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Outcomes of a Tailored Smoking Cessation Program for Individuals with a Substance Use and/or Psychiatric Disorder

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OUTCOMES OF A TAILORED SMOKING CESSATION PROGRAM FOR INDIVIDUALS WITH A SUBSTANCE USE AND/OR PSYCHIATRIC DISORDER



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Declaration of competing interests and Acknowledgements

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a maker of smoking cessation medications



a governmental service for individuals with substance use and psychiatric disorders

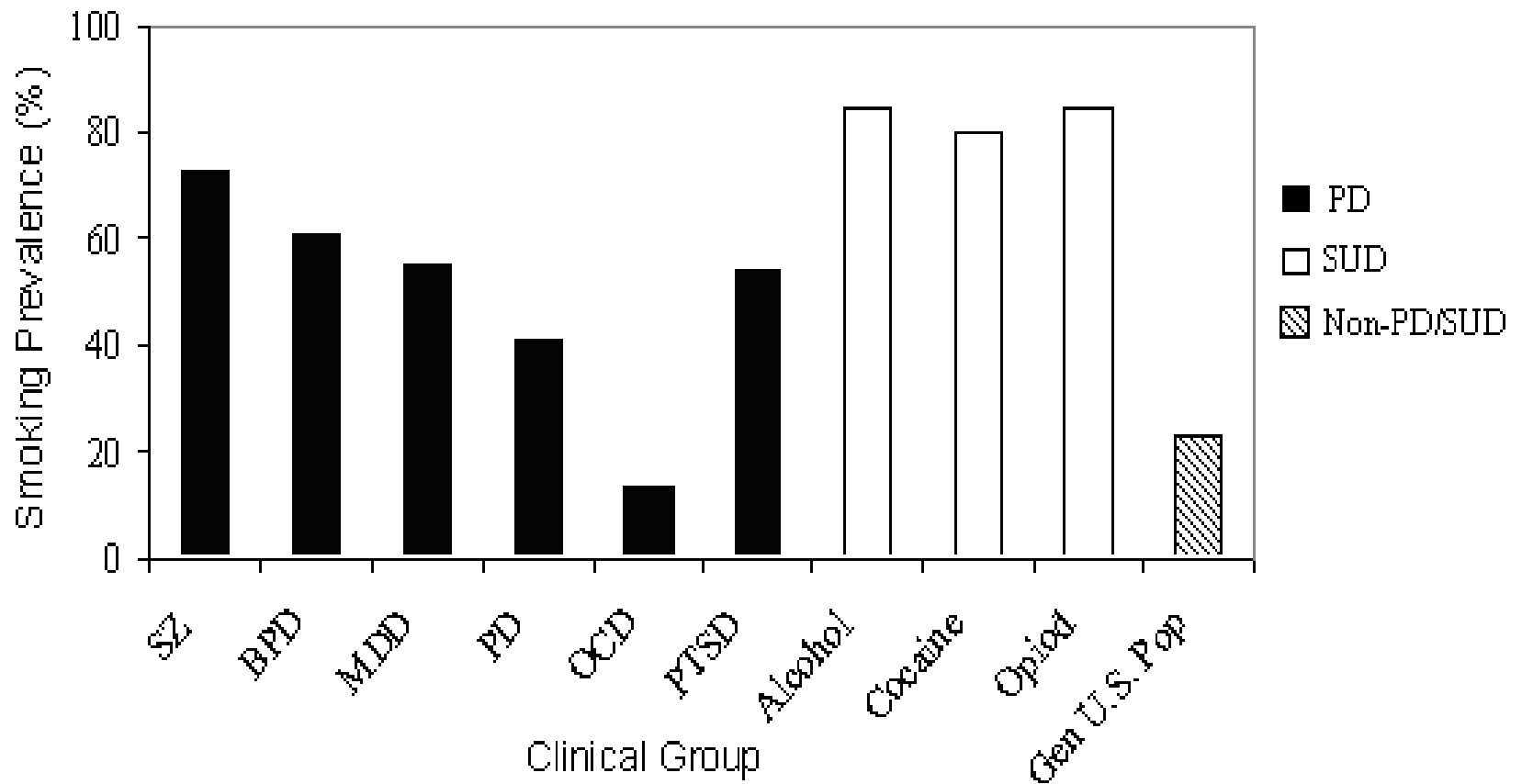
This study was made possible through a financial contribution from Health Canada. The views expressed herein do not necessarily represent the views of Health Canada.



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SIGNIFICANCE



Kalman, Morissette and George (2005), Am. J. Addict., 14: 106-123

Arguments for Not Providing Tobacco Treatment....

“these patients don’t want to quit”

- 80% of participants in a methadone maintenance program and 75% of participants in an alcohol abuse program endorsed a desire to quit (*Richter KP et al., 2001; Ellingstad TP et al, 1999*)
- In a review of 9 studies of motivation to quit smoking among individuals with psychiatric disorders at least 50% are contemplating cessation (*Siru, Hulse & Tait, 2009*).

“these patients will relapse (to other substances) if they try to quit”

- Smoking cessation efforts can ENHANCE rather than compromise long term sobriety (*Prochaska JJ et al, 2004*).

“these patients are unable to quit”

- Meta-analysis (n = 19 studies) of smoking cessation among individuals in addiction treatment and recovery found increased cessation at end of 12 weeks treatment (BUT NO SIGNIFICANT EFFECT AT 6 MONTHS!) (*Prochaska JJ et al, 2004*).
- Recent study found end-of-treatment smoking cessation rates of 20% among individuals with psychiatric disorders accessing outpatient tobacco treatment program-Longer duration of treatment significantly predicted successful cessation.

Program Description

- The Tobacco Dependence Clinic (TDC) is a program that provides **behavioural counselling** and up to **6-7months** of **no-cost pharmacotherapy** for clients through VCH Addiction Services
- Program is run with a team of nurses, counsellors, respiratory therapists, and a physician.
- Currently in 7 Addictions services located in community health centres in Vancouver.

Eligibility:

- 19 years or older
- Tobacco dependent
- Have a history of substance use disorder and/or mental illness
- Financially disadvantaged



Combination Pharmacotherapy

Nicotine Replacement Therapy



Patch



Gum



Lozenge



Inhaler

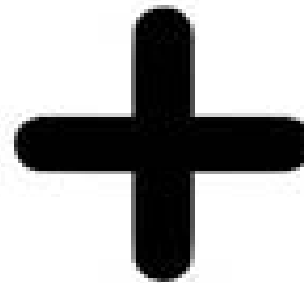
Oral Medications



Zyban



Champix

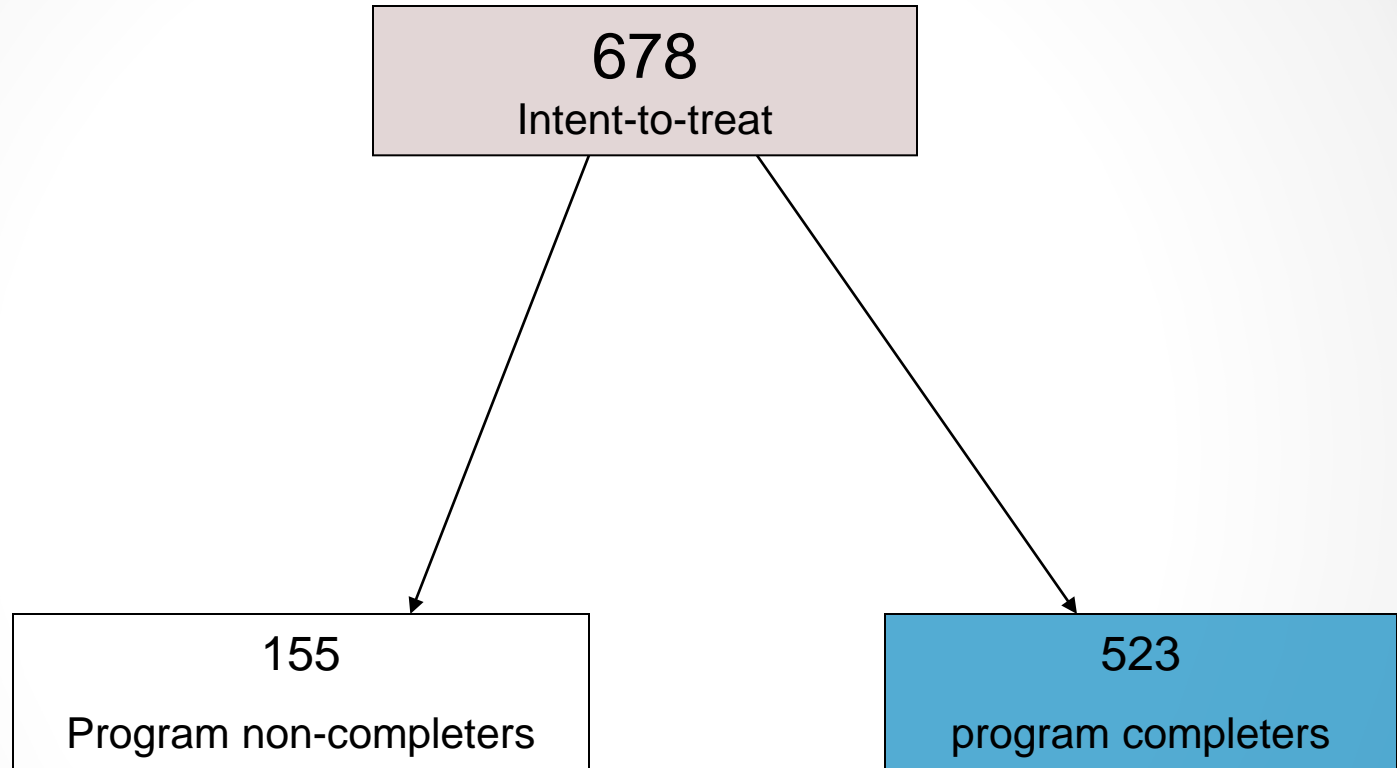


Program philosophy: Quitting smoking is a process and not an event

Specific Aims

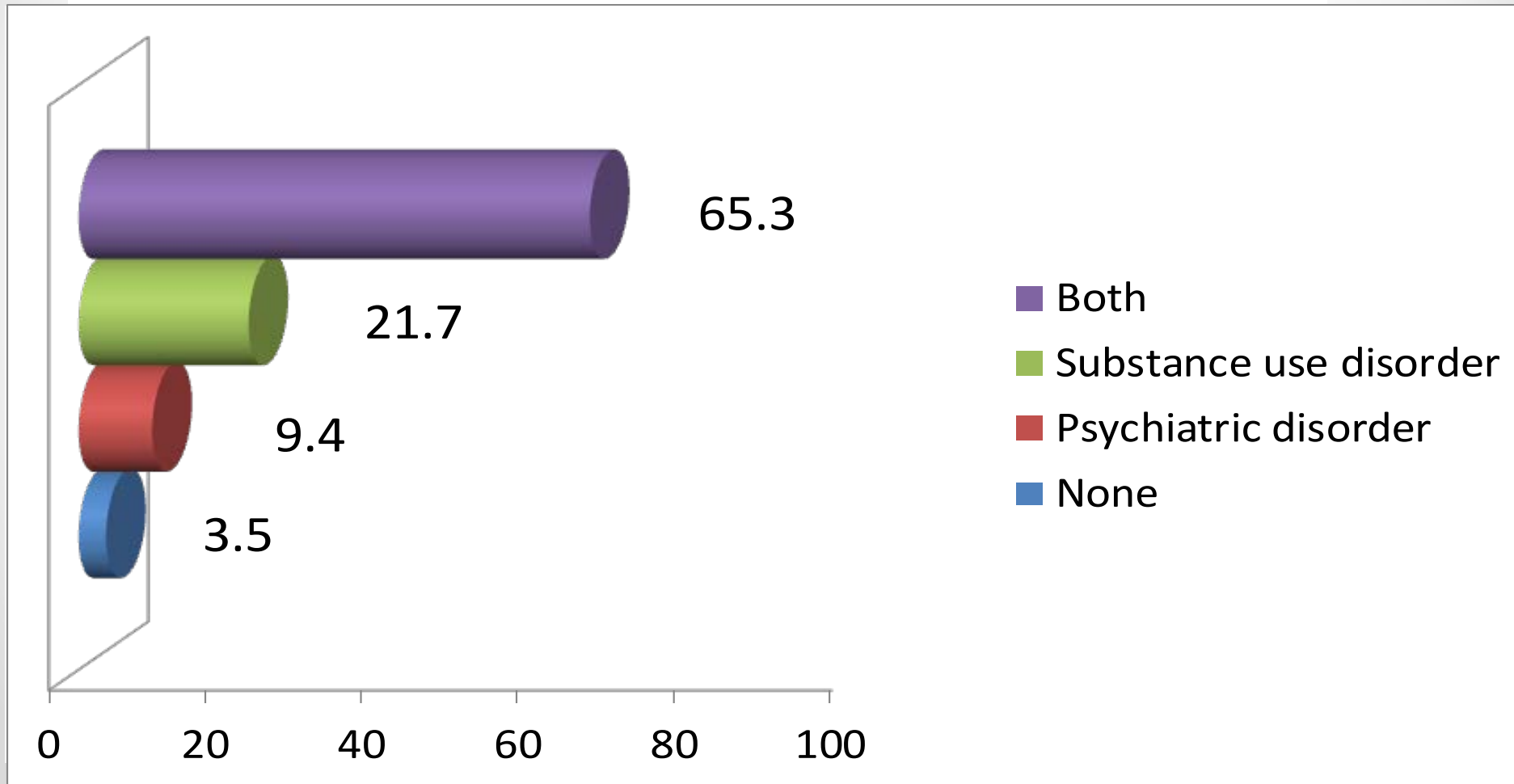
- To assess **program completion** and **smoking cessation** rates at end-of-treatment
- To examine **predictors** of successful program completion and smoking cessation

Sample for Evaluation



- Analysis is based on a retrospective chart review of participants in the TDC program (between Sept 2007 and Dec, 2011) from 7 clinics, in Vancouver, Canada
- Smoking cessation: 7-day point-prevalence of abstinence at end of treatment (i.e., anytime between 8 weeks to 26 weeks) verified by expired CO levels

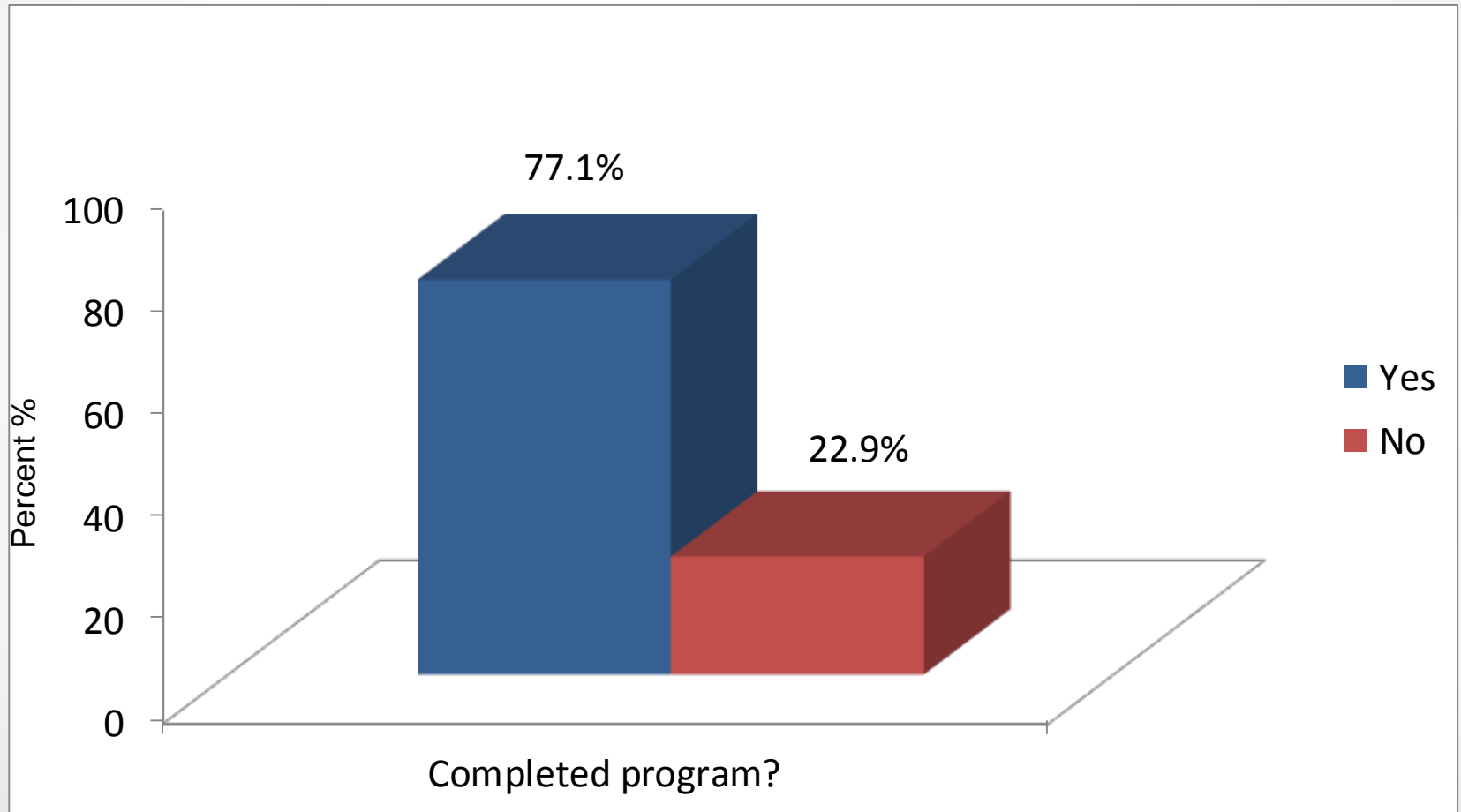
Substance Use Disorder & Psychiatric Disorder History (N = 678)



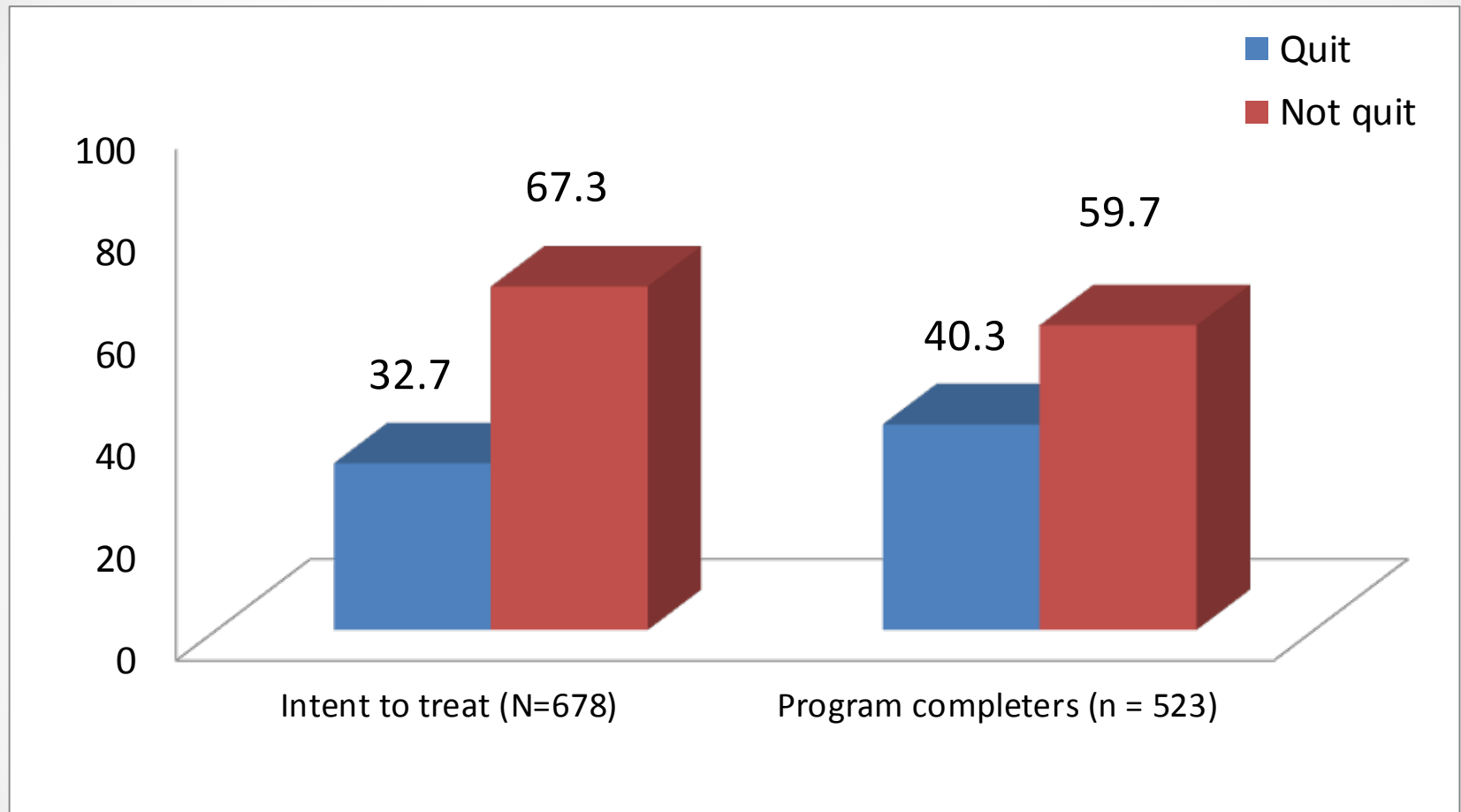
Sample Characteristics (N = 678, 57% male)

	Mean	Stand. Dev.
Age of participant (years)	48.0	11.0
Age at smoking initiation (years)	15.1	5.8
Importance of quitting (scale of 0 'low' to 10 'high')	9.0	1.4
Confidence in quitting (scale of 0 'low' to 10 'high')	7.2	2.4
Number of cigarettes smoked per day	20.4	10.3
Fagerstrom Test for Nicotine Dependence (scale of 0 'low' to 10 'high')	6.0	2.0
CO level at baseline (ppm)	20.9	14.2

Program Completion (n = 523/678)

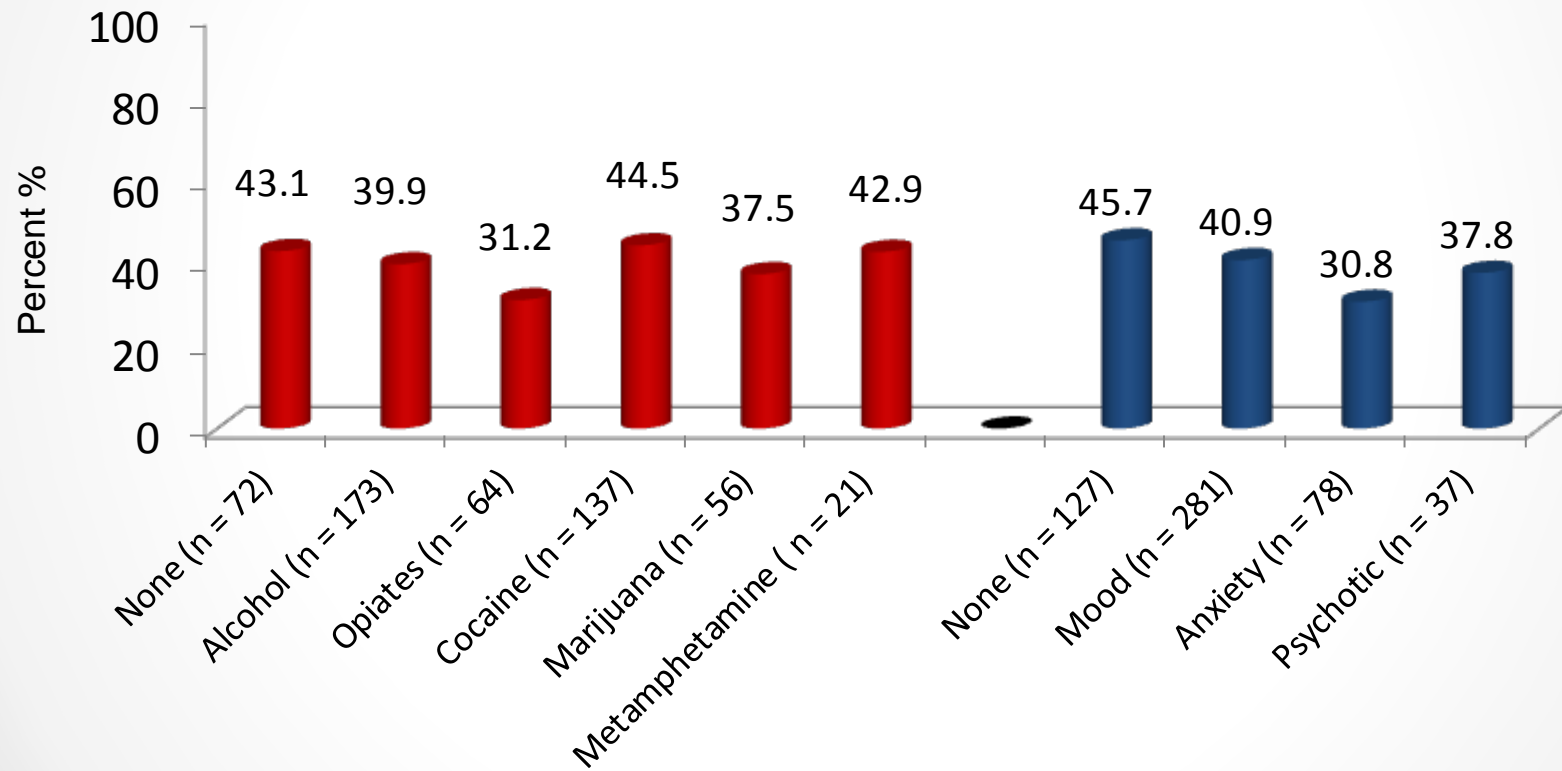


Smoking Cessation* Outcomes at end-of-treatment



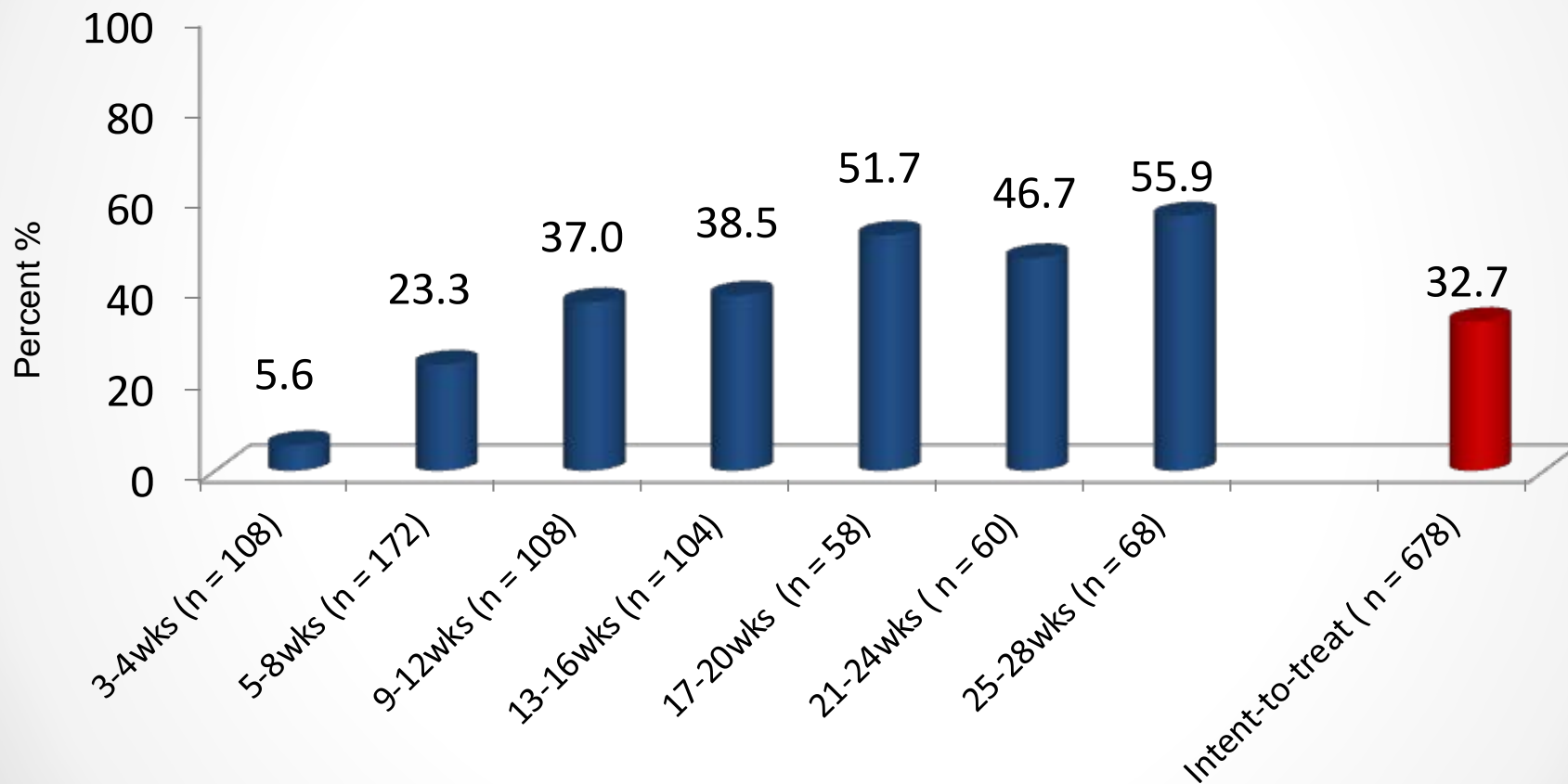
*Smoking cessation at end-of-treatment (i.e., anytime between 8 weeks to 26 weeks) verified by expired CO levels

Smoking cessation by SUD and PD among program completers (n = 523)*



* No statistically significant differences between groups

Smoking Cessation by length of stay in the program (n = 678)*



* Statistically significant differences between groups

Multivariate predictors^a of program completion (n = 674)

Predictors	Odds Ratio	95%CI
Gender		
Male (referent)	1.0	-
Female	1.78**	1.19-2.65
Age	1.03**	1.01-1.05

Hosmer-Lemeshow goodness-of-fit: $\chi^2 = 1.80$ (DF=8), $p = .986$

- a. Employing a two-step model building process in which variables associated with smoking cessation (at $\alpha < 1.0$) in the unadjusted analyses are included in a second-step for adjusted analyses. Only variables which were significantly predictive of smoking cessation in the final adjusted multivariate model are shown.

* = $p < .05$, ** = $p < .001$, *** = $p < .001$

Multivariate predictors^a of smoking cessation among program completers at end of treatment (n = 494)

Predictors	Odds Ratio	95%CI
History of Psychiatric Disorder		
None (referent)	1.0	-
Mood disorder	.90	.57-1.42
Anxiety disorder	.53*	.29-1.00
Psychotic disorder	.69	.31-1.57
FTND at baseline	.89*	.80-1.00
Number of Visits to the TDC	1.07***	1.04-1.10

Hosmer-Lemeshow goodness-of-fit: $\chi^2 = 3.45$ (DF=8), $p = .903$

- a. Employing a two-step model building process in which variables associated with smoking cessation (at alpha < 1.0) in the unadjusted analyses are included in a second-step for adjusted analyses. Only variables which were significantly predictive of smoking cessation in the final adjusted multivariate model are shown.

* = $p < .05$, ** = $p < .001$, *** = $p < .001$

Conclusions

- *The Tobacco Dependence Clinic provides an innovative model of tailored tobacco dependence treatment which combines **behavioural counselling** with **no-cost pharmacotherapy** for individuals with a history of substance use and/or psychiatric disorders for up to **6 months**.*
- *With intensive tobacco dependence treatment provided within Mental Health and Addictions services, individuals with a history of substance use and/or psychiatric disorders are able to achieve smoking abstinence.*



Research Article

Open Access

Smoking Cessation Outcomes among Individuals with Substance Use and/or Psychiatric Disorders

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Abstract

Objectives: The population of individuals with substance use (SUD) and/or psychiatric disorders (PD) has a high prevalence of smoking and a consequent increase in tobacco-related morbidity and mortality when compared to the general population. The aim of this study is to examine the outcomes of a program in a real-life setting which takes a tailored approach to smoking cessation among individuals with SUD and/or PD.

Methods: A retrospective chart review of tailored tobacco dependence treatment was performed on individuals with histories of SUD and/or PD attending a Tobacco Dependence Clinic (TDC) program in Vancouver, British Columbia, Canada. Participants of the TDC received a combination of behavioural counselling and pharmacotherapy for smoking cessation. Data from 540 participants enrolled in the TDC between September 2007 and May 2011 was reviewed. Outcome measures included seven-day point-prevalence abstinence (validated by expired carbon monoxide) and program completion rates.

Results: For individuals who completed the program the abstinence rate was 41.1% (167/406). Significant predictors of successful smoking cessation were: a) a lower expired carbon monoxide level at baseline (OR=.98, 95%CI=.96-1.00), and b) a longer duration of treatment (OR=1.09, 95%CI=1.05-1.12). Significant predictors of program completion were: a) being female (OR=1.86, 95%CI=1.21-2.87).

Discussion: Tailored smoking cessation among individuals with SUD and/or PD yields modest end-of-treatment smoking cessation rates and can be an effective approach to reducing the burden of tobacco use in substance use and mental health treatment settings.