANSWER, SAY:</p>

		<p>I understand, but this information is important because we are only interviewing individuals who have smoked at least 100 cigarettes. If you can't or would prefer not to answer this question, I'm afraid we cannot continue the interview.</p> <p>If response=1, go to FR211.</p> <p>If response=2 and BK431=1, go to TrmScr7</p> <p>If response=2 and BK431>1, go to Term100.</p> <p>If response=DK/ R, go to TrmScr7 .</p>
023	Term100	<p>Ask if household has 1 or more smokers who have not been spoken to.</p> <p>Is there another adult smoker in your household who has smoked at least 100 cigarettes in their lifetime?</p> <p>1 Yes</p> <p>2 No</p> <p>8 Refused</p> <p>9 Don't Know</p> <p>If response=1, go to NextBD2.</p> <p>If response=2, go to TrmScr7.</p> <p>If response=DK/ R, go to TrmScr7.</p>
024	FR211	<p><i>IF THE RESPONDENT CAN'T ANSWER FOR ANY REASON OR REFUSES TO ANSWER, SAY:</i></p> <p><i>"I understand, but this information is important because we need to understand how often people in this survey smoke. If you can't or would prefer not to answer this question, I'm afraid we cannot continue the interview."</i></p> <p>Do you smoke every day or less than every day?</p> <p>1 Every day</p> <p>2 Less than every day</p> <p>8 Refused</p> <p>9 Don't Know</p> <p>If response=1, go to FR216. Otherwise, go to FR221.</p>

FR216	<p>Ask if FR211=1.</p> <p>On average, how many cigarettes do you smoke each day, including both [factory-made/ packet] and roll-your-own cigarettes?</p> <p><i>Enter number of cigarettes.</i></p> <p><i>If respondent gives range (e.g. 30-33 cigarettes) and cannot be more specific, take the midpoint of the range and round up if necessary (e.g. 31.5 becomes 32.0).</i></p> <p>IF THE RESPONDENT CAN'T ANSWER FOR ANY REASON OR REFUSES TO ANSWER, SAY:</p> <p><i>"I understand, but this information is important because we need to understand how often people in this survey smoke. If you can't or would prefer not to answer this question, I'm afraid we cannot continue the interview."</i></p> <p>If response>0, go to FR245v (derivation of CPD). Otherwise, go to FR221.</p>
FR221	<p>Ask if FR211 NE 1.</p> <p>IF THE RESPONDENT CAN'T ANSWER FOR ANY REASON OR REFUSES TO ANSWER, SAY:</p> <p><i>"I understand, but this information is important because we need to understand how often people in this survey smoke. If you can't or would prefer not to answer this question, I'm afraid we cannot continue the interview."</i></p> <p>Do you smoke at least once a week?</p> <p>1 Yes 2 No</p> <p>If response=1, go to FR226. Otherwise, go to FR231.</p>
FR226	<p>Ask if FR221=1.</p>

		<p>On average, how many cigarettes do you smoke each week, including both [factory-made/ packet] and roll-your-own cigarettes?</p> <p><i>Enter number of cigarettes.</i></p> <p><i>If respondent gives range (e.g. 30-33 cigarettes) and cannot be more specific, take the midpoint of the range and round up if necessary (e.g. 31.5 becomes 32.0).</i></p> <p>IF THE RESPONDENT CAN'T ANSWER FOR ANY REASON OR REFUSES TO ANSWER, SAY:</p> <p><i>"I understand, but this information is important because we need to understand how often people in this survey smoke. If you can't or would prefer not to answer this question, I'm afraid we cannot continue the interview."</i></p> <p>If response>0, go to FR245v (derivation of CPD).</p>
	<p>FR231</p>	<p>Ask if FR221 NE 1.</p> <p>IF THE RESPONDENT CAN'T ANSWER FOR ANY REASON OR REFUSES TO ANSWER, SAY:</p> <p><i>"I understand, but this information is important because we need to understand how often people in this survey smoke. If you can't or would prefer not to answer this question, I'm afraid we cannot continue the interview."</i></p> <p>Do you smoke at least once a month?</p> <p>1 Yes</p> <p>2 No</p> <p>If response=1, go to FR236.</p> <p>If response=2, go to NextBSm.</p>
	<p>FR236</p>	<p>Ask if FR231=1.</p> <p>On average, how many cigarettes do you smoke each month, including both [factory-made/ packet] and roll-your-own cigarettes?</p>

		<p><i>Enter number of cigarettes.</i></p> <p><i>If respondent gives range (e.g. 30-33 cigarettes) and cannot be more specific, take the midpoint of the range and round up if necessary (e.g. 31.5 becomes 32.0).</i></p> <p>IF THE RESPONDENT CAN'T ANSWER FOR ANY REASON OR REFUSES TO ANSWER, SAY:</p> <p><i>"I understand, but this information is important because we need to understand how often people in this survey smoke. If you can't or would prefer not to answer this question, I'm afraid we cannot continue the interview."</i></p> <p>If FR236=0, go to NextBSm.</p> <p>If FR236>0, go to FR245v (derivation of CPD)</p>
	NextBSm	<p>If FR231=2 and have spoken to all smokers, go to TrmScr8 (CS34).</p> <p>Ask if FR231=2 AND household has any smokers who have not been spoken to.</p> <p>Is there another adult smoker in your household who smokes at least once a month?</p> <p>1 Yes</p> <p>2 No</p> <p>If response=1, go to Intro2.</p> <p>If response=2, go to Callback1a.</p> <p>If response=DK/ R, go to TrmScr8 (CS28).</p>
	FR245v	(Derived variable: cigarettes per day (continuous))
	FR250v	<p>(Derived variable: cigarettes per day (categories), calculated from FR245v)</p> <p>1 1-10 cigarettes</p> <p>2 11-20 cigarettes</p> <p>3 21-30 cigarettes</p> <p>4 More than 30 cigarettes</p>

		<p>7 NA</p> <p>8 Refused</p> <p>9 Don't know</p>
	rSmoke	<p>(Derived variable -- smoking status at recruitment)</p> <p>1 Daily smoker</p> <p>2 Weekly smoker</p> <p>3 Monthly smoker</p>
SURVEY SECTION		
<i>FREQUENCY of BEHAVIOUR QUESTIONS and SMOKING BEHAVIOUR QUESTIONS</i>		
	FB01a	<p>How frequently do you visit City Parks in the city of Woodstock?</p> <p>1. Every day</p> <p>2. Several times a week</p> <p>3. About once a week</p> <p>4. About once a month</p> <p>5. Less often than once a month</p> <p>6. Never</p> <p>8. Refused</p> <p>9. Don't Know</p>
	FB01b	<p>If FB01a NE 1</p> <p>How frequently do you visit Woodstock parks WITH CHILDREN (under the age of 18)?</p> <p>1. Every day</p> <p>2. Several times a week</p> <p>3. About once a week</p> <p>4. About once a month</p> <p>5. Less often than once a month</p> <p>6. Never</p>
		<p>OUTDOOR SMOKING BEHAVIOUR – PARKS</p> <p>IF FB01a NE 1</p>
	SB07	<p>If SMOKER ask:</p> <p>How often would you smoke a cigarette or other lit tobacco when</p>

		<p>visiting a park?</p> <p>If NON SMOKER ask:</p> <p>How often do you see someone smoking a cigarette or other lit tobacco when you are visiting a park?</p> <ol style="list-style-type: none"> 1. Never 2. Sometimes 3. Usually 4. Always – every time I visit a park 7. Not applicable 8 Refused 9 Don't know
		OUTDOOR SMOKING BEHAVIOUR – PARKS with Children
	SB08	<p>Ask if FB01b NE1</p> <p>If SMOKER ask:</p> <p>When you visit a city park while you are supervising children (under 18 years of age), how often will you have a cigarette?</p> <p>If NON SMOKER ask:</p> <p>When you visit a city park while you are supervising children (under 18 years of age), how often do you see someone smoking a cigarette?</p> <ol style="list-style-type: none"> 1. Never 2. Sometimes 3. Usually 4. Always – every time I visit a park with children 7. Not applicable 8. Refused 9. Don't know
	FB02a	<p>How frequently do you visit City Recreation Fields – either to play sports or to watch?</p>

		<ol style="list-style-type: none"> 1. Every day 2. Several times a week 3. About once a week 4. About once a month 5. Less often than once a month 6. Never <ol style="list-style-type: none"> 8. Refused 9. Don't Know
	FB02b	<p>How frequently do you visit City Recreation Fields WITH CHILDREN (under the age of 18)?</p> <ol style="list-style-type: none"> 1. Every Day 2. Several times a week 3. About once a week 4. About once a month 5. Less often than once a month 6. Never <ol style="list-style-type: none"> 8. Refused 9. Don't Know
		OUTDOOR SMOKING BEHAVIOUR – Recreational Fields
	SB13	<p>IF FB02a NE 6</p> <p>If SMOKER ask:</p> <p>When visiting a recreational field to play or watch a game – how often will you have a cigarette?</p> <p>If NON SMOKER ask:</p> <p>When visiting a recreational field to play or watch a game – how often do you notice people having a cigarette?</p> <ol style="list-style-type: none"> 1. Never 2. Sometimes 3. Usually 4. Always <ol style="list-style-type: none"> 8. Refused 9. Don't Know

	<p>SB14</p>	<p>Ask if FBO2b NE6</p> <p>If SMOKER ask: When you visit a recreational field while you are supervising children (under 18 years of age), will you have a cigarette?</p> <p>If NON SMOKER ask: When you visit a recreation field while you are supervising children (under 18 years of age), how often do you see people smoking a cigarette?</p> <ol style="list-style-type: none"> 1. Never 2. Sometimes 3. Usually 4. Always – every time I visit a go to a Rec Field with children <p>7 not applicable 8 Refused 9 Don't know</p>
	<p>SB06a</p>	<p>ASK SMOKERS: How often do you smoke near the doorway to a public or private building – not including your own home?</p> <p>Ask NON SMOKERS: How often do you have to walk through smokers near the doorway to a public or private building – not including your own home –</p> <ol style="list-style-type: none"> 1 Never 2 Sometimes 3 Daily 4 More than once a day <p>7 not applicable</p>

		<p>8 refused</p> <p>9 Don't know</p>
	SB06b	<p>IF SB06a NE 1</p> <p>Ask SMOKERS:</p> <p>When you smoke near a doorway, how far away from the entrance do you usually go to smoke?</p> <p>[select option that is closest]</p> <p>Ask NON SMOKERS</p> <p>When you see smokers near a doorway, how far away from the entrance are they usually smoking?</p> <ol style="list-style-type: none"> 1. Just beside the door 2. A few steps away 3. About 5 or 6 steps away (3 metres) 4. About the length of two cars (9 metres, 30 feet) 5. About the length of a bus (12 metres) <p>8. Refused</p> <p>9. Don't know</p>
		OUTDOOR SMOKING BEHAVIOUR -- SIDEWALKS
	SB09a	<p>Ask SMOKERS:</p> <p>How often do you smoke while walking or standing on a sidewalk in Woodstock?</p> <p>Ask Non-SMOKERS:</p> <p>How often do you see smokers on the sidewalks in Woodstock?</p> <ol style="list-style-type: none"> 1. Never 2. Sometimes 3. Always

		<p>7 Not applicable</p> <p>8 Don't know</p> <p>9 Refused</p>
	FB03	<p>How frequently do you ride a city bus in Woodstock?</p> <ol style="list-style-type: none"> 1. Daily 2. Several times a week 3. About once a week 4. About once a month 5. Less often than once a month 6. Never <ol style="list-style-type: none"> 8. Refused 9. Don't Know
	SB10S	<p>OUTDOOR SMOKING BEHAVIOUR – Transit Stops (Bus Stops)</p>
	SB10NS	<p>IF FB03 NE 6</p> <p>Ask SMOKERS:</p> <p>Will you smoke a cigarette when waiting for a bus – near the shelter or stop post?</p> <p>Read all and check all that apply:</p> <ol style="list-style-type: none"> 6. NO – I never smoke near the bus stop/shelter 7. YES – but I always step back from the stop/shelter to smoke 8. Sometimes 9. Usually 10. Always <p>7 - NA</p> <p>8 - Refused</p> <p>9 - Don't know</p> <p>Ask NON SMOKERS:</p> <p>When waiting for a bus, how often is there someone else there smoking a cigarette - either near the shelter or stop post?</p> <ol style="list-style-type: none"> 1. Never 2. Sometimes 3. Usually

		4. Always
	FB04	<p>Did you attend the City of Woodstock's Cowapalooza in recent years?</p> <p>(Do not read options –if respondent answers “yes” probe with “was that last year or in the last few years?”)</p> <p>1. no 2. yes – last year 3. yes – in the past few years 4. Don't remember</p> <p>8. Refused 9. Don't know</p>

	SB15	<p>OUTDOOR SMOKING BEHAVIOUR – Special Events</p> <p>Cowapalooza</p> <p>IF FB04 NE1</p>
		<p>Ask SMOKERS:</p> <p>When visiting an event in downtown Woodstock like Cowapalooza, how often will you smoke a cigarette or other lit tobacco?</p> <p>Ask NON SMOKERS:</p> <p>When visiting an event in downtown Woodstock like Cowapalooza, how often will you see someone smoking a cigarette or other lit tobacco?</p> <p>1 Never 2 Sometimes 3 Usually 4 Always</p>

		<p>8 Refused</p> <p>9 Don't know</p>
	FB05	<p>Did you attend the City of Woodstock's SIDEWALK DAYS in recent years?</p> <p>(Do not read options –if respondent answers “yes” probe with “was that last year or in the last few years?”)</p> <p>1. no</p> <p>2. yes – last year</p> <p>3. yes – in the past few years</p> <p>4. Don't remember</p> <p>8. Refused</p> <p>9. Don't know</p>
		<p>OUTDOOR SMOKING BEHAVIOUR – Special Events Sidewalk Days</p>
	SB16	<p>IF FB05 NE 1</p> <p>Ask SMOKERS:</p> <p>When visiting an event in downtown Woodstock like Sidewalk Days last year, how often will you smoke a cigarette?</p> <p>Ask NON SMOKERS:</p> <p>When visiting an event in downtown Woodstock like Sidewalk Days last year, how often did you see people smoking cigarettes?</p> <p>1 Never</p> <p>2 Sometimes</p> <p>3. Usually</p> <p>4 Always</p>

		<p>8 Refused</p> <p>9 Don't know</p>
	FB06a	<p>Have you gone to an outdoor patio of a restaurant, café or bar in Woodstock in the last year?</p> <p>1. No 2. Yes</p> <p>8. Refused 9. Don't know</p>
	FB06b	<p>IF FB06a = yes</p> <p>In the last year have you gone to any of the outdoor sidewalk cafés along Dundas Street in Woodstock</p> <p>1. No 2. Yes</p> <p>8. Refused 9. Don't Know</p>
	SB12	<p>OUTDOOR SMOKING BEHAVIOUR – HOSPITALITY SECTOR -- PATIOS</p>
		<p>IF FB06a NE1</p> <p>Ask SMOKERS:</p> <p>When visiting an outdoor patio of a restaurant, bar or sidewalk café in Woodstock how often will you have a cigarette?</p> <p>Ask NON SMOKERS:</p> <p>When visiting an outdoor patio of a restaurant, bar or sidewalk café in Woodstock, how often do you see people having a cigarette?</p> <p>1 Never 2. Sometimes 3. Usually 4. Always</p>

		<p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
***** SMOKING BEHAVIOUR AND PERSONAL POLICIES *****		
		<p>[Do not read out time units. Respondent can answer with one time unit, or use both hours and minutes to give a more accurate answer.]</p> <p>ASK SMOKERS:</p> <p>How soon after you wake up do you usually have your first smoke?</p> <p>1 Minutes</p> <p>2 Hours</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p> <p>Enter choice of time units, or a non-response code. (number of minutes) For >90 minutes, use hours field. (number of hours) Must be less than 24 hours.</p>
	SB01	
Rules about smoking in their lives/home		
		<p>ASK ALL:</p> <p>Read out response options.</p> <p>Which of the following best describes smoking inside your home?</p> <p>1 Smoking is allowed anywhere in your home</p> <p>2 Smoking is NEVER allowed ANYWHERE in your home</p> <p>3 Something in between</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
	SB02	

		<p>If SB02 NE2</p> <p>Are you intending to make your home totally smoke-free within the next year?</p> <p>1 Yes 2 No 3 Unsure</p> <p>7 Not applicable 8 Refused 9 Don't know</p>
	SB03	
		Rules about smoking in their vehicle
		<p>Which of the following best describes smoking inside your vehicle?</p> <p>1 Smoking is allowed in your vehicle 2 Smoking is NEVER allowed in your vehicle 3 Something in between</p> <p>7 Not applicable 8 Refused 9 Don't know</p>
	SB04	
SUPPORT FOR RESTRICTIONS		
		<p>Ask all.</p> <p>For each of the following places, please tell me if you think smoking should be allowed in outdoor environments:</p>
	SR01	
		<p>The grounds of a Hospital? Smoking should be allowed in:</p> <p>1 All outdoor areas 2 Some outdoor areas 3 No outdoor areas 8 Refused 9 Don't Know</p>
	SR02	

	SR03	The grounds of a Long Term Care Facility
	SR04	Outdoor workplaces like construction sites, smoking should be allowed in:
	SR05	Patios at Pubs or Bars
	SR06	Patios at Restaurants
	SR07	Patios at Family Restaurants [PROBE: A family restaurant is a restaurant where children are likely to be present, dining with their parents]
	SR08	Provincial or National Parks
	SR09	City Parks
	SR10	Patrolled public beaches
	SR11	Elementary or middle schools
	SR12	High schools
	SR13	University or College campuses
	SR14	<p>Doorways of any public building – like a post office or city hall</p> <ul style="list-style-type: none"> 1 All doorway areas 2 Some doorway areas 3 No doorway areas 8 Refused 9 Don't Know
	SR15	<p>Doorways of any private building – like an office building</p> <ul style="list-style-type: none"> 1 All doorway areas 2 Some doorway areas 3 No doorway areas 8 Refused 9 Don't Know
	SR16	How often do you notice the litter caused by cigarette

		<p>butts?</p> <p>1 Never</p> <p>2 Sometimes</p> <p>3 Often</p> <p>4 Always</p> <p>7 NA</p> <p>8 Refused</p> <p>9 Don't know</p>
	SR17	<p>How often do you worry that a cigarette butt could cause a fire?</p> <p>1 Never</p> <p>2 Sometimes</p> <p>3 Often</p> <p>4 Always</p> <p>7 NA</p> <p>8 Refused</p> <p>9 Don't know</p>
Psycho-Social QUESTIONS		
	PS01	<p>Ask all.</p> <p>Please tell me whether you strongly disagree, disagree, agree, or strongly agree with each of the following statements.</p> <p>ASK SMOKERS:</p> <p>There are fewer and fewer places where you feel comfortable smoking.</p> <p>ASK NON SMOKERS:</p> <p>There are fewer and fewer places where you feel comfortable with other people smoking.</p>

		<p>1. Strongly Disagree 2. Disagree 3. Agree 4. Strongly Agree</p> <p>7 NA 8 Refused 9 Don't Know</p>
	PS02	<p>Ask ONLY SMOKERS:</p> <p>If you had to do it over again, you would not have started smoking.</p>
	PS03	Cigarette smoke is dangerous to non-smokers.
	PS04	Society disapproves of smoking.
	PS05	<p>ASK ONLY SMOKERS:</p> <p>You spend too much money on cigarettes.</p>
	PS06	<p>ASK ONLY SMOKERS:</p> <p>You have strong mixed emotions both for and against smoking, all at the same time.</p>
	PS07	<p>ASK ONLY SMOKERS:</p> <p>People who are important to you believe that you should not smoke.</p>
	PS08	The medical evidence that smoking is harmful is exaggerated.
	PS09	<p>ASK ONLY SMOKERS</p> <p>You've got to die of something, so why not enjoy yourself</p>

		and smoke.
	PS10	Smoking is no more risky than lots of other things that people do.
ANTICIPATED IMPACT OF BYLAW ON BEHAVIOUR		
	AI01	<p>ASK ALL</p> <p>The City of Woodstock has passed a bylaw that will restrict smoking in 7 different outdoor areas including parks and recreational fields. The bylaw will prohibit smoking within 30 metres of playground equipment in city parks and within 15 metres of a recreation field when it is being used.</p> <p>How do you anticipate these restrictions impacting your future use of parks or fields? Would you say:</p> <p><i>Read out response options.</i></p> <ol style="list-style-type: none"> 1. I would go to parks or rec fields MORE often 2. I would go to parks of rec fields LESS often 3. The restrictions would not affect how often I go to parks or fields 8. Refused 9. Don't Know
	AI02	<p>ASK ALL</p> <p>The City of Woodstock outdoor smoking bylaw will prohibit smoking at events like Cowapalooza and Sidewalk Days – how will this impact your decision to attend this event in future years? Would you say:</p> <p><i>Read out response options.</i></p> <ol style="list-style-type: none"> 1. I will be more likely to attend 2. I will be less likely to attend 3. I will not be affected 7. Not Applicable 8. Refused 9. Don't Know
	AI03	<p>ASK ALL</p> <p>The City of Woodstock outdoor smoking bylaw will prohibit smoking on sidewalk areas of downtown cafés along Dundas Street</p>

		<p>– How will this impact your decision to visit these venues in the future? Would you say: <i>Read out response options.</i></p> <ol style="list-style-type: none"> 1. I will be more likely to attend 2. I will be less likely to attend 3. I will not be affected 7. Not Applicable 8. Refused 9. Don't Know
	A104	<p>ASK ALL</p> <p>The City of Woodstock outdoor smoking bylaw will prohibit smoking on sidewalks within 4 metres of transit shelters or transit stops -- How will this impact your decision to use transit in the future? Would you say:</p> <p><i>Read out response options.</i></p> <ol style="list-style-type: none"> 1. I will be more likely to use transit 2. I will be less likely to use transit 3. I will not be affected 7. Not Applicable 8. Refused 9. Don't Know
	A105	<p>ASK ALL</p> <p>The City of Woodstock outdoor smoking bylaw will prohibit smoking within 9m of doorways for all public buildings like city hall, and for private businesses that elect to make their doorway areas smoke free. – How will this impact your decision to visit these venues in the future? Would you say:</p> <p><i>Read out response options.</i></p> <ol style="list-style-type: none"> 1. I will be more likely to visit 2. I will be less likely to visit 3. I will not be affected 7. Not Applicable 8. Refused 9. Don't Know
	A106	REMIND: The responses from this survey are completely

		<p>confidential.</p> <p>ASK ONLY SMOKERS:</p> <p>Do you think it is likely that you will always follow the bylaw restricting smoking in outdoor spaces?</p> <p><i>[read all options]</i></p> <ol style="list-style-type: none"> 1. Yes, all the time 2. No – there would be some times when I would not follow the bylaw
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		<p>If AI06 NE 1</p> <p><i>[read all]</i></p> <p><i>[check all that apply]</i></p> <p>I'll describe some situations and you indicate if you think you would NOT smoke in the restricted areas:</p> <ol style="list-style-type: none"> 1. if non-smokers are present 2. if children are present 3. If a family members who are non-smokers are present 4. if older persons who are non-smokers are present 5. if a police officer or bylaw officer were present 6. if other smokers are present 7. if there is visible signage reminding you that it was a smoke-free area 8. don't know 9. refused
	AI07	
		<p>Would you be more likely to smoke if people were a certain distance away from you?</p> <ol style="list-style-type: none"> 1. yes [record distance] 2. no
	AI08	
	AI08dist	Distance of people
		Beliefs about quitting
	BQ01	ASK SMOKERS:

		<p>Have you had any quit attempts in the last year?</p> <ol style="list-style-type: none"> 1. Yes 2. No 8. Refused 9. Don't Know
	BQ01num	<i>[record how many]</i>
PERCEIVED RISKS		
	PR01	<p>ASK SMOKERS:</p> <p><i>Read out response options.</i></p> <p>To what extent, if at all, has smoking damaged your health?</p> <ol style="list-style-type: none"> 1 Not at all 2 Just a little 3 A fair amount 4 A great deal 7 NA 8 Refused 9 Don't know
	PR02	<p>ASK SMOKERS:</p> <p><i>Read out response options.</i></p> <p>How worried are you, if at all, that smoking WILL damage your health in the future?</p> <ol style="list-style-type: none"> 1 Not at all worried 2 A little worried 3 Moderately worried 4 Very worried 7 NA 8 Refused 9 Don't know
DEMOGRAPHICS QUESTIONS		
	DEintro	Finally, these last questions are for classification purposes only.

		Coverage: All respondents
	DE02	<p>What is the highest level of education you have completed?</p> <p>[DO NOT READ CATEGORIES]</p> <p>01 – No schooling</p> <p>02 – Some elementary</p> <p>03 – Completed elementary</p> <p>04 – Some secondary</p> <p>05 – Completed secondary</p> <p>06 – Some community college, CEGEP or nurse’s training</p> <p>07 – Completed community college, CEGEP or nurse’s training</p> <p>08 – Some university or teacher’s college</p> <p>09 – Completed university or teacher’s college</p> <p>10 – Other education or training</p> <p>66 – DK</p> <p>99 – R</p>
	DE03	<p>Are there any children under the age of 18 currently living in your household?</p> <p>1 Yes</p> <p>2 No</p> <p>7 NA</p> <p>8 Refused</p> <p>9 Don't know</p>
	DE03age	<p>What are their ages?</p> <p>(record)</p>
	DE04	<p>Finally, in order for us to send you payment for this survey, can you tell me your name, address and postal code where you receive your mail?</p> <p>PROBE: This is a UNIVERSITY based research study. Your answers to this survey will be kept absolutely confidential. All personal information, including your name and address, will be kept strictly confidential and will not be shared with any person or</p>

		<p>group that is not associated with this survey.</p> <p>[MAKE SURE THAT SPELLING IS CORRECT—REPEAT BACK TO RESPONDENT TO CHECK]</p> <p>01 – SPECIFY ADDRESS: _____</p> <p>GOTO DEFNAME</p> <p>02 – NO GOTO</p> <p>DE5INTRO</p>
	DE5INTRO	<p>Without this information, we are unable to send you the Tim Horton’s gift card for participation in this survey.</p> <p>01 – Respondent offers FULL address, Enter address GOTO</p> <p>DEFNAME</p> <p>02 – Respondent does NOT offer FULL address GOTO</p> <p>DE5</p>
	DE05	<p>Can you just tell me your postal code?</p> <p>[PROBE: This information will be used for regional classification purposes only]</p> <p>01 - _____ ENTER 6-DIGIT POSTAL CODE GOTO</p> <p>DEPCconf</p> <p>06 – DK GOTO</p> <p>DE8</p> <p>09 – No/R GOTO</p> <p>DE8</p>
	DE06	<p>Would you be willing to provide me with the first 3 digits of your postal code?</p> <p>PROBE: As a reminder, this information will be kept completely confidential and will not be shared with any person or group that is not associated with this survey. This information will be used to help us understand regional differences in behaviours and beliefs related to tobacco.</p> <p>01 - _____ ENTER 3-DIGIT POSTAL CODE</p> <p>GOTO DEPCconf</p> <p>06 – DK GOTO</p> <p>DDEID1</p> <p>09 – No/R GOTO</p>

		DDEID1
		DEFNAME – DEPCconf (????)
	FUP01	<p>We would like to call you back in about a year for a follow-up survey. It will take less than 10 minutes and you will receive another Tim Horton's gift card to thank you for your time. May we call you next year?</p> <p>1 – YES GOTO</p> <p>DEAcont</p> <p>2 – NO – Thank your for your time. (You will receive your gift card in a few days.) Good bye.</p>
	DEID1	<p>Can you please provide us with something that uniquely identifies you so that when we call back we will be able to reach you? For example, just your first name, a nickname or your initials? .</p> <p>01 – enter name/initials [DEID1txt] GOTO</p> <p>DEAcont</p> <p>02 – R GOTO</p> <p>DEAcont</p>
	DEAcont	<p>Is there an alternate number that you can also be reached at?</p> <p>01 - Yes [Enter: DEAltnum (###) ### - #####]</p> <p>02 – No GOTO</p> <p>THANKYOU</p>
	DEAlt_ex	<p>“Extension” – enter [altnum_ext]: ____ GOTO</p> <p>THANKYOU</p>
	THANKYOU	<p>This is the end of the questions. Thank you very much for your help with this important survey. A gift certificate will be mailed to you in the next few days.</p> <p>Goodbye. [End of survey]</p>
HELP SCREENS		
	TrmScr10 Error	<p>Interviewer Reminder: You have entered more SMOKERS 18+ than there are people 18+ in the household. Check data</p>

	Screen	entry and/or re-ask question.
	Trmscr1	Thank you for your time and assistance. That is all the questions we need to ask you.
	TrmScr2	Thank you, but we are currently looking for households where there is at least one adult smoker.
	TrmScr3	Thank you but we are looking for households where there is at least one person aged 18 or older.
	TrmScr4	Thank you for your time. Good bye.
	TrmScr5	I'm sorry, but the survey requires that respondents are at least 18 years old.
	TrmScr6	Thank you for your time and assistance but we need to make sure people are aged 18 years or older for this important study.
	TrmScr7	Thank you for your time and assistance, but our survey requires that our respondents have smoked at least 100 cigarettes in their lifetime.
	TrmScr8	I'm sorry, but our study requires that our respondents smoke at least once a month.
	TrmScr9	Thank you, but we are currently looking for households where there is at least one adult smoker.
	HelpScreen1	<p>a) IMPORTANCE OF SURVEY – WHO IS DOING IT</p> <p>This is a comprehensive survey of smokers and non-smokers in Woodstock and Oxford County in Ontario Canada – that has to do with beliefs, attitudes, knowledge, and behavior about tobacco use and the new outdoor smoking bylaw.</p> <p>The researchers include:</p> <p>Dr. Geoffrey Fong, University of Waterloo</p>

		<p>Dr. Mary Thompson, University of Waterloo Ryan David Kennedy University of Waterloo</p> <p>Dr. Roberta Ferrence University of Toronto – Ontario Tobacco Research Unit</p> <p>Dr. Robert Schwartz University of Toronto – Ontario Tobacco Research Unit</p> <p>Dr. Pam Kaufman University of Toronto – Ontario Tobacco Research Unit</p>
	<p>HelpScreen n2</p>	<p>b) WHAT'S IN IT FOR ME?</p> <p>We will talk to you on the telephone for approximately 10 minutes, and we think you will find the questions quite interesting</p> <p>We will send you a Tim Horton's Gift Certificate for \$5</p>

Appendix E – Pre-OSFO Targeted Sample Survey, Wave 1

Face-to-Face Survey

Woodstock Questionnaire – Entryware – Smokers Only
<p>Interviewers only</p> <p>What is the location of the interview</p> <ol style="list-style-type: none">2 Recreation Field3 Park – near Playground4 Transit Stop5 Sidewalk Patio6 Special Event7 Doorway –public building <p>If 6, specify</p> <ol style="list-style-type: none">1 Cowapolooza2 Other
<p>Hi, my name is _____ and I am conducting a survey of smokers on behalf of a national team of health researchers. The survey will only take about 10 minutes. Would you have time to answer a few questions?</p> <p>If hesitant, “It will only take a few minutes. We do offer a \$10 Tim Horton’s gift card in appreciation of your time.</p> <ol style="list-style-type: none">1. Continue2. Language Barrier3. Person Incompetent4. Refusal
<p>Interviewer only</p> <ol style="list-style-type: none">1. Female2. Male
<p>What year were you born?</p> <p><i>Enter year of birth.</i></p> <p>If response>[current year-18] (respondent too young), say sorry, you must be over 18 to participate.</p> <p>If response<[current year-18] (respondent is 18 or over), go to Age.</p>

If response=[current year-18] (respondent turns 18 this year), check if born before August.

If respondent doesn't know or refuses, sorry, we have to confirm that participants are over 18.

Derived variable — age at recruitment (continuous).

Derived variable — age at recruitment (categories).

- 1 18-24
- 2 25-39
- 3 40-54
- 4 55 and up

Have you smoked 100 or more cigarettes over your lifetime?

- 1 Yes
- 2 No (If no, exit survey)
- 3 Refused
- 4 Quit survey/breakoff

100 cigarettes= 5 packs of 20 cigarettes OR 4 packs of 25 cigarettes.

IF THE RESPONDENT CAN'T ANSWER FOR ANY REASON OR REFUSES TO ANSWER, SAY:

I understand, but this information is important because we are only interviewing individuals who have smoked at least 100 cigarettes. If you can't or would prefer not to answer this question, I'm afraid we cannot continue the interview.

We are conducting a survey on the outdoor smoking ban by-law in Woodstock. The Oxford County Public Health Unit is co-operating in this study.

This study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Waterloo. Participation is voluntary and you may stop at any time. IF there isa question that you would prefer not to answer, just say so and we'll go on to the next one. The answers

<p>you provide to the following questions will be kept absolutely confidential.</p>
<p>Do you smoke every day or less than every day?</p> <ol style="list-style-type: none"> 1 Every day 2 Less than every day <p>If response=1, go to FR216. Otherwise, go to FR221.</p>
<p>Ask if FR211=1.</p> <p>On average, how many cigarettes do you smoke each day, including both [factory-made/ packet] and roll-your-own cigarettes?</p> <p><i>Enter number of cigarettes. If range, take mid-point, round up.</i></p> <p>If response>0, go to FR245v (derivation of CPD). Otherwise, go to FR221.</p>
<p>Ask if FR211 NE 1.</p> <p>Do you smoke at least once a week?</p> <ol style="list-style-type: none"> 1 Yes 2 No <p>If response=1, go to FR226. Otherwise, go to FR231.</p>
<p>Ask if FR221=1.</p> <p>On average, how many cigarettes do you smoke each week, including both [factory-made/ packet] and roll-your-own cigarettes?</p> <p><i>Enter number of cigarettes. If range, take mid-point, round up.</i></p> <p>If response>0, go to FR245v (derivation of CPD).</p>
<p>Ask if FR221 NE 1.</p> <p>Do you smoke at least once a month?</p> <ol style="list-style-type: none"> 1 Yes 2 No

<p>If response=1, go to FR236.</p> <p>If response=2, go to NextBSm.</p>
<p>Ask if FR231=1.</p> <p>On average, how many cigarettes do you smoke each month, including both [factory-made/ packet] and roll-your-own cigarettes?</p> <p><i>Enter number of cigarettes. If range, take mid-point, round up.</i></p> <p>If FR236=0, go to NextBSm.</p> <p>If FR236>0, go to FR245v (derivation of CPD)</p>
<p>(Derived variable: cigarettes per day (continuous))</p>
<p>(Derived variable: cigarettes per day (categories), calculated from FR245v)</p> <ul style="list-style-type: none"> 0 1-10 cigarettes 1 11-20 cigarettes 2 21-30 cigarettes 3 More than 30 cigarettes 7 NA 8 Refused 9 Don't know
<p>(Derived variable -- smoking status at recruitment)</p> <ul style="list-style-type: none"> 1 Daily smoker 2 Weekly smoker 3 Monthly smoker
<p>Frequency of Behaviour Questions and Smoking Behaviour Questions</p>
<p>How frequently do you visit City Parks in the city of Woodstock?</p> <ul style="list-style-type: none"> 7. Every Day 8. Several times a week 9. About once a week 10. About once a month 11. Less often than once a month 12. Never <p>10. Refused</p>

11. Don't Know

If FB01a NE 1

How frequently do you visit Woodstock parks **with children** (under the age of 18)?

7. Every day
8. Several times a week
9. About once a week
10. About once a month
11. Less often than once a month
12. Never

OUTDOOR SMOKING BEHAVIOUR – PARKS

IF FB01a NE 1

How often do you smoke a cigarette or other lit tobacco when visiting a park?

1. Never
2. Sometimes
3. Usually
4. Always – every time I visit a park
- 7 not applicable
- 8 Refused
- 9 Don't know

OUTDOOR SMOKING BEHAVIOUR – PARKS with Children

Ask if FB01b NE1

When you visit a city park while you are supervising children (under 18 years of age), will you have a cigarette?

1. Never
2. Sometimes
3. Usually
4. Always – every time I visit a park with children

<p>7 not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
<p>How frequently do you visit City Recreation Fields – either to play sports or to watch?</p> <ol style="list-style-type: none"> 1. Every day 2. Several times a week 3. About once a week 4. About once a month 5. Less often than once a month 6. Never <ol style="list-style-type: none"> 8. Refused 9. Don't Know
<p>How frequently do you visit City Recreation Fields with children (under the age of 18)?</p> <ol style="list-style-type: none"> 7. Every day 8. Several times a week 9. About once a week 10. About once a month 11. Less often than once a month 12. Never <ol style="list-style-type: none"> 10. Refused 11. Don't Know
<p>OUTDOOR SMOKING BEHAVIOUR – Recreational Fields</p> <p>IF FB02a NE 1</p>
<p>When visiting a recreational field to play or watch a game – how often do you have a cigarette?</p> <ol style="list-style-type: none"> 1. Never smoke at a recreational field 2. Sometimes 3. Usually 4. Always <ol style="list-style-type: none"> 8 Refused 9 Don't know

Ask if FB02b NE1

When you visit a recreational field while you are supervising children (under 18 years of age), will you have a cigarette?

1. Never
2. Sometimes
3. Usually
4. Always – every time I visit a go to a Rec Field with children
- 7 not applicable
- 8 Refused
- 9 Don't know

How often do you smoke near the **doorway** to a public or private building – not including your own home?

- 1 Never
- 2 Sometimes
- 3 Daily
- 4 More than once a day
- 7 not applicable
- 8 refused
- 9 Don't know

IF SB06a NE 1

When you smoke near a doorway, how far away from the entrance do you usually go to smoke?

[select option that is closest]

1. Just beside the door
2. A few steps away
3. About 5 or 6 steps away (3metres)
4. About the length of two cars (9metres, 30 feet)
5. About the length of a bus (12 metres)

- 8. Refused
- 9. Don't know

OUTDOOR SMOKING BEHAVIOUR -- SIDEWALKS

How often do you smoke while walking or standing on a sidewalk in Woodstock?

- 1. Never smoke on sidewalks
- 2. I sometimes smoke on sidewalks
- 3. Always smoke on sidewalks
- 7 Not applicable
- 8 Don't know
- 9 Refused

How frequently do you ride a city bus in Woodstock?

- 7. Daily
- 8. Several times a week
- 9. About once a week
- 10. About once a month
- 11. Less often than once a month
- 12. Never

- 10. Refused
- 11. Don't Know

OUTDOOR SMOKING BEHAVIOUR – Transit Stops (Bus Stops)

IF FB03 NE 1

Will you smoke a cigarette when waiting for a bus – near the shelter or stop post?

Read all and check all that apply:

- 11. No – I never smoke near the bus stop/shelter
- 12. Yes – but I always step back from the stop/shelter to smoke
- 13. Sometimes
- 14. Usually
- 15. Always

7 - NA

8 - Refused

9 - Don't know
<p>Did you attend the City of Woodstock's Cowapalooza in recent years?</p> <p>1. No 2. Yes – last year 3. Yes – in the past few years 4. Don't remember 8. Refused 9. Don't know</p>
<p>OUTDOOR SMOKING BEHAVIOUR – Special Events Cowapalooza</p> <p>IF FB04 NE1</p>
<p>When visiting an event in downtown Woodstock like Cowapalooza, will you smoke a cigarette?</p> <p>1 Never 2 Sometimes 3. Usually 4 Always 8 Refused 9 Don't know</p>
<p>Did you attend the City of Woodstock's SIDEWALK DAYS in recent years?]</p> <p>1. no 2. yes – last year 3. yes – in the past few years 4. Don't remember 8. Refused 9. Don't know</p>
<p>OUTDOOR SMOKING BEHAVIOUR – Special Events Sidewalk Days</p> <p>IF FB05 NE 1</p>

When visiting an event in downtown Woodstock like Sidewalk Days, how often would you smoke a cigarette?

- 1 Never
- 2 Sometimes
- 3. Usually
- 4 Always
- 8 Refused
- 9 Don't know

Have you gone to an outdoor **patio** of a restaurant, café or bar in Woodstock in the last year?

- 3. No
- 4. Yes
- 8. Refused
- 9. Don't Know

IF FB06a = yes

In the last year have you gone to any of the outdoor **sidewalk cafés** on Dundas Street in Woodstock?

- 1. No
- 2. Yes
- 8. Refused
- 9. Don't Know

OUTDOOR SMOKING BEHAVIOUR – HOSPITALITY SECTOR -- PATIOS

IF FB06a NE1

When visiting an outdoor patio of a restaurant, bar or sidewalk café in Woodstock how often do you have a cigarette?

- 1 Never
- 2. Sometimes
- 3. Usually
- 4. Always

<p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
<p>Smoking Behaviour and Personal Policies</p>
<p>[Do not read out time units. Respondent can answer with one time unit, or use both hours and minutes to give a more accurate answer.]</p> <p>How soon after you wake up do you usually have your first smoke?</p> <p>1 Minutes</p> <p>2 Hours</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p> <p>Enter choice of time units, or a non-response code.</p>
<p>(number of minutes) For >90 minutes, use hours field.</p>
<p>(number of hours) Must be less than 24 hours.</p>
<p>Rules about smoking in their lives/home</p>
<p>Which of the following best describes smoking inside your home?</p> <p>1 Smoking is allowed anywhere in your home</p> <p>2 Smoking is NEVER allowed ANYWHERE in your home</p> <p>3 Something in between</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
<p>If SB02 NE2</p> <p>Are you intending to make your home totally smoke-free within the next year?</p> <p>1 Yes</p> <p>2 No</p>

<p>3 Unsure</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
<p>Rules about smoking in their vehicle</p>
<p>Which of the following best describes smoking inside your vehicle?</p> <p><i>Read all</i></p> <p>1 Smoking is allowed in your vehicle</p> <p>2 Smoking is NEVER allowed in your vehicle</p> <p>3 Something in between</p> <p>7 Not applicable</p> <p>8 Refused</p> <p>9 Don't know</p>
<p>Support for Restrictions</p>
<p>For each of the following places, please tell me if you think smoking should be allowed in outdoor environments:</p>
<p>The grounds of a Hospital? Smoking should be allowed in:</p> <p>1 All outdoor areas</p> <p>2 Some outdoor areas</p> <p>3 No outdoor areas</p> <p>8 Refused</p> <p>9 Don't Know</p>
<p>The grounds of a Long Term Care Facility</p>
<p>Outdoor workplaces like construction sites, smoking should be allowed in:</p>
<p>Patios at Pubs or Bars</p>
<p>Patios at Restaurants</p>
<p>Patios at Family Restaurants [A family restaurant is one where children are likely to be present, dining with their families]</p>

Provincial or National Parks
City Parks
Patrolled public beaches
Elementary or middle schools
High schools
University or College campuses
<p>Doorways of any public building – like a post office or city hall</p> <ol style="list-style-type: none"> 1. All doorway areas 2. Some doorway areas 3. No doorway areas 4. Refused 5. Don't Know
<p>Doorways of any private building – like an office building</p> <ol style="list-style-type: none"> 1. All doorway areas 2. Some doorway areas 3. No doorway areas 4. Refused 5. Don't Know
<p>How often do you notice the litter caused by cigarette butts?</p> <ol style="list-style-type: none"> 1 Never 2 Sometimes 3 Often 4 Always 7 NA 8 Refused 9 Don't know
<p>How often do you worry that a cigarette butt could cause a fire?</p> <ol style="list-style-type: none"> 1 Never 2 Sometimes

- 3 Often
- 4 Always

- 7 NA
- 8 Refused
- 9 Don't know

Psycho-Social Questions

Please tell me whether you strongly disagree, disagree, agree, or strongly agree with each of the following statements.

There are fewer and fewer places where you feel comfortable smoking.

- 5. Strongly Disagree
- 6. Disagree
- 7. Agree
- 8. Strongly Agree

- 7 NA
- 8 Refused
- 9 Don't Know

If you had to do it over again, you would not have started smoking.

Cigarette smoke is dangerous to non-smokers.

Society disapproves of smoking.

You spend too much money on cigarettes.

You have strong mixed emotions both for and against smoking, all at the same time.

People who are important to you believe that you should not smoke.

The medical evidence that smoking is harmful is exaggerated.

You've got to die of something, so why not enjoy yourself and smoke.

Smoking is no more risky than lots of other things that people do.

Anticipated Impact Of Bylaw On Behaviour

The City of Woodstock has passed a bylaw that will restrict smoking in 7 different outdoor areas including parks and recreational fields. The bylaw will prohibit smoking within 30 metres of playground equipment in city parks and within 15 metres of a recreation field when it is being used.

How do you anticipate these restrictions may impact your future use of parks or fields? Would you say...

Read out response options.

4. I would go to parks or rec fields MORE often
5. I would go to parks or rec fields LESS often
6. The restrictions would not affect how often I go to parks or fields

- 8 Refused
- 9 Don't Know

The City of Woodstock outdoor smoking bylaw will prohibit smoking at events like Cowapalooza and Sidewalk Days – How will this impact your decision to attend this event in future years? Would you say...

Read out response options.

4. I would be more likely to attend
5. I would be less likely to attend
6. I would not be affected

7. Not Applicable
- 8 Refused
- 9 Don't Know

The City of Woodstock outdoor smoking bylaw will prohibit smoking on sidewalk areas of downtown cafés along Dundas Street – How will this impact your decision to attend to visit these venues in the future? Would you say...

Read out response options.

1. I would be more likely to visit
2. I would be less likely to visit

3. I would not be affected

7. Not Applicable

8 Refused

9 Don't Know

The City of Woodstock outdoor smoking bylaw will prohibit smoking on sidewalks within 4metres of transit shelters or transit stops -- How will this impact your decision to use transit in the future? Would you say...

Read out response options.

1. I would be more likely to use transit

2. I would be less likely to use transit

3. I would not be affected

7. Not Applicable

8 Refused

9 Don't Know

The City of Woodstock outdoor smoking bylaw will prohibit smoking within 9m of doorways for all public buildings like city hall, and for private businesses that elect to make their doorway areas smoke free. – How will this impact your decision to visit these venues in the future? Would you say...

Read out response options.

1. I would be more likely to visit

2. I would be less likely to visit

3. I would not be affected

7. Not Applicable

8 Refused

9 Don't Know

REMIND: The responses from this survey are completely confidential.

Do you think it is likely that you will always follow the bylaw restricting smoking in outdoor spaces?

[read all options]

3. Yes, all the time
4. No – there would be some times when I would not follow the bylaw

If AI06 NE 1

[read all]

[check all that apply]

I'll describe some situations and you indicate if you think you would NOT smoke in the restricted areas:

10. if non-smokers are present
11. if children are present
12. If a family member who does not smoke is present
13. if older persons who are non-smokers are present
14. if a police officer or bylaw officer were present
15. if other smokers are present
16. if there is visible signage reminding you that it was a smoke-free area
17. refused
9. don't know

Would you be more likely to smoke if people were a certain distance from you?

3. yes [record distance]
2. no

Distance of people

Beliefs about quitting

Have you had any quit attempts in the last year?

1. Yes [record how many]
2. No
3. Refused

PERCEIVED RISKS

Read out response options.

To what extent, if at all, has smoking damaged your health?

- 1 Not at all
- 2 Just a little
- 3 A fair amount
- 4 A great deal
- 7 NA
- 8 Refused
- 9 Don't know

Read out response options.

How worried are you, if at all, that smoking WILL damage your health in the future?

- 1 Not at all worried
- 2 A little worried
- 3 Moderately worried
- 4 Very worried
- 7 NA
- 8 Refused
- 9 Don't know

Thinking of the past week, how many nights were you at home for most of the evening?

Note: If say all, most, some, ask for number?

If concerned about question: We are conducting this survey by phone and in the street. This question will help us combine the responses of the two surveys.

- 1 Enter Number
- If 7, skip to demographics
- 8 – Refused

Thinking of the past week, of those nights you were out of the house, how many

were spent at:

Read list. Check all that apply

Recreation Fields, enter number

Parks with Playgrounds, enter number

Sidewalk patios, enter number

Special events, enter number

None of the above

Refused

DEMOGRAPHICS

What is the highest level of education you have completed?

[DO NOT READ CATEGORIES]

01 – No schooling

02 – Some elementary

03 – Completed elementary

04 – Some secondary

05 – Completed secondary

06 – Some community college, CEGEP or nurse's training

07 – Completed community college, CEGEP or nurse's training

08 – Some university or teacher's college

09 – Completed university or teacher's college

10 – Other education or training

66 – DK

99 – R

Are there any children under the age of 18 currently living in your household?

1 Yes

2 No

8 Refused

9 Don't know

<p>-- what are their ages? (record)</p>
<p>How many landline phone connections do you have in your household?</p> <p>1 – 1 2 - 2 3 – 3 Other _ - enter 8 Refused 9 Don't know</p>
<p>We would like to call you back in about a year for a follow-up survey. It will take less than 10 minutes and you will receive another Tim Horton's gift card to thank you for your time. May we call you next year?</p> <p>1 – YES GOTO DE05 2 – NO – Thank your for your time. Here is your gift card. Good bye.</p>
<p>Can you tell me the phone number we could best reach you in the evenings? Enter #</p>
<p>Is there an alternate number that you can also be reached at? 01 - Yes [Enter: DEAltnum (###) ### - #####] 02 – No</p>
<p>“Extension” – enter [altnum_ext]: ____</p>
<p>Can you tell me your name, address and postal code where you receive your mail so we can send you a reminder letter to expect our call?</p> <p>PROBE: This is a UNIVERSITY based research study. Your answers to this survey will be kept <u>absolutely</u> confidential. All personal information, including your name and address, will be kept <u>strictly</u> confidential and will not be shared with any person or group that is not associated with this survey.</p> <p>[MAKE SURE THAT SPELLING IS CORRECT—REPEAT BACK TO RESPONDENT</p>

TO CHECK]

01 – SPECIFY ADDRESS: _____ **GOTO**

DEFNAME

02 – NO **GOTO DE07**

Can you confirm if you live in Oxford County?

Can you just tell me your postal code?

[**PROBE**: This information will be used for regional classification purposes only]

01 - _____ ENTER 6-DIGIT POSTAL CODE **GOTO thank -you and end**

06 – DK **GOTO DE9**

09 – No/R **GOTO DE9**

Would you be willing to provide me with the first 3 digits of your postal code?

PROBE: As a reminder, this information will be kept completely confidential and will not be shared with any person or group that is not associated with this survey. This information will be used to help us understand regional differences in behaviours and beliefs related to tobacco.

1 - _____ ENTER 3-DIGIT POSTAL CODE **GOTO thank you and end**

9 – DK **GOTO DDEID1**

8 – No/R **GOTO DDEID1**

Can you please provide us with something that uniquely identifies you so that when we call we will be able to reach you? For example, just your first name, a nickname or your initials? .

01 – enter name/initials [DEID1txt]

02 – R **GOTO THANKYOU**

Thank you for your time. Here is a gift card. Good-bye.

**Appendix F – Technical Report, Wave 1 Woodstock Study – Survey Research
Centre**



surveyresearchcentre | University of Waterloo

**Woodstock Outdoor Smoking Ban Survey
Technical Report**

**Prepared for
Ryan Kennedy, Ph.D Candidate
Psychology, University of Waterloo
October 6, 2008**

Woodstock Summary

Telephone

Survey in Field: August 13 – 28, 2008

Completes & Partial	609	Station Hours	390
		Completes/Hour	1.6
Quota Open			
		Survey Length	
Contact Rate	69.5%	(ave.)	14.3 min
Cooperation Rate	47.0%		
	32.7		
Response Rate	%		
Quota Closed			
Contact Rate	73.3%		
Cooperation Rate	42.2%		
	34.5		
Response Rate	%		

Street Intercepts

Survey in Field: August 13 – 19, 2008

Completes & Partial	176	Interviewer Hours	343.3
		Completes/Hour	.51
Response Rate	29.4%		
		Survey Length (ave.)	14.1 min

Section One: Study Description

This is a longitudinal survey of Woodstock and surrounding area residents that is intended to evaluate the impact of a municipal smoking ban in certain outdoor areas that will come into effect in September 1st, 2008.

Part One, a pre-ban survey, took place in August, 2008. It included a Random Digit Dialing (RDD) general adult population survey of non-smokers and smokers. Another set of smokers were contacted through a convenience sample street intercept. Interviewers using palm devices went to the outdoor areas that will be affected by the ban. Both groups were asked a set of core questions designed to evaluate the incidence of visible smoking behaviour in the targeted areas, attitudes towards smoking and the anticipated impact of the by-law.

The ban covers the following locations: Transit stops, doorways (both public and private), outdoor special events, parks, recreation fields, and sidewalk cafes and patios.

Both phone and street respondents were recruited to participate in a telephone post-ban follow-up survey that will take place next year. All participants received an incentive for participation. Thank you letters were sent to telephone respondents.

Due to the need to successfully complete fieldwork prior to the implementation of the ban, no pilot was conducted. Pre-testing was done within the SRC to test the survey instrument.

Section Two: Methodology

Sample and Selection

For the telephone portion of this survey, a sample of 4,500 RDD numbers from Oxford County was purchased from ASDE Survey Sampler, Gatineau, Quebec. Possible respondents were selected through smoking status and then by the next birthday method.

Respondents were selected by requesting household adult composition and the number of smokers. If there were smokers in the household, the smoker whose birthday was coming next was recruited, whether the non-smoker quota was open or not. If there were no smokers in the household, and the non-smoker

quota was open, then the non-smoker with the next birthday was requested. Given that only about 20% of the general adult population can be identified as smokers, and that the field time was limited, preference was given to capturing smokers efficiently.

ASDE uses a geographically stratified, general phone population random sampling program. It samples using RDD methodology and checks its samples against published phone lists to divide the RDD frame into “directory listed” and “directory not listed” components. Their method is adapted from the Mitofsky-Waksberg Method. The list is randomly ordered within strata.

For the street intercepts, a targeted convenience sample was taken. Interviewers visually identified smokers in the chosen location and approached them for possible participation. More than one respondent was accepted if a group of smokers was approached.

Section Three: Telephone Survey Fieldwork

Overview

The initial project design called for telephone data collection from 300 non-smokers and 175 smokers (a ratio of 1.7:1). Due to better than expected completion rates, 368 non-smokers and 233 smokers (a ratio of 1.6:1) completed the survey for a total of 601 cases (excluding partials). This increased completion rate may be attributed the relatively high prevalence of smokers in Woodstock.

Interviewers were trained in a four hour session on August 11th, which included a presentation by the client. Fieldwork began Wednesday, August 13th and ended on Thursday, August 28th for 14 days of fieldwork. Approximately 70% of contacts were made on weekday evenings, with the rest made Sunday afternoon or during weekdays. All calls were conducted using WinCATI v4.2, a computer system from Sawtooth Technologies.

Call Attempts

70.2% of calls were completed in the first 3 attempts. Only a few call attempts went past 8 in situations such as callbacks and busy signals. 98.6% of the cases were completed by 8 attempts.

Protocols

Woodstock followed our standard protocols for RDD sample.

Call Protocols	
Call Attempts	8 dialings will be made to each phone number. All call attempts to each number will be exhausted.
Timing of Call Attempts	Calls will be varied among all times, including mornings, afternoons, evenings, and weekends.
Busy Signal	Dialings resulting in busy signals will be rescheduled at 30-minute intervals up to 2 times. These will override the 8 dialing limit. If the first 5 attempts result in only busy signals, the number will be assumed not in service and coded accordingly.
Break Offs/Hang Ups/Early Refusal	If before the #of people of household question is asked, code as break off.
Call Backs	Appointment calls will be made when requested by respondents subject to call centre schedule.
Answering Machine/Message service	No message will be left. 8 call attempts will occur.
Fax machine, not-in-service, and business numbers	The number is checked to ensure the correct number was reached. They are then retired from the queue.
Changed numbers	Numbers that have been changed are checked, given a final disposition of not-in-service and retired from the queue.
Non-Smoker Quota	will be opened at supervisor's discretion

Station Hours

390 station hours were used to complete 608 surveys for a complete per hour of 1.6. This was a better completion rate than anticipated.

Non Smoker Quota

Due to the much higher incidence of non-smokers within the general population, and therefore the greater likelihood that they would complete a survey, daily goals were set for non-smokers. Once the goal was achieved, the non-smoker quota was closed and only smokers were recruited. This ensured the proportion of non-smokers to smokers was maintained. For evening shifts, on average only smokers were contacted for the second half of the shift (from 7pm to 9pm).

Final Dispositions

A total of 4,515 records were loaded into the CATI system to be called. Of those, 556 did not receive final dispositions and are considered out of sample. Please note that the two Refusal dispositions (2.1 and 3.1) are based on the Ontario Tobacco Control baseline survey refusal proportions over six waves (eligible refusals n= 1,479, unknown eligibility refusals n = 13,477). A programming error led to unknown eligibles being assigned to refusal, eligible. The total number of refusals is accurate. The final dispositions have been adjusted to identify partials.

Interview 1.0			608
1.1	Complete - non-smoker	368	
1.11	Complete - smoker	233	
1.2	Partial - non-smoker	5	
1.2	Partial - smoker	2	
Eligible, Non-Interview 2.0			104
2.1	Refusal, eligible	104	
Unknown Eligibility, Non-Interview 3.0			1,670
3.1	Refusal - unknown eligibility	946	
3.12	Answering machine	724	
Not Eligible 4.0			1,577
4.2	NIS/Fax/Business	1,125	
4.3	Contact, person incompetent	10	
4.33	Contact, language problem	25	
4.4	Cell phone	21	
4.7	No adult in household	31	
4.8	Non-Smoker Quota closed	360	
4.81	Ineligible (smoking status or age)	5	
Total			3,959

* AAPOR (American Association of Public Opinion Research) RDD disposition codes are used.

In order to provide a more accurate calculation of response rates, the final dispositions have been broken down by the non-smoker quota being open or closed. Response rates have been calculated by quota open and by quota closed. Of the 3,959 records that reached a final disposition, 1,125 were fax, not-in-service or business numbers. These numbers (disposition code 4.2) are excluded from the response rate calculations.

Quota Open/Closed			
Interview 1.0			608
1.12	Complete - non-smoker quota open	490	
1.13	Complete - non-smoker quota closed	111	
1.21	Partial - non-smoker quota open	5	
1.22	Partial - non-smoker quota closed	2	
Eligible, Non-Interview 2.0			104
2.11	Refusal, eligible, non-smoker quota open	61	
2.12	Refusal, eligible, non-smoker quota closed	43	
Unknown Eligibility, Non-Interview 3.0			1,670
3.1	Refusal - unknown eligibility - non-smoker quota open	558	
3.12	Refusal - unknown eligibility - non-smoker quota closed	388	
3.21	Answering machine, non-smoker quota open	517	
3.22	Answering machine, non-smoker quota closed	207	
Not Eligible 4.0			1,577
4.01	Not eligible, non-smoker quota open (per incomp, lb, cell, no adult)	63	
4.02	Not eligible, non-smoker quota closed (per incomp, lb, cell, no adult)	24	
4.21	NIS/FAX/Business, non-smoker quota open	656	
4.22	NIS/FAX/Business, non-smoker quota closed	469	
4.8	Non-Smoker Quota closed	360	
4.81	Ineligible (smoking status or age) – Quota open	5	
Total			3,959

Quota Open Calculations

Estimated Eligibility

We assume that a proportion of cases with unknown eligibility would be ineligible, based on the number of cases that were contacted and were identified as not eligible.

$$\text{Neo} = \frac{4.01 + 4.81}{4.01 + 4.81 + 1.12 + 1.21 + 2.11} = \frac{68}{624} = 0.1090$$

Only 10.9% of contacts would have been ineligible when the quota was open.

Of the unknown eligibles, the estimated eligibles are:

$$\text{Eeo} = (1 - \text{Neo}) * (3.1 + 3.21) = 958$$

Contact Rate

This measurement considers how successful we were at reaching a person.

$$\frac{1.12 + 1.21 + 2.11 + 3.1 + 4.01}{1.12 + 1.21 + 2.11 + 3.1 + 4.01 + 3.21} = \frac{1177}{1694} = 0.6948 = \mathbf{69.5\%}$$

Cooperation Rate

This measurement considers how likely it was that the person we reached would complete the survey.

$$\frac{1.12 + 1.21}{1.12 + 1.21 + 2.11 + 3.1 * (1 - \text{neo})} = \frac{495}{1053} = 0.4700 = \mathbf{47.0\%}$$

Response Rate

AAPOR Response Rate 4 (RR4) is used, which includes partials and estimated eligible unknowns.

$$\frac{1.12 + 1.21}{1.12 + 1.21 + 2.11 + \text{Eeo}} = \frac{495}{1514} = 0.3270 = \mathbf{32.7\%}$$

Quota Closed Calculations

Estimated Eligibility

We assume that a proportion of cases with unknown eligibility would be ineligible, based on the number of cases that were contacted and were identified as not eligible when the quota was closed.

$$\text{Nec} = \frac{4.02 + 4.8}{4.02 + 4.8 + 1.13 + 1.23 + 2.12} = \frac{384}{540} = 0.7111$$

71.1% of contacts would have been ineligible when the quota was closed.

Of the unknown eligibles, the estimated eligibles are:

$$\text{Eec} = (1 - \text{Nec}) * (3.12 + 3.22) = 172$$

Contact Rate

This measurement considers how successful we were at reaching a person.

$$\frac{1.13 + 1.22 + 2.12 + 3.12 + 4.02}{1.13 + 1.22 + 2.12 + 3.12 + 4.02 + 3.22} = \frac{568}{775} = 0.7329 = \mathbf{73.3\%}$$

Cooperation Rate

This measurement considers how likely it was that the person we reached would complete the survey.

$$\frac{1.13 + 1.22}{1.13 + 1.22 + 2.12 + 3.12 * (1 - \text{neo})} = \frac{113}{268} = 0.4215 = \mathbf{42.2\%}$$

Response Rate

AAPOR Response Rate 4 (RR4) is used, which includes partials and estimated eligible unknowns.

$$\frac{1.13 + 1.22}{1.13 + 1.22 + 2.12 + Eec} = \frac{113}{328} = 0.3445 = \mathbf{34.5\%}$$

Incentive and Thank you Letters

For the telephone interview, participants were offered a booklet of Tim Hortons gift certificates worth \$5 dollars. Of the 601 people who completed the survey, 559 provided their address to send the cash incentive and letter (8 of which refused the follow-up survey). Mail outs began on August 19th and continued until early September when the final incentives were sent out. Three letters were returned due to an incorrect address; all three had the address corrected and were re-sent.

Follow-Up Participation

Of the 601 people who completed the survey, 583 agreed to do the follow-up for an agreement rate of 97%. Of those who agreed, 551 provided a name and address for the reminder letter, 24 provided a name only, and 8 provided no additional contact information.

Quality Control

During an interviewing shift, interviewers are subject to several quality control measures. These measures allow us to maintain data quality and maximize efficiency. These measures include telephone monitoring, productivity checks and interviewer evaluation.

Supervisors listen to the interviews as a silent third party while simultaneously monitoring their screens from another computer. This tracks protocol adherence and accuracy of data recording. Supervisors attempt to monitor 5-10% of an interviewer's shift on the phone. Interviewer productivity is checked throughout each shift, after the completion of each shift and at the end of each week. This tracks efficiency as well as procedural accuracy. More in-depth evaluation of interviewers is done at least once every three shifts. This evaluation considers phone manners, voice tone, impartiality and probing skills. Daily pre-shift meetings ensure interviewers are notified to any changes to the instrument or protocols.

Section Four: Street Intercept Interviews

Overview

The project plan called for a minimum of 150 completes by face to face intercepts in the city of Woodstock. A better than expected response led to 171 completes in 343.3 staff hours, for a completion rate of 0.51 per hour. We anticipated requiring 375 staff hours.

Intercepts took place at every location targeted by the outdoor smoking ban: Transit stops, doorways of public buildings, doorways of large corporate businesses such as WalMart, outdoor special events, parks, recreation fields, and sidewalk cafes and patios. For intercepts in business locations such as doorways or sidewalk cafes, the owner/operator was first approached for permission. Each location was staffed for at least one day of fieldwork. The client and team supervisors spent a day in Woodstock to identify appropriate locations and plan daily activity. The intercepts were conducted using *Entryware* software on Palm III handheld devices. Each respondent was offered \$10 in Tim Hortons gift certificates as a token of appreciation. No thank you letter was sent.

Interviewers attended a three hour training session on August 12th which emphasized the survey rationale, approaching respondents, interviewer neutrality and using the Palm IIIs. Data was downloaded every night onto a SRC password protected laptop.

Protocols

Street Intercept protocols were based on reaching a convenience sample.

Call Protocols	
Interviewers	Interviewers will work in teams of two, wear ID badges at all times. Each team will have two Palm IIIs (1 as back up in case of battery failure).
Approaching Possible Participants	Approach anyone in target area seen smoking. Open questionnaire if there is initial agreement.
Refusals/Break offs	Use refusal disposition only if a confirmed smoker.
Ineligible	Use when respondent does not pass smoking status or age screener.
Time in target locations	Each location is covered at least once during field work.
# of areas	7 areas – public doorways, private doorways, transit stops, special events, playgrounds in parks, recreation fields, sidewalk patios.

Completes by Location

Of the special events, 28 surveys were completed at the weekend event Cowapalooza and 36 at “other” – the Blackout anniversary event.

Location	#
Doorways - public	37
Doorways - private	18
Transit stops	19
Special events	64
Playgrounds	21
Recreation fields	10
Sidewalk patios	2
Total	171

Final Dispositions

All recorded refusals are identified smokers who were approached, expressed initial agreement and then refused.

Interview 1.0			176
1.1	Complete	171	
1.2	Partial	5	
Eligible, Non-Interview 2.0			20
2.1	Refusal, eligible	20	
Not Eligible 4.0			4
4.33	Contact, language problem	1	
4.7	Ineligible	3	
Total			200

Response Rate

Limited response rates can be calculated from the final dispositions for the face to face interview as this was a convenience sample.

$$\frac{1.0}{1.0 + 2.0} = \frac{176}{196} = 0.8979 = 89.8\%$$

Follow-up Participation

Of the 171 people who completed the survey, 152 agreed to participate in a follow-up survey. Of those, 151 provided some type of contact information (from telephone number only to name, telephone number and address), for an agreement rate of 88.3%.

Section Four: Commentary

Both the telephone and the street intercept surveys ran smoothly in the field, with better than expected completion rates, allowing for improved recruitment. There was a high rate of agreement for the follow-up survey next year. All recruited participants will be sent a reminder letter with the gift certificates at least one week prior to telephone contact.

Appendix G – Wave 2 Survey – Telephone only

***** INTRODUCTION *****		
		1. Person answers – continue 2. No answer/answering machine 3. Busy 4. NIS/Fax 5. Cell phone 6. Person incompetent 7. Language barrier 8. Break-off/Hang up 9. Other 10. Access Alternate Numbers
	Intro	Hello, may I please speak with (Respondent's name)? 01 Yes - Continue 02 No, he/she is not available – GO TO CBack1 03 Respondent answers phone - Continue 04 Wrong Number - 09 No/respondent refuses OR asks who is calling – GO TO Intro1
001	Intro1	<i>Interviewer Note: See HelpScreens for answers to any questions about survey.</i> Hello, my name is [-----], and I'm calling from the University of Waterloo Survey Research Centre. We are looking for (Name) who took part in an academic survey about a year ago. Would that be you? IF CHILD ANSWERS, ASK TO SPEAK TO AN ADULT. (Begin again) 1. Continue – respondent reached GO TO Intro2 2. Not available – Callback GO TO CBack1 3. Refuses – Rebuttal GO TO Rebut0 4. Wrong number GO TO MovedQ
002	Cback1	When would be a better time to reach them? (NAME) 1. Set callback GO TO CB1Trm 2. Moved – GO TO MovedQ 3. Refusal Thank you for your time. Good bye.
	MovedQ	Ask for forwarding number 1. Enter new number _____ 2. No number available Thank you for your time. Good bye.
003	Intro2	About a year ago you completed a survey about the outdoor smoking ban

007	Add1_a	<p>I understand. May I continue?</p> <p>01 – Yes go to Intro5 02 - No go to Rebut2</p>
008	Add2	<p>It appears that we did not have your address on file from the survey you completed last year. We would like to send you the Tim Horton's gift card as a thank you for your participation. May I take down your address?</p> <p>01 – Yes enter in address, go to Intro4 02 – No That's okay. Are you willing to continue? 01 – Yes go to Intro5 02 – No go to Rebut2</p>
009	Intro4	<p>We would like you to answer the survey today, but if you feel more comfortable waiting until you receive the letter, we could schedule the survey in a few days' time.</p> <p>As with the last survey, your answers to this survey will be kept absolutely confidential. All personal information, including your name and address, will be kept confidential and will not be shared with anyone not associated with this survey.</p> <p>Participation is voluntary and you may stop at any time. This survey has received ethics clearance from the University of Waterloo. This call may be monitored by my supervisor for quality assurance purposes.</p> <p>Is now a good time to start the survey?</p> <p> 01 – Yes GOTO FR210 02 – No GOTO Cback3 09 – REFUSAL GOTO Rebut2</p>
010	Intro5	<p>As with the last survey, your answers to this survey will be kept absolutely confidential. All personal information, including your name and address, will be kept confidential and will not be shared with anyone not associated with this survey.</p> <p>Participation is voluntary and you may stop at any time. This survey has received ethics clearance from the University of Waterloo. This call may be monitored by my supervisor for quality assurance purposes.</p> <p>Is now a good time to start the survey?</p> <p> 01 – Yes GOTO FR210 02 – No GOTO Cback3</p>

		09 – REFUSAL	GOTO Rebut2
???	Rebut0	<p>Every respondent is important. We would like to talk as many of the people we spoke to last year as possible. This survey will help us better understand the impact of the outdoor smoking ban on people’s daily lives in Woodstock.</p> <p>May we continue?</p> <p>01 – Yes 02 – Later 09 – REFUSAL</p>	<p>GOTO Intro2 GOTO Cback3 Thank you for your time. Good bye.</p>
011	Rebuttal1	<p>Every respondent is important. We would like to talk as many of the people we spoke to last year as possible. This survey will help us better understand the impact of the outdoor smoking ban on people’s daily lives in Woodstock.</p> <p>May we continue?</p> <p>01 – Yes 02 – Later 09 – REFUSAL</p>	<p>GOTO Intro5 GOTO Cback3 Thank you for your time. Good bye. .</p>
012	Rebuttal2	<p>Every respondent is important. We would like to talk as many of the people we spoke to last year as possible. This survey will help us better understand the impact of the outdoor smoking ban on people’s daily lives in Woodstock.</p> <p>May we continue?</p> <p>01 – Yes 02 – Later 09 – REFUSAL</p>	<p>GOTO FR210 GOTO Cback3 Thank you for your time. Good bye,</p>
013	Cback3	<p>OK, when would be a good time to call you back?</p> <p>01 – Set callback 09 – Respondent refuses</p>	<p>GO TO CB3Trm Thank you for your time. Good bye,</p>

***** **SCREENER SECTION** *****

	Smst	<i>Smoking status – pulled from baseline</i>
	FR210	<p>Have you smoked a cigarette since we last spoke with you, 1 year ago? <i>IF REFUSES/DON'T KNOW: "For this research study, it is really important that we know if you have smoked since your last interview"</i></p> <p>1 Yes 2 No, non-smoker go to rSmoke 8 Refused 9 Don't Know</p>
	SmCh09	<p>Ok, how long ago was it that you last smoked a cigarette: was it</p> <p>[READ CATEGORIES] 01 – one week or less 02 – more than one week but less than one month 03 – 1 to 6 months ago go to rSmoke 04 – 7 to 12 months ago go to rSmoke 08 –Refused 09 –Don't Know</p>
022	SmCh10	<p>Compared to a year ago, that is, since August 2008, would you say that you are now smoking...</p> <p>1 The same as you were smoking go to FR211 2 More than you were smoking go to FR211 3 Less than you were smoking go to FR211 4 Less than you were smoking go to rSmoke and quit smoking 8 Refused go to FR211 9 Don't Know go to FR211</p>
023	FR211	<p>At the present time, do you smoke every day or less than every day?</p> <p>1 Every day go to FR216 2 Less than every day go to FR221 3 Has quit smoking in past year go to rSmoke 8 Refused go to FR221 9 Don't Know go to FR221</p>
024	FR216	<p>Ask if FR211=1.</p> <p>On average, how many cigarettes do you smoke each day, including both factory-made and roll-your-own cigarettes?</p> <p>1 <i>Enter number of cigarettes.</i></p>

		<p>8 Refused 9 Don't know</p> <p><i>If respondent gives range (e.g. 30-33 cigarettes) and cannot be more specific, take the midpoint of the range and round up if necessary (e.g. 31.5 becomes 32.0).</i></p> <p><i>If respondent answers in packs, ask "Is that a pack of 20 or 25?"</i></p> <p>If response>0, go to FR245v (derivation of CPD). For refusal or don't know, go to FR221.</p>
	FR221	<p>Ask if FR211 NE 1. Do you smoke at least once a week?</p> <p>1 Yes go to FR226 2 No go to FR231 8 Refused go to FR231 9 Don't know go to FR231</p> <p>If response=1, go to FR226. Otherwise, go to FR231.</p>
025	FR226	<p>Ask if FR221=1. On average, how many cigarettes do you smoke each week, including both factory-made and roll-your-own cigarettes?</p> <p>1 Enter number of cigarettes. 8 Refused go to FR231 9 Don't know go to FR231</p> <p><i>If respondent gives range (e.g. 30-33 cigarettes) and cannot be more specific, take the midpoint of the range and round up if necessary (e.g. 31.5 becomes 32.0).</i></p> <p>If response>0, go to FR245v (derivation of CPD).</p>
	FR231	<p>Ask if FR221 NE 1. Do you smoke at least once a month?</p> <p>1 Yes go to FR236 2 No go to rSmoke 8 Refuses go to rSmoke 9 Don't know go to rSmoke</p> <p>If response=1, go to FR236.</p>
026	FR236	<p>Ask if FR231=1. On average, how many cigarettes do you smoke each month, including</p>

		<p>both factory-made and roll-your-own cigarettes?</p> <p>1 Enter number of cigarettes.</p> <p>8 Refused go to rSmoke</p> <p>9 Don't know go to rSmoke</p> <p><i>If respondent gives range (e.g. 30-33 cigarettes) and cannot be more specific, take the midpoint of the range and round up if necessary (e.g. 31.5 becomes 32.0).</i></p> <p>If FR236=0, go to rSmoke. If FR236>0, go to FR245v (derivation of CPD)</p>
027	FR245v	(Derived variable: cigarettes per day (continuous))
028	FR250v	<p>(Derived variable: cigarettes per day (categories), calculated from FR245v)</p> <p>1 1-10 cigarettes</p> <p>2 11-20 cigarettes</p> <p>3 21-30 cigarettes</p> <p>4 More than 30 cigarettes</p> <p>7 NA</p> <p>8 Refused</p> <p>9 Don't know</p>
SURVEY SECTION REVISED		
Frequency of Behaviour Questions and Smoking Behaviour Questions		
		<p>How frequently do you visit City Parks in the city of Woodstock?</p> <p><i>[READ RESPONSES 1-6]</i></p> <p>1. Every day</p> <p>2. Several times a week</p> <p>3. About once a week</p> <p>4. About once a month</p> <p>5. Less often than once a month OR</p> <p>6. Never</p> <p>8. Refused</p> <p>9. Don't Know</p>
PARKS	FB01a	
		<p>If FB01a NE 1</p> <p>How frequently do you visit Woodstock parks WITH CHILDREN (under the age of 18)?</p> <p><i>[READ RESPONSES 1-6]</i></p> <p>1. Every day</p>
	FB01b	

		<ul style="list-style-type: none"> 2. Several times a week 3. About once a week 4. About once a month 5. Less often than once a month OR 6. Never 8. Refused 9. Don't know
		<p>OUTDOOR SMOKING BEHAVIOUR – PARKS</p> <p>IF FB01a NE 1</p>
	SB07	<p>If SMOKER ask: How often do you smoke a cigarette or other lit tobacco when visiting a park?</p> <p><i>[READ RESPONSES 1-4]</i></p> <ul style="list-style-type: none"> 1. Never 2. Sometimes 3. Usually 4. Always – every time I visit a park 7. Not applicable 8 Refused 9 Don't know <p>If NON SMOKER ask: How often do you see someone smoking a cigarette or other lit tobacco when you are visiting a park?</p> <ul style="list-style-type: none"> 1. Never 2. Sometimes 3. Usually 4. Always – every time I visit a park 7. Not applicable 8 Refused 9 Don't know
		OUTDOOR SMOKING BEHAVIOUR – PARKS with Children
	SB08	<p>Ask if FB01b NE1</p> <p>If SMOKER ask: When you visit a city park while you are supervising children (under 18 years of age), how often do you have a cigarette?</p> <p>If NON SMOKER ask: When you visit a city park while you are supervising children (under 18 years of age), how often do you see someone smoking a cigarette?</p> <p><i>[READ RESPONSES 1-4]</i></p>

		<ol style="list-style-type: none"> 1. Never 2. Sometimes 3. Usually 4. Always – every time I visit a park with children 7. Not applicable 8. Refused 9. Don't know
		OUTDOOR SMOKING BEHAVIOUR – Recreational Fields
REC	FB02a	<p>How frequently do you visit City Recreation Fields – either to play sports or to watch?</p> <p><i>[READ RESPONSES 1-6]</i></p> <ol style="list-style-type: none"> 1. Every day 2. Several times a week 3. About once a week 4. About once a month 5. Less often than once a month OR 6. Never <p style="text-align: right;">go to SB06a</p> <ol style="list-style-type: none"> 8. Refused 9. Don't Know
	FB02b	<p>How frequently do you visit Woodstock Recreation Fields WITH CHILDREN (under the age of 18)?</p> <p><i>[READ RESPONSES 1-6]</i></p> <ol style="list-style-type: none"> 1. Every Day 2. Several times a week 3. About once a week 4. About once a month 5. Less often than once a month 6. Never <ol style="list-style-type: none"> 8. Refused 9. Don't Know
	SB13	<p>IF FB02a NE 6</p> <p>When visiting a recreational field in Woodstock to play or watch a game – how often do you have a cigarette?</p> <p><i>[READ RESPONSES 1-4]</i></p> <ol style="list-style-type: none"> 1. Never 2. Sometimes 3. Usually OR 4. Always <ol style="list-style-type: none"> 8. Refused

		<p>9. Don't Know</p> <p>If NON SMOKER ask: When visiting a recreational field to play or watch a game – how often do you notice people having a cigarette?</p> <p>1. Never 2. Sometimes 3. Usually 4. Always</p> <p>8. Refused 9. Don't Know</p>
	SB14	<p>Ask if FB02b NE6 When you visit a recreational field in Woodstock, while you are supervising children under 18 years of age, do you have a cigarette?</p> <p><i>[READ RESPONSES 1-4]</i></p> <p>1. Never 2. Sometimes 3. Usually OR 4. Always – every time I visit a go to a Rec Field with children</p> <p>7. Not applicable 8. Refused 9. Don't know</p> <p>If NON SMOKER ask: When you visit a recreation field while you are supervising children (under 18 years of age), how often do you see people smoking a cigarette?</p> <p>1. Never 2. Sometimes 3. Usually 4. Always – every time I visit a go to a Rec Field with children</p> <p>7. Not applicable 8. Refused 9. Don't know</p>
	SB06a	<p>How often do you smoke near the doorway to a public or private building – not including your own home?</p> <p><i>[READ RESPONSES 1-4]</i></p> <p>1. Never 2. Sometimes 3. Daily OR 4. More than once a day</p> <p>7. Not applicable</p> <p style="text-align: right;">go to SB09a</p>

		8. Refused 9. Don't know
	SB06b	<p>IF SB06a NE 1 When you smoke near a doorway, how far away from the entrance do you usually go to smoke?</p> <p><i>[READ RESPONSES 1-5]</i></p> <ol style="list-style-type: none"> 1. Just beside the door 2. A few steps away 3. About 5 or 6 steps away (3 metres, 10 feet) 4. About the length of two cars (9 metres, 30 feet) 5. About the length of a bus (12 metres, 40 feet) <ol style="list-style-type: none"> 8. Refused 9. Don't know <p>Ask NON SMOKERS When you see smokers near a doorway, how far away from the entrance are they usually smoking?</p> <ol style="list-style-type: none"> 1. Just beside the door 2. A few steps away 3. About 5 or 6 steps away (3 metres) 4. About the length of two cars (9 metres, 30 feet) 5. About the length of a bus (12 metres) <ol style="list-style-type: none"> 8. Refused 9. Don't know
		OUTDOOR SMOKING BEHAVIOUR -- SIDEWALKS
	SB09a	<p>How often do you smoke while walking or standing on a sidewalk in Woodstock?</p> <p><i>[READ RESPONSES 1-3]</i></p> <ol style="list-style-type: none"> 1. Never 2. Sometimes OR 3. Always <ol style="list-style-type: none"> 7. Not applicable 8. Don't know 9. Refused <p>Ask Non-SMOKERS: How often do you see people smoking on the sidewalks in Woodstock?</p> <ol style="list-style-type: none"> 1. Never 2. Sometimes 3. Always <ol style="list-style-type: none"> 7. Not applicable

		8. Don't know 9. Refused
	FB03	How frequently do you ride a city bus in Woodstock? <i>[READ RESPONSES 1-6]</i> 1. Daily 2. Several times a week 3. About once a week 4. About once a month 5. Less often than once a month OR 6. Never go to FB04R 8. Refused 9. Don't Know
BUS	SB10S	OUTDOOR SMOKING BEHAVIOUR - Transit Stops (Bus Stops)
	SB10S	IF FB03 NE 6 Will you smoke a cigarette when waiting for a bus – near the shelter or stop post? <i>[READ RESPONSES 1-5]</i> 1. No, I never smoke near the bus stop/shelter 2. Yes, but I always step back from the stop/shelter to smoke 3. Sometimes 4. Usually OR 5. Always 7 - NA 8 - Refused 9 - Don't know Ask NON SMOKERS: When waiting for a bus, how often is there someone else there smoking a cigarette - either near the shelter or stop post? 1. Never 2. Sometimes 3. Usually 4. Always
	FB04R	Did you attend the City of Woodstock's Cowapalooza this year, on August 14 th and 15 th ? <i>[DO NOT READ RESPONSES]</i> 1. No go to FB05R 2. Yes go to FB04S

		8. Refused 9. Don't know	go to FB05R go to FB05R
	FB04S	If FB04R NE 2 <i>[DO NOT READ RESPONSES]</i> Did you smoke a cigarette or other lit tobacco while at the event? 1. No 2. Yes 8. Refused 9. Don't know	
	FB04A	Did you see someone smoking a cigarette or other lit tobacco at the event? <i>[DO NOT READ RESPONSES]</i> 1. No 2. Yes 8. Refused 9. Don't know	
	FB05R	Did you attend the City of Woodstock's Sidewalk Days this year, on August 6 th , 7 th and 8 th ? <i>[DO NOT READ RESPONSES]</i> 1. No 2. Yes 8. Refused 9. Don't know	go to FB06a go to FB05S go to FB06a go to FB06a
	FB05S	If FB05R NE 2 Did you smoke a cigarette or other lit tobacco while at the event? <i>[DO NOT READ RESPONSES]</i> 1. No 2. Yes 8. Refused 9. Don't know	
	FB05A	Did you see someone smoking a cigarette or other lit tobacco at the event? <i>[DO NOT READ RESPONSES]</i>	

		1. No 2. Yes 8. Refused 9. Don't know
PATIO	FB06a	Have you gone to an outdoor patio of a restaurant, café or bar in Woodstock in the last year? <i>[DO NOT READ RESPONSES]</i> 1. No go to SB01 2. Yes go to FB06b 8. Refused go to SB01 9. Don't know go to SB01
	FB06b	IF FB06a = yes In the last year, have you gone to any of the outdoor sidewalk cafés along Dundas Street in Woodstock <i>[DO NOT READ RESPONSES]</i> 1. No 2. Yes 8. Refused 9. Don't Know
	SB12	OUTDOOR SMOKING BEHAVIOUR – HOSPITALITY SECTOR -- PATIOS
	SB12	IF FB06a NE1 When visiting an outdoor patio of a restaurant, bar or sidewalk café in Woodstock, how often do you have a cigarette? <i>[READ RESPONSES 1-4]</i> 1. Never 2. Sometimes 3. Usually OR 4. Always 7 Not applicable 8 Refused 9 Don't know Ask NON SMOKERS: When visiting an outdoor patio of a restaurant, bar or sidewalk café in Woodstock, how often do you see people having a cigarette? 1. Never 2. Sometimes 3. Usually 4. Always

		<ul style="list-style-type: none"> 4 Outdoor smoking ban 5 Reduce others' exposure to second-hand smoke 6 Pregnancy/breastfeeding 7 Reduced need/craving 8 Family pressure 9 New Years Resolution 10 Other; specify_____ 11 Refused 12 Don't Know
030	rSmoke	<p>(Derived variable -- smoking status at follow-up)</p> <ul style="list-style-type: none"> 1 Daily smoker 2 Weekly smoker 3 Monthly smoker 4 Quit smoking in past year (Non-smoker) 5 Non-Smoker 6 - Unknown (use baseline status)
	SB20091	<p>For the following two questions please answer YES, NO, or NOT APPLICABLE for each.</p> <p>Smoking status=1-3, 6: Has the smoke-free law made you more likely to quit smoking?</p> <p>Smoking status=4-, 6: Did the smoke-free law help you to quit smoking?</p> <p><i>[DO NOT READ RESPONSES]</i></p> <ul style="list-style-type: none"> 1 Yes go to SB20093 2 No go to SB20093 3 Not applicable to me go to SB20093 7 Not applicable go to SB20093 8 Refused go to SB20093 9 Don't know go to SB20093
	SB20092	<p>Ask Quitter: Has the smoke-free law helped you stay a non-smoker</p> <ul style="list-style-type: none"> 1. Yes 2. No 8. Refused 9. Don't know
	SB20093	<p>Ask Smoker: Has the smoke-free law made you cut down on the number of cigarettes you smoke?</p> <p><i>[DO NOT READ RESPONSES]</i></p> <ul style="list-style-type: none"> 1. Yes 2. No

		7. N/A 8. Refused 9. Don't know
SUPPORT FOR RESTRICTIONS		
	SR01	Ask all. For each of the following places, please tell me if you think smoking SHOULD be allowed in outdoor environments:
	SR02	The grounds of a Hospital? <i>[PROBE:] Should smoking be allowed in all outdoor areas, some outdoor areas, or no outdoor areas</i> <i>[DO NOT READ RESPONSES]</i> 1 All outdoor areas 2 Some outdoor areas OR 3 No outdoor areas 8 Refused 9 Don't Know
	SR03	The grounds of a Long Term Care Facility
	SR04	Outdoor workplaces like construction sites?
	SR05	Patios at Pubs or Bars?
	SR06	Patios at Restaurants?
	SR07	Patios at Family Restaurants? <i>[PROBE: A family restaurant is a restaurant where children are likely to be present, dining with their families]</i>
	SR08	Provincial or National Parks?
	SR09	City Parks?
	SR10	Patrolled public beaches?
	SR11	Elementary or middle schools?
	SR12	High schools?
	SR13	University or College campuses?
	SR13x	At crowded outdoor events sponsored by the city like Cowapalooza or Sidewalk Days? Smoking should be allowed in:...
	SR14	Doorways of any public building – like a post office or city hall? <i>[READ RESPONSES 1-3]</i> 1 All doorway areas 2 Some doorway areas OR 3 No doorway areas 8 Refused 9 Don't Know
	SR15	Doorways of any private building – like an office building?

		<p><i>[READ RESPONSES 1-3]</i></p> <ol style="list-style-type: none"> 1 All doorway areas 2 Some doorway areas 3 No doorway areas 8 Refused 9 Don't Know
	ET888R	<p>The City of Woodstock passed a bylaw almost a year ago, September 2008, that restricts smoking in 7 different outdoor areas including parks and recreational fields. The bylaw prohibits smoking within 30 metres of playground equipment in city parks and within 15 metres of a recreation field when it is being used.</p> <p>Do you support or oppose the restrictions on 7 outdoor smoking environments in Woodstock?</p> <p><i>[READ RESPONSES 1-4]</i></p> <ol style="list-style-type: none"> 1 Strongly oppose 2 Oppose 3 Support OR 4 Strongly support 7 Not applicable 8 Refused 9 Don't know
	ET889R	<p>Overall, would you say that the restrictions on 7 outdoor smoking environments in Woodstock is a good thing or a bad thing? Would you say that the restrictions are...</p> <p><i>[READ RESPONSES 1-4]</i></p> <ol style="list-style-type: none"> 1 Very bad 2 Bad 3 Good 4 Very good 7 Not applicable 8 Refused 9 Don't know
	SR20091	<p>The restriction on smoking in 7 different outdoor areas including parks and recreational fields has been a good thing for the community. Do you...</p> <p><i>[READ RESPONSES 1-4]</i></p> <ol style="list-style-type: none"> 1. Strongly Disagree 2. Disagree 3. Agree OR 4. Strongly Agree 7. Not Applicable 8. Refused 9. Don't Know
	SR20092	<p>The restriction on smoking in 7 different outdoor areas including parks and recreational fields has been good for the health of the children in the community. Do you...</p> <p><i>[READ RESPONSES 1-4]</i></p> <ol style="list-style-type: none"> 1. Strongly Disagree

		<ul style="list-style-type: none"> 2. Disagree 3. Agree OR 4. Strongly Agree 7. Not applicable 8. Refused 9. Don't Know
	SR20093	<p>The restriction on smoking in 7 different outdoor areas including parks and recreational fields has been good in reducing health risks for the people of Woodstock. Do you...</p> <p><i>[READ RESPONSES 1-4]</i></p> <ul style="list-style-type: none"> 1. Strongly Disagree 2. Disagree 3. Agree OR 4. Strongly Agree 7. Not applicable 8. Refused 9. Don't Know
	SR16	<p>How often do you notice the litter caused by cigarette butts?</p> <p><i>[READ RESPONSES 1-4]</i></p> <ul style="list-style-type: none"> 1 Never 2 Sometimes 3 Often OR 4 Always 7 Not applicable 8 Refused 9 Don't know
	SR17	<p>How often do you worry that a cigarette butt could cause a fire?</p> <p><i>[READ RESPONSES 1-4]</i></p> <ul style="list-style-type: none"> 1 Never 2 Sometimes 3 Often OR 4 Always 7 Not Applicable 8 Refused 9 Don't know
Psycho-Social QUESTIONS		
	PS01	<p>Ask all. Please tell me whether you strongly disagree, disagree, agree, or strongly agree with each of the following statements.</p> <p>ASK SMOKERS: There are fewer and fewer places where you feel comfortable</p>

		<p>smoking.</p> <p><i>[Probe: Do you strongly disagree, disagree, agree or strongly agree with the statement]</i></p> <p>ASK NON SMOKERS:</p> <p>There are fewer and fewer places where you feel comfortable with other people smoking.</p> <ol style="list-style-type: none"> 1. Strongly Disagree 2. Disagree 3. Agree 4. Strongly Agree <ol style="list-style-type: none"> 7 NA 8 Refused 9 Don't Know
	DI251R1	<p>Ask Smoker:</p> <p>You worry that your smoking will influence the children around you to start or continue smoking.</p> <p><i>[Probe: Do you strongly disagree, disagree, agree or strongly agree with the statement]</i></p> <ol style="list-style-type: none"> 1 Strongly disagree 2 Disagree 3 Agree 4 Strongly agree 7 Not applicable 8 Refused 9 Don't Know
	DI251R2	<p>Ask Non-Smoker:</p> <p>You worry that others smoking will influence the children around them to start or continue smoking.</p> <ol style="list-style-type: none"> 1 Strongly disagree 2 Disagree 3 Agree 4 Strongly agree 7 Not applicable 8 Refused 9 Don't Know
	PS02	<p>Ask ONLY SMOKERS:</p> <p>If you had to do it over again, you would not have started smoking.</p> <p><i>[Probe: Do you strongly disagree, disagree, agree or strongly agree with the statement]</i></p> <ol style="list-style-type: none"> 1 Strongly Disagree 2 Disagree 3 Agree

		4 Strongly Agree 7 NA 8 Refused 9 Don't Know
	PS03	Cigarette smoke is dangerous to non-smokers.
	PS04	Society disapproves of smoking.
	PS05	ASK ONLY SMOKERS: You spend too much money on cigarettes.
	PS06	ASK ONLY SMOKERS: You have strong mixed emotions both for and against smoking, all at the same time.
	PS07	ASK ONLY SMOKERS: People who are important to you believe that you should not smoke.
	PS08	The medical evidence that smoking is harmful is exaggerated.
	PS09	ASK ONLY SMOKERS You've got to die of something, so why not enjoy yourself and smoke.
	PS10	Smoking is no more risky than lots of other things that people do.
REPORTED IMPACT OF BYLAW ON BEHAVIOUR		
	AI01	ASK ALL How have the new smoking restrictions impacted your use of PARKS OR FIELDS? Would you say: <i>[READ RESPONSES 1-3]</i> 1. I go to parks or rec fields MORE often 2. I go to parks or rec fields LESS often OR 3. The restrictions have not affected how often I go to parks or fields 8. Refused 9. Don't Know
	AI02	ASK ALL The City of Woodstock outdoor smoking bylaw can prohibit smoking at events like Cowapalooza and Sidewalk Days. If the city made these events smoke-free, how would this impact your decision to attend these events this year? Would you say...

		<p><i>[READ RESPONSES 1-3]</i></p> <ol style="list-style-type: none"> 1. I was MORE likely to attend 2. I was LESS likely to attend OR 3. I was not affected <ol style="list-style-type: none"> 7. Not Applicable 8. Refused 9. Don't Know
	AI03	<p>ASK ALL</p> <p>The City of Woodstock outdoor smoking bylaw prohibits smoking on sidewalk areas of downtown cafés along Dundas Street – How has this impacted your decision to visit these venues? Would you say...</p> <p><i>[READ RESPONSES 1-3]</i></p> <ol style="list-style-type: none"> 1. I am MORE likely to visit the cafes along Dundas Street 2. I am LESS likely to visit OR 3. I have not been affected <ol style="list-style-type: none"> 7. Not Applicable 8. Refused 9. Don't Know
	AI04	<p>ASK ALL</p> <p>The City of Woodstock outdoor smoking bylaw prohibits smoking on sidewalks within 4 metres of transit shelters or transit stops -- How has this impacted your decision to use transit? Would you say:</p> <p><i>[READ RESPONSES 1-3]</i></p> <ol style="list-style-type: none"> 1. I am MORE likely to use transit 2. I am LESS likely to use transit OR 3. I have not been affected <ol style="list-style-type: none"> 7. Not Applicable 8. Refused 9. Don't Know
	AI05	<p>ASK ALL</p> <p>The City of Woodstock outdoor smoking bylaw prohibits smoking within 9m of doorways for all public buildings like city hall, and for private businesses that elect to make their doorway areas smoke free. How has this impacted your decision to visit these venues? Would you say:</p> <p><i>[READ RESPONSES 1-3]</i></p> <ol style="list-style-type: none"> 1. I am MORE likely to visit

		<ul style="list-style-type: none"> 2. I am LESS likely to visit OR 3. I have not been affected 7. Not Applicable 8. Refused 9. Don't Know
	<p>AI06</p>	<p>REMIND: I am now going to ask you a few questions about your smoking habits when you are in the public areas of Woodstock. And please remember that your responses from this survey are completely confidential.</p> <p>ASK ONLY SMOKERS:</p> <p>Do you always follow the bylaw restricting smoking in outdoor spaces?</p> <p><i>[READ RESPONSES 1-2]</i></p> <ul style="list-style-type: none"> 1. Yes, all the time OR 2. No – there are some times when I do not follow the bylaw 3. I don't know. 8. Refused 9. Don't know

		<p>If AI06 NE 1</p> <p><i>[READ RESPONSES 1-2]</i></p> <ol style="list-style-type: none"> 1. No, I do NOT smoke then OR 2. Yes, I do still smoke 8. Refused 9. Don't Know <p>I'll describe some situations and you indicate if you think you do NOT smoke in the restricted areas:</p> <ol style="list-style-type: none"> 1. (a) if non-smokers are present 2. (b) if children are present 3. (c) if family members who are non-smokers are present 4. (d) if older persons who are non-smokers are present 5. (e) if a police officer or bylaw officer is present 6. (f) if other smokers are present 7. (g) if there is visible signage reminding you that it was a smoke-free area
	AI07(a-g)	
		<p>In general, how far from a non-smoker do you feel comfortable smoking?</p> <p><i>[READ RESPONSES 1-6]</i></p> <ol style="list-style-type: none"> 1. Right beside them. 2. A few steps away. 3. Five or six steps away. 4. The length of two cars. 5. The length of a bus. 6. Further. 8. Refused 9. Don't know
	AI08R	
		Beliefs about quitting
		<p>ASK SMOKERS:</p> <p>Have you had any quit attempts in the last year?</p> <ol style="list-style-type: none"> 1. Yes 2. No 8. Refused 9. Don't Know
	BQ01	
	BQ01num	<i>[record how many]</i>
		<p>What is the longest time that you stayed smoke-free in the last year?</p> <p><i>Prompt: that is, the longest consecutive time period</i></p> <ol style="list-style-type: none"> 1. Total Hours or 2. Total Days or 3. Total Weeks or 4. Total Months
	QA551R	

PERCEIVED RISKS		
PR01	<p>ASK SMOKERS:</p> <p><i>[READ RESPONSES 1-4]</i></p> <p>To what extent, if at all, has smoking damaged your health?</p> <ol style="list-style-type: none"> 1 Not at all 2 Just a little 3 A fair amount OR 4 A great deal 7 NA 8 Refused 9 Don't know 	
PR02	<p>ASK SMOKERS:</p> <p><i>[READ RESPONSES 1-3]</i></p> <p>How worried are you, if at all, that smoking WILL damage your health in the future?</p> <ol style="list-style-type: none"> 1 Not at all worried 2 A little worried 3 Moderately worried OR 4 Very worried 7 NA 8 Refused 9 Don't know 	
DEMOGRAPHICS QUESTIONS		
DEIntro	<p>Finally, these last questions are for classification purposes only.</p> <p>Coverage: All respondents</p>	
DE02	<p>What is the highest level of education you have completed?</p> <p><i>[DO NOT READ CATEGORIES]</i></p> <ol style="list-style-type: none"> 01 – No schooling 02 – Some elementary 03 – Completed elementary 04 – Some secondary 05 – Completed secondary 06 – Some community college, CEGEP or nurse's training 07 – Completed community college, CEGEP or nurse's training 08 – Some university or teacher's college 09 – Completed university or teacher's college 10 – Other education or training 88 – Refused 99 – Don't Know 	
DE03	<p>Are there any children under the age of 18 currently living in your</p>	

		household? 1 Yes 2 No 7 NA 8 Refused 9 Don't know
	DE03age	What are their ages? (record)
	THANKYOU	This is the end of the questions. Thank you very much for your help with this important survey. Goodbye. [End of survey]
HELP SCREENS NEEDS TO BE REVISED		
	HelpScreen1	<p>a) IMPORTANCE OF SURVEY – WHO IS DOING IT</p> <p>This is a comprehensive survey of smokers and non-smokers in Woodstock and Oxford County in Ontario Canada – that has to do with beliefs, attitudes, knowledge, and behavior about tobacco use and the new outdoor smoking bylaw.</p> <p>The researchers include:</p> <p>Dr. Geoffrey Fong, University of Waterloo Dr. Mary Thompson, University of Waterloo Ryan David Kennedy University of Waterloo</p> <p>Dr. Roberta Ferrence University of Toronto – Ontario Tobacco Research Unit Dr. Robert Schwartz University of Toronto – Ontario Tobacco Research Unit Dr. Pam Kaufman University of Toronto – Ontario Tobacco Research Unit</p> <p>Along with the Oxford County Public Health Unit.</p>
	HelpScreen2	<p>b) WHAT'S IN IT FOR ME?</p> <p>We will talk to you on the telephone for approximately 15 minutes, and we think you will find the questions quite interesting. It's a study about your community.</p>
	HelpScreen3	<p>If you have any questions or concerns about this study, you may contact Dr. Susan Sykes at the University of Waterloo Office of Research Ethics at (519) 888-4567 ext. 36005.</p>

Appendix H -Technical Report – Woodstock Wave 2 (Survey Research Centre)



Woodstock Outdoor Smoking Ban Follow Up Survey Technical Report

Prepared for
Ryan Kennedy, Ph.D Candidate
Psychology, University of Waterloo
September 29, 2009

Woodstock Follow Up Survey Summary

Survey in Field:

Completes & Partial	543	Station Hours	259
		Completes/Hour	2.1
Contact Rate	91.0%	Survey Length (ave.)	13.0 mins
Cooperation Rate	95.8%		
Response Rate	87.2%		

Sub-group Rates	Smokers	Non-Smokers	Face-to-Face Smokers	Telephone Smokers
	%	%	%	%
Traceable Rate	77.6	94.4	68.1	83.6
Contact Rate	86.9	97.5	70.4	95.2
Cooperation Rate	94.4	96.9	87.0	97.2
Response Rate	82.0	94.5	61.2	92.5
Retention Rate	63.6	89.2	41.7	77.3

Section One: Study Description

This is a longitudinal survey of Woodstock and surrounding area residents that is intended to evaluate the impact of a municipal smoking ban in certain outdoor areas that came into effect on September 1st, 2008.

Part One, a pre-ban survey, took place in August, 2008. It included a Random Digit Dialing (RDD) general adult population survey of non-smokers and smokers. Another set of smokers were contacted through a convenience sample street intercept. Interviewers using palm devices went to the outdoor areas that will be affected by the ban. Both groups were asked a set of core questions designed to evaluate the incidence of visible smoking behaviour in the targeted areas, attitudes towards smoking and the anticipated impact of the by-law.

Part Two, the follow up survey, was conducted in August and September, 2009. All participants from the initial study were included, unless no telephone number was provided during the initial interview in 2008.

Participants were mailed a letter and incentive prior to follow up contact, if a mailing address was provided initially. The incentive was \$5 in Tim Horton's gift certificates.

Section Two: Methodology

Sample and Selection

All participants from the initial survey were eligible for the follow up survey, regardless of mode of contact during the first phase. If a respondent provided contact information, that person was retained in the second phase. For all participants providing mailing addresses in the initial interview, a precontact letter was mailed with the incentive. For those not providing mailing addresses initially, a letter was sent after the second interview was completed, once an address was obtained.

Look-ups were performed for wrong numbers and not-in-service dispositions. All alternate numbers were exhausted before a final disposition of NIS/WN was assigned. See the list of final dispositions in Section Three for a detailed display of all record outcomes.

Section Three: Telephone Survey Fieldwork

Overview

Interviewers were trained in a four hour session on August 17th, which included a presentation by the client. Fieldwork began August 18th and continued through to September 15th, 2009.

Approximately 70% of contacts were made on weekday evenings, with the rest made Sunday afternoon or during weekdays. All calls were conducted using WinCATI v4.2, a computer system from Sawtooth Technologies.

Call Attempts

During the summer, holiday schedules can mean more call attempts are needed to achieve a completed interview. The following table displays the call attempts by completes for the follow up survey. 88% of interviews were completed in the first 8 attempts. An average of 4 attempts was required to achieve a completed interview.

Number of Attempts	Completed Interviews	Percent of Completes	Cumulative %
1	163	30.1%	30.1%
2	112	20.7%	50.7%
3	69	12.7%	63.5%
4	47	8.7%	72.1%
5	33	6.1%	78.2%
6	26	4.8%	83.0%
7	17	3.1%	86.2%
8	12	2.2%	88.4%
9	10	1.8%	90.2%
10	8	1.5%	91.7%
11	9	1.7%	93.4%
12	6	1.1%	94.5%
13	4	0.7%	95.2%
14	4	0.7%	95.9%
15	6	1.1%	97.0%
16	5	0.9%	98.0%
17	1	0.2%	98.2%
18	3	0.6%	98.7%
19	1	0.2%	98.9%
20	2	0.4%	99.3%
21	3	0.6%	99.8%
22	1	0.2%	100.0%
TOTAL	542*		
Average # of Attempts	3.97		

*Does not include partial interview

Protocols

Woodstock followed our standard protocols for recruited samples as detailed below.

Call Protocols	
Call Attempts	At least 14 call attempts before Sept 15
Definition of Call Attempt	A single call attempt is defined as from 1 to 3 calls made over a period of one day. Numbers reappear in the queue no less than one hour after the previous contact.
Timing of Call Attempts	Call attempts will be varied among all times, including mornings, afternoons, evenings, and weekends.
Busy Signal	Dialings resulting in busy signals will be redialed twice within the hour. These three dialings count as one call. Interviewers will make up to 2 more calls that day according to the regular schedule.
Appointment Calls	Appointment callbacks will be attempted at their appointment time, and if not reached, will be redialed twice within the hour of the scheduled callback. These dialings count as one call. Interviewers will make up to 2 more calls that day according to the regular schedule.
Answering Machine	A message will be left on the first call attempt reaching an answering machine. SEE SCRIPT
Household Member answers	We will identify ourselves and ask for availability of person, but will not indicate subject of study.
Fax machine numbers	The number is immediately re-dialed to ensure the correct number was reached. Fax numbers are tried for three days and then retired from the queue. A supervisor will re-activate the number for the next day of calling. If it is still a fax machine, it will be coded as 'NIS' and alternate numbers will be looked up.
Not-in-Service numbers	Not in service numbers are immediately re-dialed to ensure the correct number was reached. Not in service numbers are given that disposition and alternate numbers will be looked up.
Wrong numbers	Interviewers will repeat the full phone number to the person answering the phone to ensure that the correct number was dialed. It is then coded as 'wrong number' and alternate numbers will be looked up.
Cell Phones	If the respondent does not wish to do the interview on their cell phone the interviewer will ask for an alternate number. Cell phone numbers with messages such as "customer unavailable" and "the mobile customer that you are calling is not available at the moment" will be coded as no answer and will be tried for three days. If the respondent is not reached on the third day alternate numbers will be looked up.
Person Moved	Interviewers will repeat the intended respondent to the person answering the phone to ensure the correct number was dialed. It is then coded as 'person moved' and retired from the queue.
Other	Interviewers will reserve using "Other" for situations not laid out in the notes. Any time an interviewer encounters an "Other" situation, documentation is required to explain.

Final Dispositions

A total of 732 records were loaded into the CATI system to be called. Of these, 6 were duplicate records, leaving 726 records to be processed. The following table displays the final dispositions for these remaining records.

		NS	S	Total
Interview 1.0		308	235	543
1.11	Complete - non-smoker	308		308
1.12	Complete - smoker		234	234
1.21	Partial - non-smoker	0		0
1.22	Partial - smoker		1	1
Eligible, Non-Interview 2.0				80
2.1	Refusal, eligible	8	11	19
2.2	Cell phone - unwilling		3	3
2.3	Other non-interview	2		2
2.4	Unable to contact – busy/no answer/break-off	18	38	56
Untraceable 4.0				103
4.1	Deceased	1		1
4.2	Fax/modem		6	6
4.3	Not-in-service	11	48	59
4.4	Wrong number	4	24	28
4.5	Moved	4	5	9
Total		356	370	726

Traceable Rate: 85.8% (103 removed from 726)

Contact Rate

$$\frac{1.0 + 2.1 + 2.2 + 2.3}{1.0 + 2.1 + 2.2 + 2.3 + 2.4} = \frac{567}{623} = 0.910$$

The contact rate for traceable records is 91.0%

Cooperation Rate

$$\frac{1.0}{1.0 + 2.1 + 2.2 + 2.3} = \frac{543}{567} = 0.958$$

The cooperation rate is 95.8%

Response Rate

The response rate is the contact rate times the cooperation rate.

$$0.910 \times 0.958 = .872$$

The overall response rate is **87.2%**

Retention Rate

The retention rate is the traceable rate times the response rate.

$$0.858 \times 0.872 = 0.748$$

The retention rate is **74.8%**.

Non-Smokers Response Rate

Traceable Rate = 94.4%

Contact Rate

$$\frac{1.0 + 2.1 + 2.2 + 2.3}{1.0 + 2.1 + 2.2 + 2.3 + 2.4} = \frac{318}{328} = 0.975$$

The contact rate for non-smokers is **97.5%**

Cooperation Rate

$$\frac{1.0}{1.0 + 2.1 + 2.2 + 2.3} = \frac{308}{318} = 0.969$$

The cooperation rate for non-smokers is **96.9%**

Response Rate

The response rate is the contact rate times the cooperation rate.

$$0.975 \times 0.969 = 0.945$$

The response rate for non-smokers is **94.5%**

Retention Rate

The retention rate is the traceable rate times the response rate.

$$0.944 \times 0.945 = 0.892$$

The retention rate is 89.2%.

Smokers Response Rate

Traceable Rate = 77.6%

Contact Rate

$$\frac{1.0 + 2.1 + 2.2 + 2.3}{1.0 + 2.1 + 2.2 + 2.3 + 2.4} = \frac{249}{287} = 0.869$$

The contact rate for smokers is 86.9%

Cooperation Rate

$$\frac{1.0}{1.0 + 2.1 + 2.2 + 2.3} = \frac{235}{249} = 0.944$$

The cooperation rate for smokers is 94.4%

Response Rate

The response rate is the contact rate times the cooperation rate.

$$0.869 \times 0.944 = .820$$

The response rate for smokers is 82.0%

Retention Rate

The retention rate is the traceable rate times the response rate.

$$0.776 \times 0.820 = 0.636$$

The retention rate is 63.6%.

Smokers Response Rates by Mode of Initial Survey

		F2F	Phone	235
Interview 1.0				
1.11	Complete	60	174	234
1.21	Partial		1	1
Eligible, Non-Interview 2.0				52
2.1	Refusal, eligible	7	4	11
2.2	Cell phone - unwilling	2	1	3
2.3	Other non-interview			
2.4	Unable to contact – busy/no answer/break-off	29	9	38
Untraceable 4.0				83
4.1	Deceased			
4.2	Fax/modem	3	3	6
4.3	Not-in-service	27	21	48
4.4	Wrong number	15	9	24
4.5	Moved	1	4	5
Total		144	226	370

Face-to-face Mode

Traceable Rate = 68.1%

Contact Rate

$$\frac{1.0 + 2.1 + 2.2 + 2.3}{1.0 + 2.1 + 2.2 + 2.3 + 2.4} = \frac{69}{98} = 0.704$$

The contact rate for face-to-face smokers is 70.4%

Cooperation Rate

$$\frac{1.0}{1.0 + 2.1 + 2.2 + 2.3} = \frac{60}{69} = 0.870$$

The cooperation rate for face-to-face smokers is 87.0%

Response Rate

The response rate is the contact rate times the cooperation rate.

$$0.704 \times 0.870 = .612$$

The response rate for face-to-face smokers is **61.2%**

Retention Rate

The retention rate is the traceable rate times the response rate.

$$0.681 \times 0.612 = 0.417$$

The retention rate is **41.7%**.

Telephone Mode

Traceable Rate = 83.6%

Contact Rate

$$\frac{1.0 + 2.1 + 2.2 + 2.3}{1.0 + 2.1 + 2.2 + 2.3 + 2.4} = \frac{180}{189} = 0.952$$

The contact rate for telephone smokers is **95.2%**

Cooperation Rate

$$\frac{1.0}{1.0 + 2.1 + 2.2 + 2.3} = \frac{175}{180} = 0.972$$

The cooperation rate for telephone smokers is **97.2%**

Response Rate

The response rate is the contact rate times the cooperation rate.

$$0.952 \times 0.972 = .925$$

The response rate for telephone smokers is **92.5%**

Retention Rate

The retention rate is the traceable rate times the response rate.

$$0.836 \times 0.925 = 0.773$$

The retention rate is 77.3%.

Quality Control

During an interviewing shift, interviewers are subject to several quality control measures. These measures allow us to maintain data quality and maximize efficiency. These measures include telephone monitoring, productivity checks and interviewer evaluation.

Supervisors listen to the interviews as a silent third party while simultaneously monitoring their screens from another computer. This tracks protocol adherence and accuracy of data recording. Supervisors attempt to monitor 5-10% of an interviewer's shift on the phone. Interviewer productivity is checked throughout each shift, after the completion of each shift and at the end of each week. This tracks efficiency as well as procedural accuracy. More in-depth evaluation of interviewers is done at least once every three shifts. This evaluation considers phone manners, voice tone, impartiality and probing skills. Daily pre-shift meetings ensure interviewers are notified to any changes to the instrument or protocols.

Section Four: Commentary

Calling went very smoothly for this follow up survey. Response rates were high, and no doubt influenced by the pre-paid incentive.

Smokers were more likely to be untraceable, and also had a lower response rate, resulting a smaller sample than expected.

It should be noted that non-smokers were solely recruited by telephone in the first wave, and so it is not surprising that this group is less likely to be untraceable.

Appendix I – Sample Information Letter given to Key Informants



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Faculty of Arts

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Geoffrey T. Fong, Ph.D.,

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INFORMATION LETTER – Key Informant Interviews

DEAR: XXXX

CITY OF WOODSTOCK STAFF PERSON

This information letter will provide you with a description of the study that I am conducting at the University of Waterloo. It will also provide you with information about what your involvement would entail if you decide to take part.

As indoor smoke-free policies become more established, there has been increasing interest in extending smoking restrictions to outdoor places. As you are aware, the city of Woodstock passed such a by-law on June 5th 2008. The purpose of this study is to learn from the experience of policy makers and public health professionals from the City of Woodstock and Oxford County Public Health. Specifically we wish to understand the history behind the creation of the by-law, and any details that would be helpful for other communities contemplating creating, enacting and enforcing a comprehensive outdoor smoke-free by-law.

This study will focus on the series of events that lead to the development of the comprehensive outdoor smoking by-law, the process to have the by-law adopted by City Council, and the enactment and enforcement of the by-law. As a By-Law Officer with the City of Woodstock, and your history and involvement in the process, you are well suited to speak about the various issues.

Participation in this study is voluntary. It will involve an interview of approximately 30 minutes and will take place in a mutually agreed upon location. You may decline to answer

any of the interview questions if you so wish. Further, you may decide to withdraw from this study at any time without any negative consequences by advising the researcher. With your permission, the interview will be audio recorded to facilitate collection of information, and later transcribed for analysis. Data collected during this study will be retained for one year and it will be stored in a secure location where only researchers involved in the study will have access to it. Due to the nature of the research, it will not be possible to guarantee anonymity when the findings are presented. With your permission we would like to include quotations from the interview in the report, and because you were one of few key individuals in the process leading up to the adoption of the by-law it may be possible to identify you even with the absence of your name. We will not assign or attribute direct quotes to anyone specifically but may refer to quotations from their general source, such as from an employee of the City of Woodstock or from an elected member of the Woodstock City Council. There are no known or anticipated risks to you as a participant in this study.

If you have any questions regarding this study, or would like additional information to assist you in reaching a decision about participation please contact me at 519-888-4567 ext. 33597 or ryan.david.kennedy@gmail.com.

I would like to assure you that this study has been reviewed and received ethics clearance through the Office of Research Ethics at the University of Waterloo. However, the final decision about participation is yours. If you have any comments or concerns resulting from your participation in this study, please contact Dr. Susan Sykes from the Office of Research Ethics at 519-888-4567 Ext. 36005 or ssykes@uwaterloo.ca.

Thank you in advance for your interest and assistance with this research.

Sincerely,

Appendix J - Wave 1 Report – sample description and findings from the longitudinal measures, Wave 1 whole sample

Measures to understand smoking behaviour and second-hand smoke in different outdoor environments regulated by the by-law

Parks

The questions asked of smokers was “*How often do you smoke a cigarette or other lit tobacco when visiting a park?*” – and the response options were ‘never’, ‘sometimes’, ‘usually’, ‘always, every time I visit a park’. These response options were re-coded to ‘not-often’ for never or sometimes, and ‘often’ for usually or always.

Smokers: How often do you smoke a cigarette when visiting parks							
		Wave 1 Full Sample			Wave 1 Remained		
		“Not often”	“Often”	Total	“Not often”	“Often”	Total
Smokers – General Population Survey (Telephone)	Count	108	68	176	70	44	114
	%	61.4%	38.6%	100.0%	61.4%	38.6%	100.0%
Smokers – Targeted Sample (Face to Face)	Count	72	86	158	17	24	41
	%	45.6%	54.4%	100.0%	41.5%	58.5%	100.0%
Total	Count	180	154	334	87	68	155
		53.9%	46.1%	100.0%			
		108	68	176			
	%	61.4%	38.6%	100.0%	56.1%	43.9%	100.0%

Recreational Fields

The questions asked of smokers was, “*When visiting a recreational field to play or watch a game – how often will you have a cigarette?*” – and the response options were ‘never’, ‘sometimes’, ‘usually’ or ‘always’ . These response options were re-coded to ‘not-often’ for never or sometimes, and ‘often’ for usually or always.

Smokers: When visiting a recreational field in Woodstock to play or watch a game - how often will you have a cigarette?							
		Wave 1 Entire Sample			Wave 1 Remained in Sample		
		“Not often”	“Often”	Total	“Not often”	“Often”	Total
Smokers – General Population Survey (Telephone)	Count	83	42	125	52	30	82
	%	66.4%	33.6%	100.0%	63.4%	36.6%	100.0%
Smokers – Targeted Sample (Face to Face)	Count	62	47	109	20	12	32
	%	56.9%	43.1%	100.0%	62.5%	37.5%	100.0%

Doorways

The question used to measure smoking behaviour in doorways did not differentiate between public or private sector doorways. The questions asked of smokers was, “*How often do you smoke near the doorway to a public or private building – not including your own home?*” and the response options were ‘never’, ‘sometimes’, ‘daily’ or ‘more than once a day’. The response options for ‘daily’ and ‘more than once a day’ have been collapsed to a response ‘daily’

Smokers: How often do you smoke near the doorway to a public or private building – not including your own home?									
		Wave 1 Entire Sample				Wave 1 Remained			
		Never	Sometim es	Daily	Total	Never	Sometimes	Daily	Total
Smokers – General Population Survey (Telephone)	Count	100	92	40	232	71	62	25	158
	%	43.1%	39.7%	17.2%	100.0%	44.9%	39.2%	15.8%	100.0%
Smokers – Targeted Sample (Face to Face)	Count	63	62	51	176	19	12	17	48
	%	35.8%	35.2%	29.0%	100.0%	39.6%	25.0%	35.4%	100.0%

Transit Environments

The questions asked of smokers was, “*Will you smoke a cigarette when waiting for a bus – near the shelter or stop post?*”. The response options were all read and included:

- 16. NO – I never smoke near the bus stop/shelter
- 17. YES – but I always step back from the stop/shelter to smoke
- 18. Sometimes
- 19. Usually
- 20. Always

The response options ‘Sometimes’, ‘Usually’ and ‘Always’ have been collapsed into a ‘Yes’ category; any ‘yes’ response will not be in compliance with the OSFO that restricts smoking within 4m of any transit stop or shelter. Transit users that either never smoke when waiting for a bus, or always step away from the stop or shelter to smoke, are already compliant with a by-law requiring a set-back. It is not certain from this measure if respondents step back 4m, however the intention of the behaviour is in alignment with the spirit of the policy.

Smokers: Will you smoke a cigarette when waiting for a bus - near the shelter or stop post?									
		WAVE 1 entire sample				WAVE 1 that remained in sample			
		NO	Yes, But Step Back	YES	Total	NO	Yes, But Step Back	YES	Total
Smokers – General Population Survey (Telephone)	Count	8	12	10	30	5	5	8	18
	%	26.7	40.0	33.3	100.	27.8	27.8	44.4	100.
	%	%	%	%	0%	%	%	%	0%
Smokers – Targeted Sample (Face to Face)	Count	13	29	21	63	2	8	5	15
	%	20.6	46.0	33.3	100.	13.3	53.3	33.3	100.
	%	%	%	%	0%	%	%	%	0%

Patio Environments

In Wave 1 smokers in the general population sample, and targeted sample were asked, “*When visiting an outdoor patio of a restaurant, bar or sidewalk café in Woodstock how often will you have a cigarette?*”. The response options were, ‘never’, ‘sometimes’, ‘usually’, and ‘always’.

Response options of ‘never’, and ‘sometimes’ were collapsed into ‘not often’, and response options of ‘usually’, and ‘always’ were collapsed into ‘often’ for reporting below.

Smokers: When visiting an outdoor patio of a restaurant, bar or sidewalk cafe in Woodstock, how often do you smoke?							
		Wave 1 Entire Sample			Wave 1 Remained in Sample		
		Not often	Often	Total	Not often	Often	Total
Smokers – General Population Survey (Telephone)	Count	61	52	113	38	31	69
	%	54.0%	46.0%	100.0%	55.1%	44.9%	100.0%
Smokers – Targeted Sample (Face to Face)	Count	59	44	103	16	10	26
	%	57.3%	42.7%	100.0%	61.5%	38.5%	100.0%

SOCIAL DENORMALIZATION OF SMOKING

The following measures were used to understand how the Woodstock OSFO may have socially denormalized smoking.

Fewer and Fewer Places where smokers feel comfortable smoking

The first question to measure social-denormalization of smoking asked if smokers agreed or disagreed that “*There are fewer and fewer places where you feel comfortable smoking,*” with the response options ‘strongly disagree’, ‘disagree’, ‘agree’, and ‘strongly agree’. The same question was asked in Wave 1 and Wave 2. These responses have been dichotomized, grouping “agree” and “strongly agree” together, and “disagree”, and “strongly disagree” together.

Smokers:		
There are fewer and fewer places where you feel comfortable smoking		
	‘Agree’ or ‘Strongly Agree’	
	Wave 1 Whole sample	Wave 1 Remained
Smokers – General Population Sample	87.4% (n=201_)	89.2% (n=140)
Smokers – Targeted Sample	87.8% (n=151)	93.6% (n=44)

Society Disapproves of smoking

The second question asked all respondents if they agreed or disagreed that “*Society disapproves of smoking*”, with the response options ‘strongly disagree’, ‘disagree’, ‘agree’, and ‘strongly agree’. The same question was asked in Wave 1 and in Wave 2.

The entire sample from Wave 1 did not differ significantly from the sub-sample that remained in Wave 2 ($p>0.05$, proportions are almost exactly the same, see Appendix J).

The results from the longitudinal measure, responses from Wave 1 and Wave 2, are presented below in Table 33. These responses have been dichotomized in the tables below, grouping “agree” and “strongly agree” together, and “disagree”, and “strongly disagree” together.

Society Disapproves of Smoking		
	Agree or Strongly Agree	
	Wave 1	Wave 1
	Whole Sample	Remained in Sample
Non-Smokers		
General Population Sample	87.2% (n=314)	89.2% (n=263)
Smokers		
General Population Sample	87.3% (n=199)	87.2% (n=156)
Smokers Targeted Sample	88.8% (n=151)	86.9% (n=53)

FIRE AND LITTER MEASURES

LITTER

The following question was asked of both non-smokers and smokers in both the telephone survey and the survey conducted with the targeted sample of smokers, “*How often do you notice the litter caused by cigarette butts*”, and the response options were, ‘never’, ‘sometimes’, ‘often’, and ‘always’. These responses have been dichotomized in the tables below, grouping “never” and “sometimes” to a response option of ‘not often’, and the response options “often”, and “always” have been grouped together as ‘often’.

Report Seeing Litter Caused by Cigarette Butts		
	'Often' or 'Always'	
	Wave 1 Whole Sample	Wave 1 Remained in Sample
Non-Smoker General Population Sample (Telephone)	68.2%	67.90%
	(n=253)	(n=203)
Smoker General Population Sample (Telephone)	58.4%	56.6%
	(n=136)	(n=103)
Smoker Targeted Sample (Face-to-face)	76.9%	70.50%
	(n=133)	(n=43)

FIRE

The following question was asked of both non-smokers and smokers in the general population sample, and the targeted sample, “*How often do you worry that a cigarette butt could cause a fire?*”, and the response options were, ‘never’, ‘sometimes’, ‘often’, and ‘always’. These responses have been dichotomized in the tables below, grouping “never” and “sometimes” to a response option of ‘not often’, and the response options “often”, and “always” have been grouped together as ‘often’.

Report Worrying Cigarette Butts Could Cause a Fire		
	'Often' or 'Always'	
	Wave 1 Whole Sample	Wave 1 Retained in Sample
Non-Smoker General Population Sample (Telephone)	20.5% (n=76)	19.1% (n=57)
Smoker General Population Sample (Telephone)	26.6% (n=62)	28.0% (n=51)
Smoker Targeted sample (Face-to-face)	28.7% (n=50)	23.0% (n=14)

SUPPORT FOR SMOKE-FREE RESTRICTIONS

There were 6 measures collected to address research objective 4 – which sought to understand the public’s support for outdoor smoking restrictions in Woodstock, and how the OSFO may have influenced levels of support.

These questions were asked of both people who smoke and non-smokers. The same question was asked in each wave. Before this set of questions was asked, the following pre-amble was read to each respondent, “*For each of the following places, please tell me if you think smoking should be allowed in outdoor environments:*

- G. Patios at pubs or bars
- H. Patios at Restaurants
- I. Patios at family restaurants
- J. City Parks
- K. Doorways of Public Buildings
- L. Doorways of Private Buildings

The response options were:

- 1 - All outdoor areas
- 2 - Some outdoor areas
- 3 - No outdoor areas
- 7. Not applicable
- 8. Refused
- 9. Don't know

A response of ‘all outdoor areas’ means a respondent thinks that smoking should be permitted everywhere outdoors in that environment. The responses were dichotomized for presenting the findings – grouping ‘some outdoor areas’ and ‘no outdoor areas’ together – since these responses are in line with parts of the Woodstock by-law which regulated smoking by making certain areas (buffer zones) smoke-free around park equipment, recreational fields and transit stops.

SUPPORT FOR SMOKING RESTRICTIONS ON PATIOS OF PUBS/BARS

Support for Restrictions - Patio at Pubs or Bars –							
		Wave 1 Entire sample			Wave 1 That remained in the sample		
		Permit Smoking in All outdoor areas	Restrict Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers - General Population Sample	Coun t	24	346	370	19	279	298
	%	6.5%	93.5%	100.0%	6.4%	93.6%	100.0 %
Smokers – General Population Sample	Coun t	104	127	231	75	106	181
	%	45.0%	55.0%	100.0%	41.4%	58.6%	100.0 %
Smokers – Targeted sample	Coun t	100	74	174	36	25	61
	%	57.5%	42.5%	100.0%	59.0%	41.0%	100.0 %

SUPPORT FOR SMOKING RESTRICTIONS ON PATIOS OF RESTAURANTS

Support for Restrictions - Patio Restaurants							
		Wave 1 Entire sample			Wave 1 That remained in the sample		
		Permit Smoking in All outdoor areas	Restric t Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers - General Population Sample	Count	14	358	372	10	289	299
	%	3.8%	96.2%	100.0%	3.3%	96.7%	100.0 %
Smokers – General Population Sample	Count	65	167	232	45	137	182
	%	28.0%	72.0%	100.0%	24.7%	75.3%	100.0 %
Smokers – Targeted sample	Count	70	103	173	28	32	60
	%	40.5%	59.5%	100.0%	46.7%	53.3%	100.0 %

SUPPORT FOR SMOKING RESTRICTIONS ON PATIOS OF FAMILY RESTAURANTS

Support for Restrictions - Patio Family Restaurants							
		Wave 1 Entire sample			Wave 1 That remained in the sample		
		Permit Smoking in All outdoor areas	Restric t Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers - General Population Sample	Count	10	360	370	7	292	299
	%	2.7%	97.3%	100.0%	2.3%	97.7%	100.0 %
Smokers – General Population Sample	Count	38	194	232	30	151	181
	%	16.4%	83.6%	100.0%	16.6%	83.4%	100.0 %
Smokers – Targeted sample	Count	21	153	174	10	51	61
	%	12.1%	87.9%	100.0%	16.4%	83.6%	100.0 %

SUPPORT FOR SMOKING RESTRICTIONS ON IN CITY PARKS

Support for Restrictions – City Parks							
		Wave 1 Entire sample			Wave 1 That remained in the sample		
		Permit Smoking in All outdoor areas	Restric t Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers - General Population Sample	Coun t	25	344	369	21	277	298
	%	6.8%	93.2%	100.0%	7.0%	93.0%	100.0 %
Smokers – General Population Sample	Coun t	70	163	233	54	128	182
	%	30.0%	70.0%	100.0%	29.7%	70.3%	100.0 %
Smokers – Targeted sample	Coun t	78	96	174	26	35	61
	%	44.8%	55.2%	100.0%	42.6%	57.4%	100.0 %

SUPPORT FOR SMOKE-FREE RESTRICTIONS IN PUBLIC DOORWAYS

Support for Restrictions – Public Doorways							
		Wave 1 Entire sample			Wave 1 That remained in the sample		
		Permit Smoking in All outdoor areas	Restrict Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers - General Population Sample	Count	3	367	370	3	295	298
	%	.8%	99.2%	100.0%	1.0%	99.0%	100.0 %
Smokers – General Population Sample	Count	9	224	233	5	177	182
	%	3.9%	96.1%	100.0%	2.7%	97.3%	100.0 %
Smokers – Targeted sample	Count	20	154	174	8	53	61
	%	11.5%	88.5%	100.0%	13.1%	86.9%	100.0 %

SUPPORT FOR SMOKE-FREE RESTRICTIONS IN PRIVATE DOORWAYS

Support for Restrictions – Private Doorways							
		Wave 1 Entire sample			Wave 1 That remained in the sample		
		Permit Smoking in All outdoor areas	Restrict Smoking	Total	Permit Smoking in All outdoor areas	Restrict Smoking	Total
Non-smokers - General Population Sample	Count	5	365	370	4	294	298
	%	1.4%	98.6%	100.0%	1.3%	98.7%	100.0 %
Smokers – General Population Sample	Count	21	212	233	15	167	182
	%	9.0%	91.0%	100.0%	8.2%	91.8%	100.0 %
Smokers – Targeted sample	Count	24	149	173	9	52	61
	%	13.9%	86.1%	100.0%	14.8%	85.2%	100.0 %

ANTICIPATED COMPLIANCE WITH THE WOODSTOCK OUTDOOR SMOKE-FREE
BY-LAW

In Wave 1 smokers were asked, “*Do you think it is likely that you will always follow the by-law restricting smoking in outdoor spaces?*”, and the response options were, “Yes, all the time”, “No, there would be some times I would not follow the bylaw”.

Smokers Wave 1: Do you think it is likely that you will always follow the bylaw restricting smoking in outdoor spaces?							
		Wave 1 Whole sample			Wave 1 That remained in the sample		
		Yes	No, not always	Total	Yes	No, not always	Total
Smokers – General Population Sample	Count	117	115	232	77	75	152
	%	50.4%	49.6%	100.0%	50.7%	49.3%	100.0 %
Smokers – Targeted sample	Count	85	86	171	25	23	48
	%	49.7%	50.3%	100.0%	52.1%	47.9%	100.0 %

PERSONAL RESTRICTIONS – SMOKE-FREE HOME POLICIES

The question was worded “Which of the following best describes smoking inside your home?”, and the response options were, “Smoking IS allowed anywhere in your home”, “Smoking is NEVER allowed ANYWHERE in your home,”, or “Something in between”.

Smokers and Non-Smokers: Which of the following best describes smoking inside your home?									
		Wave 1 Whole Sample				Wave 1 Remained in the Sample			
		Allowed Anywhere	Allowed Nowhere	Something in between	Total	Allowed Anywhere	Allowed Nowhere	Something in between	Total
Non-smokers - General Population Sample	Count	5	347	20	372	4	278	17	299
	%	1.3%	93.3%	5.4%	100.0%	1.3%	93.0%	5.7%	100.0%
Smokers – General Population Sample	Count	38	122	72	232	26	107	49	182
	%	16.4%	52.6%	31.0%	100.0%	14.3%	58.8%	26.9%	100.0%
Smokers – Targeted sample	Count	63	78	33	174	17	36	8	61
	%	36.2%	44.8%	19.0%	100.0%	27.9%	59.0%	13.1%	100.0%

PERSONAL RESTRICTIONS – SMOKE-FREE VEHICLE POLICIES

The question was worded “Which of the following best describes smoking inside your vehicle?”, and the response options were, “Smoking is allowed anywhere in your vehicle”, “Smoking is NEVER allowed ANYWHERE in your vehicle,”, or “Something in between”.

Smokers and Non-Smokers: which of the following best describes smoking inside your vehicle?									
		Wave 1 Whole Sample				Wave 1 Retained in Sample			
		Allowed in your vehicle	Never Allowed in your vehicle	Something in between	Total	Allowed in your vehicle	Never Allowed in your vehicle	Something in between	Total
Non-smokers - General Population Sample	Count	2	336	19	357	2	271	15	288
	%	.6%	94.1%	5.3%	100.0%	.7%	94.1%	5.2%	100.0%
Smokers – General Population Sample	Count	79	62	73	214	58	56	52	166
	%	36.9%	29.0%	34.1%	100.0%	34.9%	33.7%	31.3%	100.0%
Smokers – Targeted sample	Count	39	39	59	137	15	10	25	50
	%	28.5%	28.5%	43.1%	100.0%	30.0%	20.0%	50.0%	100.0%

**MEASURES OF CHANGES IN ANTICIPATED AND REPORTED USE OF FACILITIES,
BUSINESSES AND ATTENDANCE AT PUBLIC EVENTS**

PARKS OR FIELDS

In Wave 1 the question was worded, “How do you anticipate the new smoking restrictions will impact your use of Parks or Fields? would you say...”, and the response options were, ‘I will go to the park or rec field more often’, ‘I will go to the park or rec field Less often’, or ‘the restrictions will not affect how often I go to the parks or fields’.

Smokers and non-smokers were asked: How will the new smoking restrictions impact your use of Parks or Fields , would you say you will “Go more”, “Go less”, or your use (will <i>or</i> is) not be affected?”									
		Wave 1 Whole Sample				Wave 1 Retained in the Sample			
		Go MORE often	Go LESS often	Will not be affected	Total	Go MORE often	Go LESS often	Will not be affected	Total
Non-smokers - General Population Sample	Count	101	3	264	368	83	3	213	299
	%	27.4%	.8%	71.7%	100. 0%	27.8%	1.0%	71.2%	100. 0%
Smokers – General Population Sample	Count	8	49	174	231	8	36	137	181
	%	3.5%	21.2 %	75.3%	100. 0%	4.4%	19.9 %	75.7%	100. 0%
Smokers – Targeted sample	Count	3	33	136	172	0	13	48	61
	%	1.7%	19.2 %	79.1%	100. 0%	.0%	21.3 %	78.7%	100. 0%

TRANSIT

In Wave 1 the question was worded, “The city of Woodstock outdoor smoking by law (will) prohibit(s) smoking on sidewalks within 4 metres of transit shelters or transit stops. How do you anticipate the new smoking restrictions will impact your decision to use transit? Would you say...”, and the response options were, ‘I will use transit more often’, ‘I will use transit Less often’, or ‘the restrictions will not affect how often I use transit’.

Smokers and Non-Smokers: The city of Woodstock outdoor smoking by law will prohibit smoking on sidewalks within 4 metres of transit shelters or transit stops. How will this impacted your decision to use transit? Would you say:									
		Wave 1 Whole Sample				Wave 1 Retained in Sample			
		Use MORE often	USE LESS often	Will not be affected	Total	Use MORE often	USE LESS often	Will not be affected	Total
Non-smokers - General Population Sample	Count	47	4	307	358	37	3	252	292
	%	13.1%	1.1%	85.8%	100. 0%	12.7%	1.0%	86.3%	100. 0%
Smokers – General Population Sample	Count	6	23	197	226	4	18	154	176
	%	2.7%	10.2 %	87.2%	100. 0%	2.3%	10.2 %	87.5%	100. 0%
Smokers – Targeted sample	Count	0	15	137	152	0	4	49	53
	%	.0%	9.9%	90.1%	100. 0%	.0%	7.5%	92.5%	100. 0%

PATIOS ON DUNDAS STREET

In Wave 1 the question was worded, “The City of Woodstock outdoor smoking bylaw will prohibit smoking on sidewalk areas of downtown cafés along Dundas Street. How do you anticipate the new smoking restrictions will impact your decision to visit these venues, would you say...”, and the response options were, ‘I will use transit more often’, ‘I will use transit Less often’, or ‘the restrictions will not affect how often I use transit’.

Smokers and Non-Smokers: The City of Woodstock outdoor smoking bylaw will prohibit smoking on sidewalk areas of downtown cafés along Dundas Street – How will this impact your decision to visit these venues in the future? Would you say: I will be more , likely to visit, I will be less likely to visit or I will not be affected?									
		Wave 1 Whole Sample				Wave 1 – Retained in Sample			
		MOR E Likely To Visit	LES S Likely to visit	Will not be affected	Total	MOR E Likely To Visit	LES S Likely to visit	Will not be affected	Total
Non-smokers - General Population Sample	Count	179	10	177	366	155	7	135	297
	%	48.9%	2.7%	48.4%	100.0%	52.2%	2.4%	45.5%	100.0%
Smokers –General Population Sample	Count	10	81	141	232	9	63	110	182
	%	4.3%	34.9%	60.8%	100.0%	4.9%	34.6%	60.4%	100.0%
Smokers – Targeted sample	Count	0	61	110	171	0	24	37	61
	%	.0%	35.7%	64.3%	100.0%	.0%	39.3%	60.7%	100.0%

BUILDINGS AND FACILITIES WITH SMOKE-FREE DOORWAYS

. There was no distinction made with this measure between public or private doorways. In Wave 1 the question was worded, “The city of Woodstock outdoor smoking by law will prohibit smoking on sidewalks within 9 metres of doorways for all public buildings like city hall, and for private businesses that elect to make their doorway areas smoke free. How do you anticipate this will impact your decision to visit these venues in the future? Would you say..”, and the response options were, ‘I will be more likely to visit, ‘I will be less likely to visit’, or ‘I will not be affected’.

Smokers and Non-Smokers: The city of Woodstock outdoor smoking by law prohibits smoking on sidewalks within 9 metres of doorways for all public buildings like city hall, and for private businesses that elect to make their doorway areas smoke free.									
Wave 1: How will this impact your decision to visit these venues? Would you say:									
		Wave 1 – Whole Sample				Wave 1 – Retained in Sample			
		MORE Likely To Visit	LESS Likely to Visit	Will not be affected	Total	MORE Likely To Visit	LESS Likely to Visit	Not been affected	Total
Non-smokers - General Population Sample	Count	129	8	228	365	107	5	185	297
	%	35.3 %	2.2%	62.5%	100.0 %	36.0 %	1.7%	62.3 %	100.0 %
Smokers – General Population Sample	Count	11	28	192	231	8	17	156	181
	%	4.8%	12.1 %	83.1%	100.0 %	4.4%	9.4%	86.2 %	100.0 %
Smokers – Targeted sample	Count	2	23	146	171	0	8	53	61
	%	1.2%	13.5 %	85.4%	100.0 %	.0%	13.1%	86.9 %	100.0 %

OUTDOOR EVENTS

The question asked to understand impact on outdoor events was worded the same in each Wave because no event had been added to the Woodstock outdoor events Schedule. Therefore the measure collects opinion over time with no change in policy.

In Wave 1 the question was worded, “The City of Woodstock outdoor smoking bylaw will prohibit smoking at events like Cow-a-palooza and Sidewalk Days – how will this impact your decision to attend this event in future years? Would you say...”, and the response options were, “I will be MORE likely to attend”, “I will be LESS likely to attend”, or ‘I will not be affected’.

Smokers and Non-Smokers: If the City made these events smoke-free, how would this impact your decision to attend these events this year? Would you say... you would go More, go Less or Not Be Affected?									
		Wave 1 Whole Sample				Wave 1 – Retained in Sample			
		MORE Likely To Attend	LESS Likely to Attend	Will not be affected	Total	MORE Likely To Attend	LESS Likely to Attend	Will not be affected	Total
Non-smokers - General Population Sample	Count	128	4	236	368	102	3	194	299
	%	34.8 %	1.1%	64.1%	100. 0%	34.1 %	1.0%	64.9%	100. 0%
Smokers – General Population Sample	Count	10	74	148	232	8	54	120	182
	%	4.3%	31.9 %	63.8%	100. 0%	4.4%	29.7 %	65.9%	100. 0%
Smokers – Targeted sample	Count	1	57	114	172	0	21	40	61
	%	.6%	33.1 %	66.3%	100. 0%	.0%	34.4 %	65.6%	100. 0%

Appendix K – Indexed and Charted Quotes from Key Informant Interviews

CODE	QUOTE	PERSON
1. Woodstock Unique Conditions		
1.1 Economic Prosperity	“Things were booming at the time [the by-law was passed] things were very settled at the time in terms of employment and growth so I think it certainly helps, definitely. People aren’t as worried about other things and would be more receptive I think”	PH1
	“I think [the Toyota plant] was a positive thing, I don’t know how much of a factor it was but I think it might have been a catalyst to looking at other areas within the city of Woodstock as to how we can make it more visually pleasing or healthy.”	PH2
	“[When Woodstock got the Toyota plant] everybody thought they were going to get those high paying automotive jobs.”	PH3
	“Did Toyota help us do a smoking by-law: No. Not at all. In fact a lot of this action happened before the Toyota announcement.”	EO1
	“I would say [the introduction of the Toyota plant influencing the development of the by-law] would be a misstatement, if anything I think the only thing you could draw would be a conclusion that this community just doesn’t worry about much other than getting the job done. Whether its landing, whatever it takes to get a Toyota plant or to accomplish something that there isn’t a whole lot of ground covered yet on.”	ME1
1.2 Progressive and Proactive City Council	“Woodstock is a good example and even prior to this they were one of the first by-laws locally to go- they included patios, as part of their by-laws- pretty progressive for a tobacco growing area so even within a tobacco growing area there’s people who are progressive”	PH1
	“If you look at EO1, I think he’s a person who looks at the image of Woodstock and how important that is to him and what sort of image it portrays to other people in the neighbouring communities as well as across Canada. And I think that was a very proud moment for him when he got the plant to come in because it brings stability it brings prestige and pride as well. And I think it’s a by-product, you know what other things can happen in order to make the city look better to the people who	PH2

	<p>live within the community and the people who are outside of the community.”</p> <p>“I think it was appealing to get Woodstock on the map. [to be the first to introduce such a comprehensive by-law]”</p> <p>We’ve always been innovative in a sense that we’ve had to try harder, I mean we don’t have a whole lot of resources so we have to find unique ways of creating a lifestyle here in our city. It’s always been there- the public isn’t aware of our innovation in terms of our industrial community, I think at one point there was one robot for every two citizens. We’ve been good for one hundred years at making things but Toyota increased the pride we had in our community, that we were a worth while community. When I first became [elected official], the undercurrent was that we were second class and second best and it wasn’t a really good place to shop, there wasn’t anything here for people. So it became in effect better communicators.”</p>	<p>PH3</p> <p>EO1</p>
<p>1.3 Smoking prevalence, Tobacco growing region</p>	<p>“Certainly within tobacco growing areas there are pockets, there are some really good open areas like this and as you move into the heart more where people’s livelihoods have been seriously affected, where certainly it might take a little longer.”</p> <p>“so I think when you do pass these types of by-laws in any municipality across oxford county its a huge success story because of the barriers you do face in terms of the tobacco industry here in oxford county”</p> <p>“We didn’t even have a good sense of what the smoking stats were until a couple years ago because they would tease out oxford from different health status reports- we never had anything oxford specific. ”</p> <p>“You can’t use oxford county as a measure of Woodstock. We do have a higher percentage- we grow tobacco. Particularly among young people so the next battle is not going to be through legislation its going to be in terms of behaviour change. Smoking is definitely not cool and its an addiction and one has to be careful. The next round is going to be in terms of education on tobacco and alcohol.”</p> <p>“The southern end of the county is the tobacco farming historically, so they have branches into the city but being in London as well I don’t see a difference”</p> <p>“The South end of the county is tobacco country so there’s</p>	<p>PH1</p> <p>PH2</p> <p>PH3</p> <p>EO1</p> <p>ME2</p> <p>ME1</p>

	probably some influence in that regard but we didn't concern ourselves with whether we were a higher smoking community or a lower smoking community it was going to be a decision of council's to whether or not they wanted to pass this by-law and they were really the only ones we concerned ourselves with. It was a unanimous decision, even the smokers on council."	
1.4 Success of Last Smoke-free By-law	<p>"We had strong compliance, very few people wanted to challenge it... we had strong public support [for the 2003 by-law]. We had vocal minority that said, 'its my right' [to smoke]. And I think the public became intolerant of that [sentiment]."</p> <p>"I think that's what made it happen [knowledge about the harms of SHS], and that's the context in which you say 'your behaviour impacts me and I shouldn't have to have that kind of behaviour'."</p>	EO1 EO1
2. Implementation Process		
2.1 Incremental and strategic policy development	<p>"I strongly support [the by-law] but I think it was an easy sell to the municipal government because of the smoke-free act, because of what municipalities have done across Ontario in recent years"</p> <p>"I believe in an educational campaign, I think that's very important and a grace period where you can educate members of community- what your and our responsibilities are"</p> <p>"I think its very important to engage community stakeholders when you're implementing a new policy and identifying what sort of associations are found in communities such as lung association, heart and stoke etc. Understand the council and what direction they want to take the community and identifying who's on the council in terms of your advocates for that policy so obviously council buy-in is very important. And internally you want to see your manager, director also sees it as something that's important to the public health agenda and they want to dedicate resources to and whether it be financial, or human resources and I think that's important as well. Like any successful policy it really involves everyone on all levels – not only in government but community stakeholders. And I think that's why this has been a success story, you know some people who are very dedicated- PH1 and PH3 know Woodstock inside out and have been a member of the community for many years so</p>	PH2 PH2 PH2

	<p>they know what makes the community tick and they're politically astute – they see there's a good timeline to introduce the policy based on what's happening provincially or even internationally in terms of the smoke-free Ontario act and what WHO is doing.- taking advantage of the policy environment – being strategic.”</p> <p>“When we wrote the letter requesting they look at the smoke-free parks issue it was shortly after some kids in Durham or east of Toronto- that there had been a little flurry in the newspaper about a couple of kids wanting Santa Claus parade to be smoke free and it did get a fair but of press around here. The inter-agency council thought that at that point its time to get moving again we need to move and our focus has always been protect the children.”</p> <p>“You have to go with the momentum, and just get in there. When there's press about something smoke free then you strike, taking advantage of what's going on in other places and of course giving the impression that we can't be left out here. Woodstock wants to be the leader”</p> <p>We had promoted [the charts that OTN puts out] and copies of the map were made available and trying to keep the politicians informed. Several times in the early 2000s we went to council and presented them with our blue ribbon for the blue ribbon campaign so they knew we were there and were relatively supportive all along. Even in 2003 there was minimal opposition”</p> <p>“There's a whole argument about whether you should enact legislation after the public has provided broad consent or which may be following and whether or not you need to provide leadership which is in advance of public. Every municipality, every government waivers in that regard. The role of the [EO1] is to communicate the intent of what we are trying to achieve to elicit as best as possible the broad community not just the people at the margins of the argument and to take advantage of opportunity.”</p> <p>“Timing is everything. You have to decide if you're going to lead or you're going to follow.”</p> <p>“That's how we laid out the options for council, the middle option did focused on children and where they congregate. The</p>	<p>PH3</p> <p>PH3</p> <p>PH3</p> <p>EO1</p> <p>EO1</p> <p>ME1</p> <p>ME1</p>
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	<p>next option, which takes it to a higher extreme, was no smoking anywhere in a park or even on municipal properties. But to get there you have to decide that some adult walking on a trail with their dog can't smoke and that becomes a much more difficult argument. Or someone sitting in a car on municipal property, sitting alone in their car and not being able to smoke. Its hard to build an argument, a health impact, and influencer or impact in either of those scenarios. So if we were to recommend going there then I think we wouldn't have met with much success. I think the arguments are much stronger going the way we went, at least as an initial step.”</p> <p>“Don't presume to think this needs to be a major undertaking. The amount of effort you put in to actually implementing should be more than the amount of effort you put in to the actual passing of this and that's what we've found and that's the way it should be. Your resources and getting the signage out and information and publications out is where you really want to focus.”</p>	
<p>2.2 Consistencies with other policies and other city priorities</p>	<p>“So already here you are seeing that council here are progressive in terms of their by-law development. And this was nothing to do with smoke-free [Ontario] this was totally a city of Woodstock by-law around patios. To be more consistent.”</p> <p>“The smoke free Ontario put a lot more restrictions on tobacco sales and displays and we'd just gone through that display ban. Whereas the by-law is dealing with the actual person and lighting of the cigarette. Where they can do that, where they can't do that. Whereas the act still had that from the tobacco control act which was previous but it goes down a different path. We were trying to pick up the pieces of what the smoke free Ontario act didn't have and apply it that way. “</p> <p>“I think [the bingo hall debate] started the counsel thinking we do have a role here and we cannot absent ourselves from the obligations to protect our citizens.”</p> <p>“A [designated smoking room] sounded counter productive to the message we wanted to send”</p> <p>“Our moniker is the friendly city and I think that plays into that, definitely, there's a perception and I think a good one that it's a friendly city, that it is family oriented, you know it's a good place to raise families”</p>	<p>PH1</p> <p>ME2</p> <p>EO1</p> <p>EO1</p> <p>PH1</p>
<p>2.3</p>	<p>“We used children, and children in terms of protection from</p>	<p>PH1</p>

Evidence Based Planning	<p>secondhand smoke and support parents who wanted to protect their children.”</p> <p>“The study helped, that there is no safe level of secondhand smoke always good to continuously push that because there are still people out there that don’t buy that so using the study and the scientific basis helps as well”</p> <p>“Inter-agency council and public health were able to be right at the table and say here are some suggestions and here’s some thoughts from our point of view. Here’s Collingwood example.”</p> <p>“One of the themes we used was protection, and especially of children and second hand smoke and that certainly resonated with council- more so than some other things. We had sort of thrown in environmental clean-up, but sitting there and kids picking them up- but they didn’t really bite on that. But certainly when you talked about protection and protection of secondhand smoke to children that study was definitely helpful [Klepseis article]”</p> <p>“So as a public health practitioner its very important- the science based evidence is important, I think its also important to show the county council and to the municipal councils how to use that information, to change human behaviour is the key question and think that’s what public health always struggles with”</p> <p>“we sent a copy of the whole [klepeis] article with the letter in September 2007. So I wondered myself how much of an impact that particularly scientific evidence had because that was hot off the press- I think it came out august 2007 or something. And I included the surgeon general’s report from 2006”</p> <p>“One can’t discount the health risks but I think what people came to realize is that they just didn’t like the smell of smoke and an individuals behaviour impacted another individuals behaviour and I think it became common sense.... It made sense to people. So you wait it out until the public tells you that their ready and so anecdotally I think may have done a survey – but we waited for the public to be ready and then we did it in parks. Particularly where children were at.”</p> <p>“Some municipalities had put their toe in the water, they didn’t really take it to a greater conclusion but there were some</p>	<p>PH1</p> <p>PH1</p> <p>PH1</p> <p>PH2</p> <p>PH3</p> <p>EO1</p> <p>ME1</p> <p>ME1</p>
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	<p>examples out there and we bounced those around and talked about how could structure the by-law for opening the by-law up to greater restrictions.”</p> <p>“I thought a little bit of science was important to support the public policy decision. Its not just about being the influencers on children, its also about how there’s a health issue here. I think its important to use all the hot button ammunition that you’ve got in order to accomplish it. Health has got to play a priority in why we do this stuff.”</p>	
<p>2.4 Innovation of effective policy mechanisms (Schedules A and B)</p>	<p>“I think its important that they’ve made it simple, the schedule the way its set up, you don’t have to vote on every single property that comes forward, what they do is just bring it to council- here’s an edition to schedule and its in, its done, all you have to do is request it, so it makes it simple from a perspective of approval”</p> <p>“We’ve been surprised by how many people have called and been interested in exploring the options- what its about and a lot of people have taken it up. Not only with doorways but with properties being totally smoke-free.”</p> <p>“we know how hard it is to change a law, particularly provincial law and I guess municipal law is a bit easier, so any time you make it easy for an agency such as public health to change an aspect of that by-law or regulation act it will be better for everyone because you won’t have to go through all the political red-tape of making it happen so in terms of just having those schedules included in that aspect of the by-law so it was a very smart move”</p> <p>“You can make your doorway smoke-free, all you have to do is write a letter to the city and they’ll pass it and you can have it enforced so that’s been available but Woodstock general has been the only workplace that took advantage.</p> <p>“We’ve had a growing number of companies come to us to enact legislation on their private property by by-law... we will enforce it.</p> <p>“There was history there with loitering. We had already had requests from property owners to deal with those issues. Then when they got wind of the by-law and putting the two together as well as the police dealing with trespassing. I wouldn’t say we’ve cleaned it up but we’re getting compliments”</p>	<p>PH1</p> <p>PH1</p> <p>PH2</p> <p>PH3</p> <p>EO1</p> <p>ME2</p> <p>ME2</p>

	<p>“Probably within the first four months is the majority of what you see in the by-law now and then a long the way you’ve had a handful more.”</p>	
2.5 Minimal funding required	<p>“through inter-agency and public health we were able to assist [the city] in terms of promotion and I think that helped as well so while they were focusing on the by-law and we certainly had input into that we were willing to spend some time and some money to do signage ads in papers and brochures and those types of things to take a little pressure off of them in that sense”</p> <p>“I find here in oxford county, that perhaps although this is a great example of leadership, smoking in public places, but I find they sometimes kind of ride the wave, and not as many funds are donated to the cause. And smoking in public places I don’t think really affected business owners and operators as much as in work places so I think it was a little easier to implement because you’re not hurting people’s businesses”</p> <p>“This policy doesn’t really have any financial implications which councils love, it has a little in terms of staffing but really its one that’s a win win for everyone.”</p> <p>“Your resources and getting the signage out and information and publications out is where you really want to focus”</p>	<p>PH1</p> <p>PH2</p> <p>PH2</p> <p>ME1</p>
2.6 Enforcement and administration effective, easy	<p>“For the most part its been self enforcing, that its complaint driven because we don’t have the bodies to get out there and walk around and we’ve literally had one complaint. Does that mean nobody is smoking, I’m sure people are smoking out there, I think its very very minimal and its been self enforced, so its been successful in that sense.”</p> <p>“One of the best examples is a plaza downtown which has had some problems with loitering and they’ve really struggled with keeping people out of their doorways...they made their entire property smoke-free and it’s a large plaza with 6 to 8 stores in it so now people are off that area, its been successful in terms of getting people away, we’ve written a lot of tickets and that’s the only area we tended to write a lot of tickets. But it’s been successful because companies know that they can use that as a tool. We’ve had a church as well near a school where kids were coming across and being on their property- and here’s a tool to keep them off their property. So it was a solution for them and as soon as people here that you get more calls.”</p>	<p>PH1</p> <p>PH1</p> <p>PH2</p>

	<p>“Most of the messaging I’ve received has been excellent, the community has been really supportive of it, its been relatively easy in terms of enforcing it and its been a good news story for the community.”</p> <p>“I don’t think its been a huge problem in terms of work but what’s the problem and I don’t think its been the city of Woodstock by-law but the smoke-free Ontario stuff- once they write a ticket then they spend all this time in court. Recently both guys spent a day and nothing happened, the case didn’t come up- they have to be there [in court] so that’s a challenge. The fact that they made the \$100 fine affordable so most people would tend to pay up and move on”</p> <p>“We have the smoking police. We have regular by-law enforcement but I think we run on the money that we have at public health enforcement as well.”</p> <p>“Don’t enact a by-law unless there is funding available for education and community awareness.”</p> <p>“I’ve issued about 22. Mostly at that location- the Tim Hortons. But a few here and there. Some workplace vehicles. Workplaces I don’t think we’ve had an issue or I’ts been a warning.”</p>	<p>PH3</p> <p>EO1</p> <p>EO1</p> <p>ME2</p>
<p>2.7 Focus on it being ‘the right thing to do’</p>	<p>“I think the first critical step was the inter-agency council came to a decision that the status quo wasn’t good enough and there was room to move in terms of by-law...the first step was to write a letter to council to share our thoughts, you know that maybe its time to push the by-law envelope and this is what we’re thinking.”</p> <p>“First of all ask the question, go to council and ask, because honestly we were a bit surprised when we initially wrote the letter and thought oh you know it will be years down the road that we’ll even get a reply, we might even have to write a second or third letter, but they responded right away so I think the first lesson is ask the question. People are open and receptive now, things are really developing quickly. Ask the question and you will probably get a positive response”</p> <p>“you have to go with the momentum, and just get in there. When there’s press about something smoke free then you strike, taking advantage of what’s going on in other places and</p>	<p>PH1</p> <p>PH1</p> <p>PH3</p> <p>PH3</p>

	<p>of course giving the impression that we can't be left out here.”</p> <p>“don't wait for [the council] to make a move, get in there and have your voice”</p> <p>“Be Bold. Consult. And Enact.”</p> <p>“I think a lot of municipalities get too caught up in what the public reaction is and when it comes to something like this I don't think you need to concern yourself with that. It's the right thing to do and I don't think there's a debate about it. So we didn't concern ourselves and we just cut through all of that, and I think a lot of municipalities spend a lot of time to ascertain the acceptance in the community like this. And to me I think that's a waste of effort. Just get the job done. Its time, you should not be allowed to smoke. I have a small child and I take him to the playground and I find it offensive when somebody is smoking near me. So I thought it made a lot of sense and so did council so it ended up being passed. It's not perfect by any stretch of the imagination but I think we accomplished quite a bit and we're happy with it.”</p>	<p>EO1</p> <p>ME1</p>
3. Partnership of city and public health/ inter-agency council		
<p>3.1 Inter-agency Involvement and Partnership</p>	<p>“Inter-agency committee includes myself, PH3, tobacco enforcement officer, PH2, representation from Canadian cancer society, the lung association and these are local representatives and also interested parties from the community so we have a couple volunteers who sit on that committee as well”</p> <p>“Inter-agency council and public health were able to be right at the table and say here are some suggestions and here's some thoughts from our point of view. Here's Collingwood example.”</p> <p>“through inter-agency and public health we were able to assist [the city] in terms of promotion and I think that helped as well so while they were focusing on the by-law and we certainly had input into that we were willing to spend some time and some money to do signage ads in papers and brochures and those types of things to take a little pressure off of them in that sense, so that helped too in terms of partnership”</p> <p>“I would say [the city and public health relationship] is good in the sense the by-law was passed and has been implemented successfully and is being monitored and</p>	<p>PH1</p> <p>PH1</p> <p>PH1</p> <p>PH2</p>

	<p>people are accepting it. So that's an indication of a successful partnership. And there really hasn't been any barriers, the city of Woodstock devotes some enforcement time as well as public health so there's a working relationship and partnership with municipality and oxford county public health"</p> <p>"We're kind of a unique partnership, I'm not too sure there's anywhere else in the province where we do partner with the local by-law officer and the city of Woodstock on various tobacco enforcement activities including no smoking in public places but this being a by-law the only person who can actually charge is the city of Woodstock by-law officer. But we do go out together and from what I've known its been very successful in terms of public acceptance of it</p> <p>"We had several meetings and talked about what we wanted and the city people talked about how far they thought City Council would go. "</p> <p>"It's been a partnership through the whole exercise, right from the very beginning. I think PH3 picked the ball up for us and carried it on the promotion and the development of the information piece that was put into the Woodstock magazine. So she's been doing all that leg-work for us. Much as she did when we introduced the first smoking by-law in the city."</p>	<p>PH2</p> <p>PH3</p> <p>ME1</p>
<p>3.2 History of co-operation</p>	<p>"The history there is that inter-agency council has been around for a number of years including the time when by-laws were being developed... before there was any provincial legislation. So they had done a lot of promotion at that time to get a by-law out here locally"</p> <p>"We have a good relationship [with the city] its certainly from inter-agency's perspective in terms of getting the by-laws back before smoke-free Ontario that relationship had already been made. People knew who inter-agency was... I think there was trust."</p> <p>"Public health plays an important part in advocating for these by-laws across the community and the inter-agency council on tobacco plays a very important role, so you have these advocates from the Canadian cancer society, heart and stroke and local physicians who advocate on behalf of citizens across the community. So all these</p>	<p>PH1</p> <p>PH1</p> <p>PH2</p> <p>PH3</p>

	<p>individuals play very important roles in making the by-law happen”</p> <p>“We had a good relationship with the city from the [smoke free bars]. So we worked with the city to get [all the smoke-free Ontario] stuff out so we had a good working relationship especially the enforcement guys. [Public Health by-law office] and EO2 started going out on smoke-free Ontario calls so they already had a working relationship so when the by-law came into effect it was just “well we’ll carry on””</p> <p>“We have a physician on our council, he’s a retired physician. He’s one of those people that just needles everybody, in a very nice way, he’ll say something and get you thinking so he’s been a real driving force in the inter-agency council at keeping us on track in terms of protecting the children and just going forward and making sure there is that protection for the whole youth...That kind of a community activist so he’s been a real bonus to have on the inter-agency council.”</p> <p>“[Bingo hall meeting] was in advance of [the 2003 by-law]. But it sort of set the direction, the flavour of what the public were willing to consider, that both sides were willing to listen to each other and that ... there was broad public consent.”</p> <p>“Normally we would not be appointed to enforce the smoke-free Ontario act. So we have public health that can do that. So we do joint investigations and inspections and flip a coin who gets it. Money goes to the city if it’s the by-law and to the province if it’s SFOA. So my preference is to write it for the by-law. But there has been a couple that could go either way.”</p>	<p>PH3</p> <p>EO1</p> <p>ME2</p>
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Appendix L – Details about the Sample Size Used in the Longitudinal Survey

The research funder, Canadian Tobacco Control Research Initiative (CTCRI), required the research team to fully explain the rationale for the sample size. Below is the response prepared by the team detailing the sample size proposed and the precision of estimates of the proportions at Wave 1. This communication was from July 15, 2008.

Proposed Sample Size

A. The research team proposed to sample 325 adult smokers and 300 adult non-smokers at the first wave. It is assumed that of these, at least 200 smokers and 225 non-smokers will be retained at the second wave.

B. The sample of non-smokers is an RDD sample, and we assume that it approximates a simple random sample of adult non-smokers in the area. The sample of smokers consists of 175 recruited by RDD and 150 recruited through intercept. It is likely that the retention rate will be smaller for the second group. For the sake of sample size justification, we assume that the sample of 325 adult smokers approximates a simple random sample of adult smokers in the area. (We recognize that the intercept sample is non-random and does in fact over-sample people who frequent the locations of surveying. At the same time, we note that the intercept sample may allow us to reach more younger adults, who are typically harder to reach by telephone.)

Precision of estimates of proportions at Wave 1

C. We use illustrations mainly for the smoker population. The computations for the non-smoker population would be similar.

D. For estimating a proportion close to 50% (the “worst case scenario”), the standard error of estimation would be

$$\sqrt{\frac{1}{n}P(1-P)} = \sqrt{\frac{1}{325}0.5 * 0.5} = 0.028$$

Thus, for a proportion close to 50%, a 95% confidence interval would have half width at most 5.6 percentage points. For a proportion close to 10%, a 95% confidence interval would have half-width about 3.3 percentage points.

E. For a difference in the proportions between smokers and non-smokers, for any characteristic, the standard error of estimation would be at most 0.040 or 4 percentage points.

Power to detect change

F. Power of testing depends on the quantities being estimated, and assumptions about the wave-to-wave variability of responses for an individual, under the hypothesis of no underlying change, and an alternative hypothesis of change. As an example, consider estimating the change between Waves 1 and 2 of the population proportion of smokers who would report smoking at a certain venue. Assume a correlation in responses from Wave 1 to Wave 2 of 0.7. Suppose the baseline population proportion of smokers who do smoke at the venue is 20%. Assuming we have a sample size of 200 smokers responding at both waves, and use a two-sided test of significance at the 5% level, we have power a little more than 80% to detect a decrease in the proportion of 6.0 percentage points, to 14%. If the baseline proportion is 60%, we have at least 80% power to detect a decrease of 7.6 percentage points.

G. Assuming a weaker correlation in responses of 0.5 from Wave 1 to Wave 2, and a baseline proportion of 20%, we have at least 80% power to detect an increase of 8.5 percentage points, or a decrease of 7.4 percentage points. With the same correlation, and a baseline proportion of 60%, we have more than 80% to detect a decrease of 10 percentage points, to 50%.

H. These calculations assume random dropout, and estimation using only those retained from Wave 1 to Wave 2. If the whole data set is used, including the dropouts from Wave 1, then under the same random dropout assumption, precision and power of change analysis would be increased.

I. In this study we do expect to see large changes in proportion from pre- to post-intervention, and thus the sample sizes are expected to be adequate.

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- “First, a bit about patios. Over a dozen other communities in Ontario have joined Kingston in requiring smoke-free patios. Recently, other Canadian cities, in particular four in Alberta -- Banff, Jasper, Calgary and Edmonton -- have made patios smoke-free.*

It's really important to understand why our council did this. During the consultation process in 2002, hundreds of people did delegations, and many business owners waited up to two hours just to give them one message, and that message was - "Please make the bylaw fair and equal; no special arrangements for some businesses and not for others; no exceptions." This is because some businesses have the opportunity to have big patio spaces and others don't. Leaving out patios in our bylaw would have put the latter at a great disadvantage. So they actually asked for it."

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