



March 2019

## Cessation Treatment Research: Knowledge Synthesis and Preliminary Study Findings

### Background

OTRU continues to generate new knowledge to inform cessation policies and practices through the Research on Advancing Cessation Treatment (REACT) study. This newsletter highlights the findings from the ongoing knowledge synthesis, baseline survey for the Long-Term Engagement Randomized Study, and analyses on health care utilization before and after the use of cessation services.

### Highlights

- 29 systematic reviews and 31 journal articles related to cessation were identified
- 1,631 current and former smokers were recruited for the Long-Term Engagement Randomized Study

### Knowledge Synthesis

OTRU monitors the scientific literature for new research on cessation, identifying authoritative systematic reviews on cessation interventions and journal articles by Canadian researchers for key information relevant to Canadian audiences. In 2018-19, we identified 29 systematic reviews and 31 journal articles related to cessation. These articles included topics like behavioural interventions, relapse, pregnancy, plain packaging, substance use and e-health. Highlights from three select reviews include:

1. Web-based and mobile health smoking cessation interventions were found to moderately increase smoking abstinence<sup>1</sup>
2. Exposure to plain packaging was found to increase quit intentions, and increase negative attitudes towards smoking and smoking initiation<sup>2</sup>
3. Pregnant women who used nicotine replacement therapy instead of smoking cigarettes were found to have lower nicotine exposure<sup>3</sup>



## Long-Term Engagement Randomized Study

OTRU's Long-Term Engagement Randomized Study completed recruitment in March 2018. The study assesses the effectiveness of long-term engagement in achieving positive cessation outcomes (e.g., increased intentions to quit, quit attempts, referral to cessation services and long-term abstinence). Overall, 1631 current and former smokers participated in the study (816 in the intervention group and 815 in the control group). Following recruitment, intervention group participants received 11 monthly emails with links to cessation services, while the control group did not receive any emails. Below is a summary of the baseline characteristics reported by all study participants. Details are provided in [Table 1](#) (page 4).

Participants in the study were, on average, 49 years of age. The majority of participants were female (58%), White (88%), born Canadian citizens (89%), had some post-secondary education (61%), were employed full- or part-time (54%), had a family income less than \$80,000 (71%), and were living in a detached or an attached house (62%).

The majority of participants smoked daily, almost daily or occasionally (62%), while 32% did not smoke "at all". Among current non-daily smokers, 98% had smoked daily in the past. Almost all participants (99%) had smoked 100 or more cigarettes in their lifetime.

Among current non-daily and "not at all" smokers, 30% smoked their last cigarette within a month of completing the baseline survey, and 70% smoked their last cigarette a month or more before the baseline survey.

On average, in the 30 days prior to the baseline survey:

- Current non-daily smokers who smoked their last cigarette within a month smoked 15.6 days out of 30
- Current daily and non-daily smokers smoked 16.1 cigarettes/day on days they smoked
- "Not at all" smokers smoked 19.6 cigarettes/day on days they had smoked in the past

The majority (70%) of current smokers smoked their first cigarette in the morning within 30 minutes after waking. Eighty-one percent (81%) of participants perceived themselves as somewhat to very addicted to cigarettes.



Eighteen percent (18%) of participants reported using other tobacco products in the past 30 days, mainly e-cigarettes (12%). Overall, 28% of participants reported using marijuana in the past 30 days. Among those participants, 43% reported using marijuana and tobacco at the same time.

On average, participants made 6.9 quit attempts in their lifetime. Among participants who smoked in the past 30 days, 54% had a period of time where they quit smoking and remained smoke-free (not smoking even a puff) in the last 12 months. Among current smokers, the majority (77%) planned to quit smoking within the next month or next 6 months; only a small proportion (3%) did not plan to quit smoking.

There were no significant differences in sociodemographic characteristics, smoking-related variables, and other substance use variables between the intervention and control groups, meaning the randomization worked well.

A 12-month follow-up survey of all Long-Term Engagement Randomized Study participants is currently being conducted (over 65% of participants have completed the survey to date). Results from the baseline and follow-up survey will be presented in a future Project News installment.

## Health Care Utilization and Health Status Study

OTRU and CAMH researchers continue to conduct analyses to characterize health status and healthcare utilization patterns of smokers in Ontario using health administrative data linked to a clinical sample of smokers (Smoking Treatment for Ontario Patients (STOP)—150,000 smokers) and a population sample of smokers (Ontario Tobacco Survey (OTS)—4,500 smokers).

Preliminary findings are forthcoming.

**Authors:** Jolene Dubray, Bo Zhang

<sup>1</sup> Do H, Tran B, Pham Q, Nguyen L, Tran T, Latkin C, et al. Which eHealth interventions are most effective for smoking cessation? A systematic review. *Patient Preference and Adherence* 2018 Oct; 12:2065-84.

<sup>2</sup> Lilic N, Stretton M, Prakash M. How effective is the plain packaging of tobacco policy on rates of intention to quit smoking and changing attitudes to smoking? *ANZ Journal of Surgery* 2018 Sept;88(9):825-830.

<sup>3</sup> Hickson C, Lewis S, Campbell KA, Cooper S, Berlin I, Claire R, et al. Comparison of nicotine exposure during pregnancy when smoking and abstinent with nicotine replacement therapy: systematic review and meta-analysis. *Addiction* 2019 Mar;114(3):406-424.



# PROJECT NEWS

**Table 1: Baseline Smoking Characteristics of Long-Term Engagement Randomized Study Participants (n=1,631)**

Characteristic	Overall (n=1631)	Intervention (n=816)	Control (n=815)
	% or mean (SD)		
Current smoking status			
Daily	53.7	53.7	53.7
Almost daily	5.7	5.0	6.4
Occasionally	8.8	8.3	9.3
Not at all	31.8	33.0	30.6
Ever daily smoking among current non-daily smokers	97.9	97.9	97.9
Smoked 100+ cigarettes/lifetime	99.1	99.1	99.1
Last cigarette smoked among occasional and “not at all” smokers			
<1 week ago	17.2	17.8	16.6
1 week - <1 month ago	13.1	11.9	14.5
1-6 months ago	29.9	28.8	31.1
7-11 months ago	10.1	11.0	9.2
1-2 years ago	24.6	24.6	24.6
2+ years ago	5.0	5.9	4.0
Days smoked in the last 30 days among current non-daily smokers whose last cigarette smoked within a month – mean (SD)	15.6 (9.5)	15.3 (9.3)	15.9 (9.6)
Current number of cigarettes smoked per day among current smokers (daily, almost daily and occasional) – mean (SD)	16.1 (10.2)	16.1 (10.6)	16.1 (9.8)
Past number of cigarettes smoked per day among current non-smokers (“not at all”) - mean (SD)	19.6 (9.9)	19.1 (10.3)	20.0 (9.4)
Time to the first cigarette			
<5 min	30.6	32.0	29.2
6-30 min	39.2	37.5	40.9
31-60 min	15.9	16.2	15.6
>60 min	14.3	14.3	14.3
Current self-perceived addiction to cigarettes			
Not at all addicted	18.8	19.4	18.2
Somewhat addicted	28.9	29.6	28.1
Very addicted	52.4	51.0	53.7
Using other tobacco products in the past 30 days	18.1	18.3	18.0
Using e-cigarettes	12.3	12.5	12.0
Using cigars	4.0	4.3	3.7
Using waterpipe	1.7	1.2	2.1
Using pipes	1.0	1.1	0.9
Using marijuana in the past 30 days	28.0	26.8	29.1
Using marijuana with tobacco at the same time in the past 30 days among those who used marijuana in the past 30 days	43.1	45.4	40.9
Number of serious quit attempts ever made	6.9 (28.0)	6.7 (33.8)	7.0 (20.8)
Had a period of time quit smoking and remaining smoke-free (not smoking even a puff) in the last 12 months among those who smoked in the last 30 days	54.3	54.3	54.4
Quit intention among current (daily, almost daily and occasional) smokers			
Within the next month	34.1	33.5	34.6
Within the next 6 months	43.0	42.2	43.7
Sometime in the future beyond 6 months	20.2	21.6	18.8
I am not planning to quit	2.8	2.7	2.9