Smokeless tobacco availability and promotion in Edmonton: Exploring the barriers to and the opportunities for tobacco harm reduction

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Authors: Karyn Heavner, Jia Hu, Carl V. Phillips

Corresponding author:
Carl V. Phillips, MPP, PhD
University of Alberta, School of Public Health
8215 112 St. Suite 215
Edmonton, AB Canada, T6G 2L9
E-mail: cvphilo@gmail.com

Karyn K. Heavner, MSPH, PhD
University of Alberta, School of Public Health
8215 112 St. Suite 215
Edmonton, AB Canada, T6G 2L9
E-mail: karynkh@aol.com

Jia Hu, BA
University of Alberta, School of Public Health
8215 112 St. Suite 215
Edmonton, AB Canada, T6G 2L9
E-mail: jiahu17@gmail.com

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Abstract

Background: Accessible low-risk nicotine products (smokeless tobacco (ST) and pharmaceutical nicotine) and smokers' awareness that these products are safer than cigarettes are crucial for tobacco harm reduction (THR), the substitution of safer nicotine products for cigarettes. This study investigated the availability and onsite promotion of THR products in Edmonton, Alberta (Canada) before and after introduction of a Swedish-style ST product, "du Maurier snus" (dMS), by Imperial Tobacco Canada in September 2007.

Methods: Researchers visited tobacco retailers in August 2007 (n=65) and February-March 2008 to assess changes in the availability, price and promotion of ST products. Round two included a follow-up sample that did not sell dMS (n=23) and 69 stores selling dMS (rollout sample).

Results: All stores sold cigarettes (the highest risk nicotine product). In Round 1, most (82%) stores sold at least one ST product. Stores had more onsite promotion and more prominent displays for cigarettes than ST. dMS displays approximately doubled the size of the ST displays in the rollout sample, increasing the visibility (and potentially the awareness) of THR products.

Conclusions: The introduction of dMS substantially increased point-of-sale visibility of low-risk tobacco products in the Edmonton market, and associated THR information. Unfortunately, the promotion of tobacco products (even those significantly less harmful than cigarettes) is prohibited in Canada and regulatory changes will limit the visibility and availability and increase

the price of ST products. An opportunity to improve Canadian nicotine users' health may be lost if smokers are unaware of safer nicotine products when they purchase cigarettes.

Background

Tobacco harm reduction (THR) is the substitution of less harmful sources of nicotine for cigarettes. Non-smoked nicotine sources -- smokeless tobacco (ST) and pharmaceutical nicotine -- cause approximately 1/100th the mortality risk of smoking because smoke inhalation, the most harmful aspect of tobacco smoking, is eliminated (www.tobaccoharmreduction.org) [1]. Though there are probably some health differences among these product classes, they all have a similar tiny fraction of the risk from smoking, and there is no evidence about which products are slightly less harmful than others. Moist snuff in pouches, often called by its Swedish name, *snus*, is perhaps the most promising for THR because it delivers a similar dose of nicotine as cigarettes (albeit taking somewhat longer to reach a peak dose) and can be used easily and discretely with no spitting. Although smokers in North America are interested in THR there are several significant barriers to switching, including extensive disinformation intended to overstate the health risks of ST and lack of awareness of the availability of low-risk nicotine products [2-7].

Current regulations restrict the availability and promotion of THR products even though promotion of these products to smokers could potentially have a substantial public health benefit. In Canada, the Tobacco Act of 1997 prohibits most promotion of tobacco products (including low-risk products) [8]. Two parts of the provincial regulation, the Alberta Tobacco Reduction Act, affect THR products: As of July 2008, retail displays, advertising and promotion of tobacco products are prohibited and on January 2009 tobacco sales in health care facilities, public post-secondary campuses, pharmacies, and stores that contain a pharmacy will be prohibited [9].

The introduction of new ST products in North America has provided a unique opportunity to educate smokers about THR products. Major cigarette companies have recently launched ST products under well-known brand names, specifically: du Maurier snus (dMS) (Imperial Tobacco Canada Limited (ITC)); Camel Snus (R.J. Reynolds, United States); and Marlboro Snus (Philip Morris, United States). dMS, similarly to the above products, is marketed under the manufacturer's cigarette brand name, though is unique in that it is explicitly marketed as a reduced harm substitute for ITC cigarette customers [10]. dMS was originally priced substantially lower than du Maurier cigarettes but a surtax on small quantities of manufactured tobacco recently increased the tax on dMS from $0.46 to $2.89 per container [11], reducing the likelihood that the manufacturer will maintain the favorable pricing differential. In September of 2007, dMS became available in approximately 230 stores in Edmonton, Canada. ITC supplied retailers with a countertop refrigerated display case (slightly smaller than a filebox sitting on end) to store and highlight dMS, education about the product category and a brochure to distribute to consumers.

Most of the research on the availability, point-of-sale promotion and price of nicotine products in North America has focused on cigarettes [12-18]. This study investigated changes in the availability and onsite promotion of THR products in Edmonton that occurred after the launch of dMS. All studies of social occurrences are necessarily about a particular time and circumstances, but can still be used to extrapolate to the future or other localities or analyze what has been previously observed. In the case of this study, extrapolation to the future of Edmonton

THR is difficult due to two major policy changes, the change in restrictions on point-of-sale displays and the huge tax increase on ST products. These changes create a discontinuity such that lessons from observations in 2007 and early 2008 may be of little value for the present. However, the observations still serve the practical purposes of recording past events and offering suggestions about future efforts in jurisdictions where the government has not so effectively impeded THR.

Methods

A list of all retailers (n=942) in Edmonton with a tobacco license was obtained from the city of Edmonton in June 2007. Five residential census tracts (population>=2,000) were randomly selected from each of five geographic sections of the city. The facilities included gas stations, other convenience stores, pharmacies, grocery stores, hospitality locations, and other locations (mostly specialty tobacco shops). One of each type, was randomly selected from each census tract wherever possible (not all types were present in each census tract). Hospitality locations were excluded from the analysis because many only had cigarettes vending machines and few local consumers would actively go there to make purchases. Nineteen of the 84 retailers were excluded because they sold no tobacco products, were closed or could not be located. The remaining Round 1 sample of 65 stores was analyzed in this study and a random sample of 32 (~50%) was selected for round 2 (February-March 2008). Nine stores sold dMS and were

grouped with a random sample of 60 stores participating in the product rollout for a total of 92 retailers in the Round 2 sample.

Whenever possible two researchers visited each store together and completed a data collection form after leaving the store. During Round 1 (August 2007) and in stores in the Round 2 sample that were not part of the rollout, the researchers asked the retailers about the availability and price of ST products if this information was not displayed. This was not done in stores selling dMS because interacting with the staff might have biased the results of other evaluation activities. The researchers noted the availability and price of ST products and the location and prominence of tobacco products; and the presence of point-of-sale promotion for tobacco products. In Round 2, information about the location, prominence and promotion of dMS was also collected (additional changes in data collection are described in the results and discussion). The Round 2 sample was stratified by participation in the dMS rollout and compared to the Round 1 sample to investigate possible changes in ST availability and promotion besides those related to dMS. SAS version 9.1 (SAS Institute Inc., Cary, North Carolina, USA) was used for all data analysis.

Although two of the four researchers collected data during both rounds, some of these measures are subjective and prone to inconsistent classification. In addition, misclassification may have resulted from incorrect signs, products that were not visible or staff who were not knowledgeable about the products and misinformed the researchers. However, this data

collection likely replicates the information that would be available to smokers seeking to purchase safer nicotine products.

Results and discussion

All of the stores sold cigarettes and most sold at least one ST product. The availability, location, prominence and promotion of different nicotine products are displayed in Table 1. The most common ST product sold during Round 1 was loose moist snuff (often mistakenly called chewing tobacco by retailers) with the most common brands, Skoal and Copenhagen Long Cut, each sold in 77% of stores. Loose snuff is preferred by some tobacco users, and has the same low risk compared to smoking as do "snus" products, but may be less promising for THR than sachet-style moist snuff products because it is messier and usually requires spitting. Skoal Bandits, the most common sachet-style product before the dMS rollout (and possibly after by a small margin), were available in 29% of stores.

Pharmaceutical nicotine was available in several stores in the follow-up sample but fewer stores in the rollout sample. Differences between these two samples are likely due to the predominance of convenience stores (where pharmaceutical nicotine products cannot be sold) in the rollout sample. The number of stores selling both tobacco products and pharmaceutical nicotine will dramatically decrease by 2009, limiting smokers' opportunities to purchase lower risk products when they are shopping for cigarettes. Approximately 100 of the 942 outlets in the

Round 1 sampling frame will be prohibited from selling tobacco products as of January 2009 because they are pharmacies or stores with a pharmacy. Thus, more smokers will go to convenience stores or specialty tobacco shops to purchase cigarettes. These stores do not sell pharmaceutical nicotine products in Alberta and, and ST will no longer be visible in stores, so smokers will not have a visual reminder that low-risk nicotine products exist when they purchase cigarettes. This seems likely to decrease the likelihood of them quitting smoking.

Pricing satchet-style ST products below the price of cigarettes might have induced some smokers to switch. When the study was conducted ST products were less expensive than premium cigarette brands. dMS was more expensive (per package) than other ST products (although there was a wide range in the prices).

Cigarette displays were larger and far more prominent than ST displays (Figure 1). In Round 1 the ST displays were located within the cigarette display in most (70%) stores and the vast majority of the tobacco display consisted of cigarettes. In many stores, ST was difficult to find although cigarettes were easy to find. When Round 2 was conducted, the visibility and prominence of THR products had increased because of dMS. The dMS refrigerator approximately doubled the amount of space in the tobacco displays devoted to THR products and was prominently placed in front of or beside the clerk in most (81%) stores. The refrigerator has a glass front through which consumers may see the product or may be turned so that the product is concealed from customers (which was required as of July 2008).

Until the dMS rollout, people purchasing cigarettes usually did not have a prominent visual reminder of other nicotine products. Other ST products were usually part of the cigarette display or in countertop displays that were lost in the visual cacophony, and contained products that most cigarette consumers already "knew" they were not interested in, and therefore likely did not attract attention. As of July 2008, cigarettes and ST displays were concealed, though smokers still know where to find cigarettes, of course. As a result, smokers who might have been introduced to lower risk nicotine products when purchasing cigarettes will have no difficulty purchasing cigarettes but are much less likely to learn of the possibility of trying lower risk products.

Conclusion

When advertising is restricted, point-of-sale is one of the few opportunities for THR education, but new regulations make even this virtually impossible in Alberta. Restrictions on communications to consumers will likely further cement cigarette brand loyalty, a well-established phenomenon, since it is difficult to encourage consumers to switch brands; for similar reasons it will presumably prevent switching to much lower risk products.

A regulation to reduce the visibility and prominence of the highest risk tobacco products (cigarettes) but allow displays of low risk nicotine products, would increase the relative prominence of the latter. Alberta avoided this pro-health approach in favor of an anti-tobacco

approach which effectively locks-in the current differential awareness of cigarettes, including where to buy them and how to use them (near-100% awareness), and of THR products (low awareness).

ITC attempted to distinguish dMS from other ST. It marketed it as a harm reduction product and focused on differences in manufacturing and product chemistry compared to existing popular products. While there is no evidence that these differences have any health implications, it appears that the claims play well with consumers who have been misled into believing that older established products pose a substantial health risk. Consumers seem more amenable to being told the new product is different rather than that they are wrong about existing products. ITC also employed brand extension, using a major brand name of the cigarettes they were trying to switch consumers away from. This is a common marketing strategy in other industries and represents a clear commitment by the manufacturer. Strangely, this promising pro-health strategy has been harshly criticized by anti-tobacco activists; some claim it was done to increase the market share of du Maurier cigarettes, though those critics have never proposed a mechanism through which this might happen.

Despite ITC's commitment to marketing harm reduction, however, the legal changes that took place after ITC planned the rollout create a huge barrier to making the product line profitable. ITC has indicated that they will maintain the product line [11] but it is easy to imagine that a costly product line will eventually be discontinued despite a commitment to harm reduction. Even if dMS remains available, the trend toward making low-risk sources of nicotine

more visible and affordable has effectively been reversed, and presumably this has doomed many Edmonton smokers to continue to smoke rather than quitting by switching to a low-risk alternative.

List of abbreviations

ITC – Imperial Tobacco Canada

THR – Tobacco harm reduction

ST – Smokeless tobacco

dMS – du Maurier snus

Competing interests

The authors are interested in encouraging tobacco harm reduction (reducing the morbidity and mortality caused by tobacco use by encouraging smokers to switch to smokeless tobacco and other low risk sources of nicotine). As a result, they have an interest in designing research that explores the accessibility of tobacco harm reduction products. In addition to this actual substantial interest, the authors also have what some mistakenly consider to be a more important conflict of interest, funding: Dr. Phillips and his research group (including Dr. Heavner and Mr. Hu) are partially supported by an unrestricted (completely hands-off) grant to the University of Alberta from U.S. Smokeless Tobacco Company. The grantor is unaware of this manuscript, and thus had no scientific input or other influence on it. Dr. Heavner owns a small amount of stock in Johnson and Johnson. Unlike many authors on related topics, Dr. Phillips attempts to be transparent in his dealings with parties interested in the worldly results: he has consulted for U.S.

Smokeless Tobacco Company in the context of product liability litigation, is a member of British American Tobacco's External Scientific Panel, has other productive conversations with people in corporations, is involved with the harm-reduction advocacy community, and is heavily involved with those who are trying to improve the conduct of epidemiology.

Authors' contributions

KH and JH collected the data with the assistance of other members of Dr. Phillip's research group. CVP supervised data collection and analysis. KH and JH conducted the data analysis. All authors contributed to writing the manuscript and have read and approved the final manuscript.

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Table 1: Availability visibility prominence and promotion of nicotine products

	Round 1 sample (n=65)		Round 2 sample* Follow up (n=23)		Rollout (n=69)	
	n	**%**	**n**	**%**	**n**	**%**
Availability						
# brands of ST						
0	12	18%	8	35%	0	0%
1	6	9%	3	13%	2	3%
2	38	58%	11	48%	8	12%
3	9	14%	1	4%	46	67%
4	0	0%	0	0%	12	17%
5	0	0%	0	0%	1	1%
# brands of sachet style ST products						
0	42	65%	16	70%	1	1%
1	20	31%	7	30%	25	36%
2	3	5%	0	0%	40	58%
3	0	0%	0	0%	3	4%
Sell pharmaceutical nicotine products†						
Nicotine gum	NA		7	30%	2	3%
Nicotine patches	NA		6	26%	2	3%
Other nicotine products (inhalers, lozenges)	NA		5	22%	1	1%
Price	**Median (range)**		**Median (range)**		**Median (range)**	
Skoal Bandits	\$5.29 (\$4.69-\$7.79)		\$5.29 (\$4.65-\$6.92)		\$5.09 (\$4.65-\$8.59)	
Skoal Long cut	\$7.29 (\$5.99-\$8.05)		\$7.31 (\$6.49-\$9.09)		\$7.24 (\$5.50-\$8.59)	
Copenhagen long cut	\$7.30 (\$6.39-\$8.95)		\$7.49 (\$6.99-\$9.09)		\$7.49 (\$5.50-\$8.48)	
Du Maurier snus	NA		NA		\$7.55 (\$6.60-\$8.89)	
Size and prominence of the tobacco display	**n**	**%**	**n**	**%**	**n**	**%**
% of the display near the cash register that is made up of tobacco products						
<25%	5	8%	3	13%	1	1%

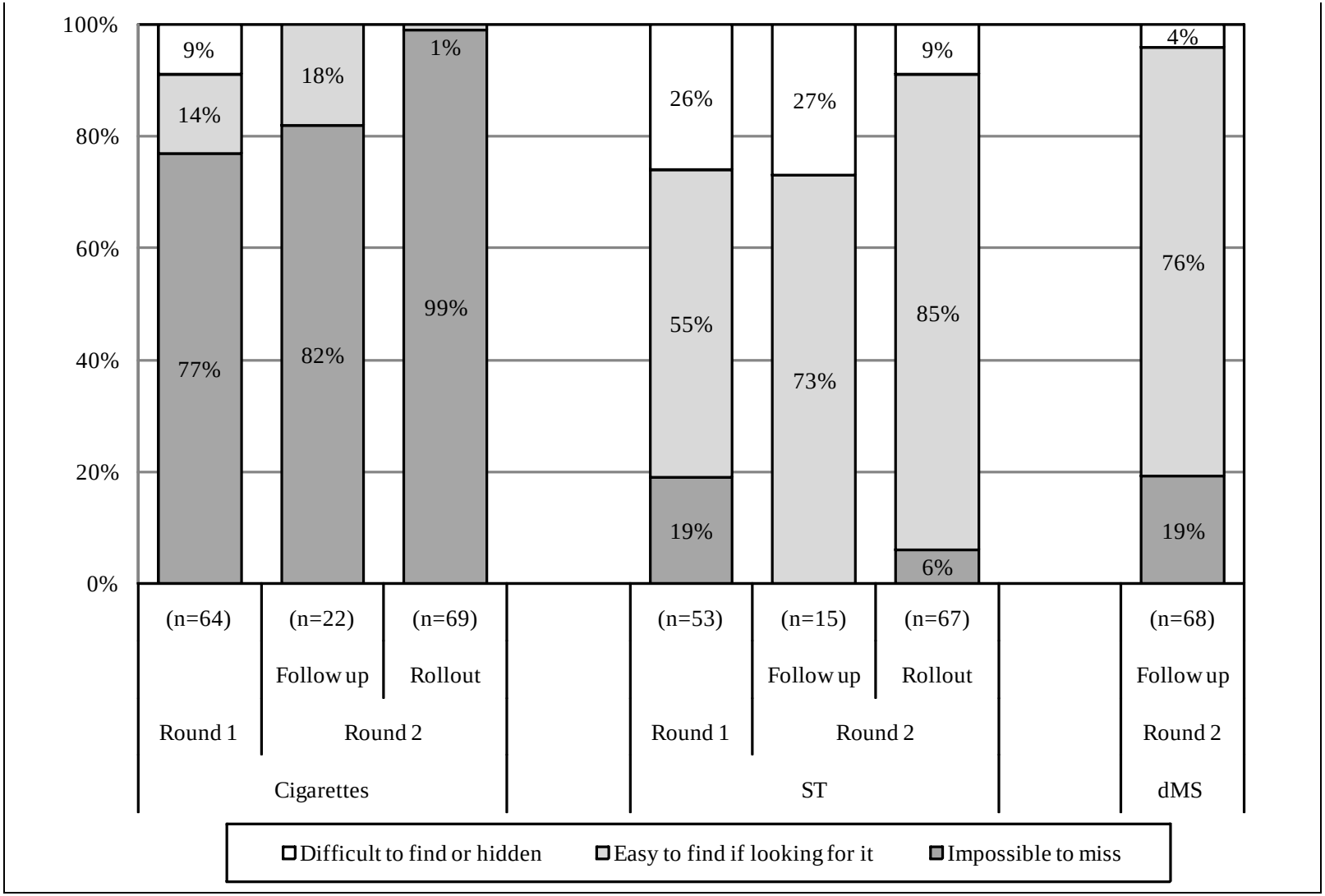
Table 1: Availability visibility prominence and promotion of nicotine products

	Round 1 sample (n=65)		Round 2 sample* Follow up (n=23)		Rollout (n=69)	
	n	**%**	**n**	**%**	**n**	**%**
25-49%	13	20%	4	17%	5	7%
50-74%	21	32%	8	35%	51	74%
>=75%	26	40%	8	35%	12	17%
Prominence of ST display relative to the cigarette display						
Not visible	4	8%	2	13%	0	0%
Less prominent	42	79%	12	80%	69	100%
Equally prominent	0	0%	1	7%	0	0%
More prominent	7	13%	0	0%	0	0%
Advertisements or signs for:						
Cigarettes	19	29%	7	30%	63	91%
du Maurier Snus	NA		NA		63	91%
Other ST	1	2%	0	0%	0	0%
Pharmaceutical nicotine products	NA		0	0%	0	0%

* 9 retailers that were in the round 1 sample and sold Du Maurier snus were analyzed with the rollout sample.

† During round 1, only the availability of pharmaceutical nicotine products in the vicinity of the tobacco products was assessed (n=3, 5% of stores place nicotine gum near tobacco products and 1=1, 2% of stores placed nicotine patches near tobacco products).

Figure 1: Visibility of tobacco products



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