Ontario's *Back on Track* Remedial Education Program for Impaired Drivers:

Focusing on Evaluation

camh

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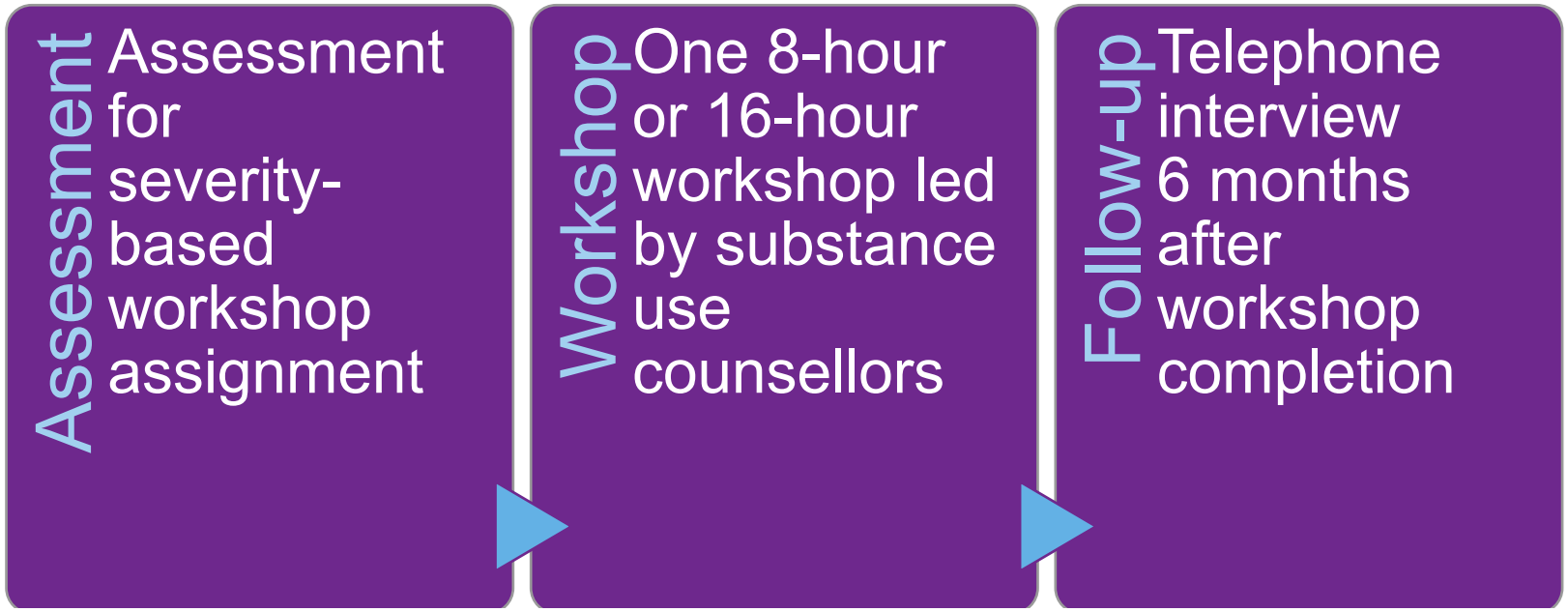
Back on Track (BOT)

- Ontario's remedial education program for drivers who have committed an impaired driving offence
- CAMH developed and has managed BOT since 1998
- Required for full reinstatement of driving privileges after suspension
- Currently offered at 28 sites across the province

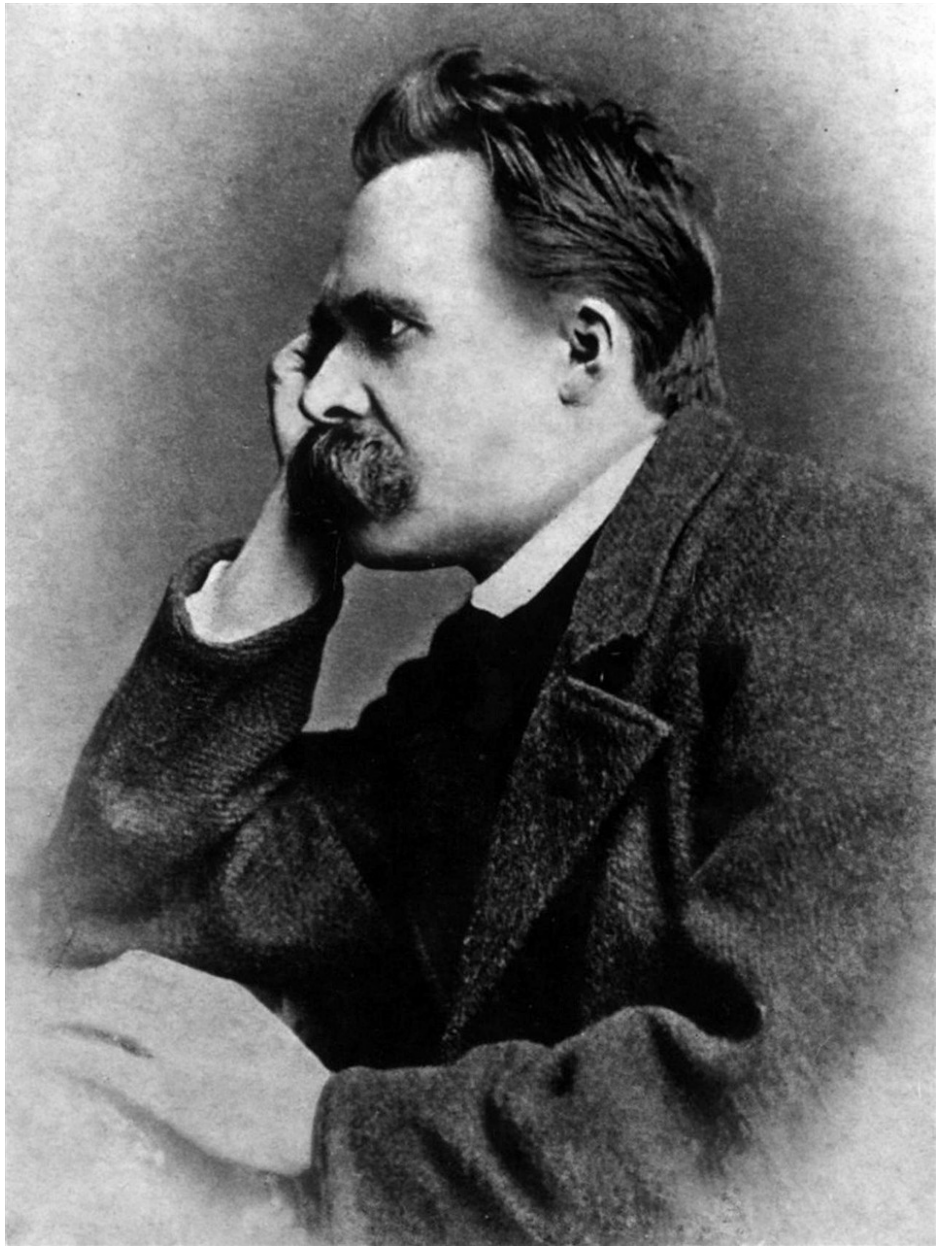


- The 3 components of BOT can be completed in less than 1 year.

Friedrich Nietzsche

(1844-1900)

“It is only through evaluation that value exists.”



Back on Track (BOT) – Data Collected

Assessment

Substance Use

In the preceding 90 days:

- # of drinks per drinking day
- # of drinking days
- # of days using other drugs (eg, cannabis, prescription opioids)

Problems Related to Substance Use

- Physical health, cognitive abilities, mood, relationships, aggressive behaviour, school or work, legal, and financial
- Rated on 3- or 4-point scale, with item-specific labels

Back on Track (BOT) – Data Collected

Workshop

BEFORE & AFTER

Attitudes toward Impaired Driving

Behavioural Intentions (to avoid impaired driving in the future)

Negative Affect

Self-Efficacy (ability to avoid impaired driving)

- Rated on a 5-point Likert-type scale
- Completed anonymously

Back on Track (BOT) – Data Collected

Workshop

AFTER ONLY

Client Satisfaction: adapted from the RAND Health Care (1994) instrument

- Rated on 5-point Likert-type scale
- Subscales: (1) Satisfaction with Service, (2) Negative and (3) Positive Quality of Facilitators

Clarity of Presentation: a workshop evaluation measure which divides the BOT program into 22 (or 27) distinct curriculum components

- Participants rate how clearly each component presented on a 5-point Likert-type scale

Back on Track (BOT) – Data Collected

back on track bonne conduite

Follow-up

Substance Use

In the preceding 90 days:

- # of drinks per drinking day
- # of drinking days
- # of days using other drugs (eg, cannabis, prescription opioids)

Problems Related to Substance Use

- Physical health, cognitive abilities, mood, relationships, aggressive behaviour, school or work, legal, and financial
- Rated on 3- or 4-point scale, with item-specific labels

Back on Track (BOT)

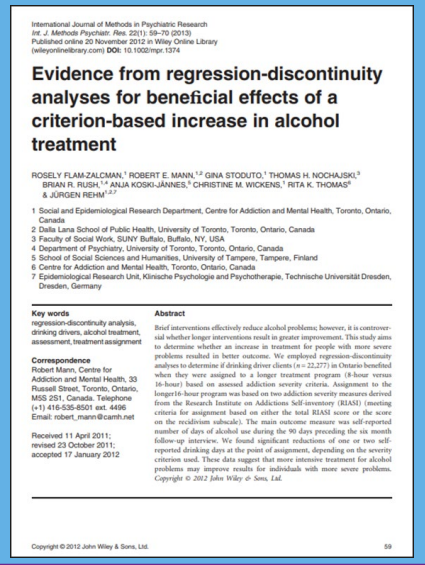
Evaluations of the BOT program have demonstrated:

- Improvement in knowledge, attitude, negative affect, self-efficacy and behavioural intentions immediately following workshop participation (pre- to post-workshop change) (Wickens et al, 2019)
- Reductions in alcohol and other drug use and associated problems (e.g., legal, memory, relationship problems) at 6-month follow-up (Stoduto et al., 2014; Wickens et al., 2018)

BOT Evaluations

Severity-based Assignment to More Intensive Treatment is Beneficial

- Clients with higher problem levels assigned to longer program (16- vs 8-hour workshop) showed a significant reduction in drinking days at 6-month follow-up, attributable to program assignment. (Flam-Zalcman et al, 2013)



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Evidence from regression-discontinuity analyses for beneficial effects of a criterion-based increase in alcohol treatment

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Key words
regression-discontinuity analysis, drinking drivers, alcohol treatment, assessment, treatment assignment

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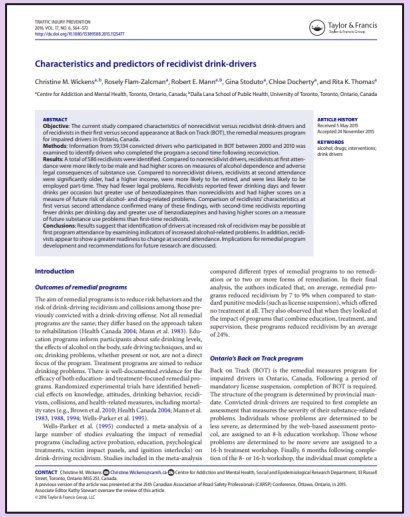
Abstract

Brief interventions effectively reduce alcohol problems; however, it is controversial whether longer interventions result in greater improvement. This study aims to determine whether an increase in treatment for people with more severe problems resulted in better outcome. We employed regression-discontinuity analyses to determine if drinking driver clients ($n = 22,277$) in Ontario benefited when they were assigned to a longer treatment program (8-hour versus 16-hour) based on assessed addiction severity criteria. Assignment to the longer16-hour program was based on two addiction severity measures derived from the Research Institute on Addictions Self-inventory (RIASI) (meeting criteria for assignment based on either the total RIASI score or the score on the recidivism subscale). The main outcome measure was self-reported number of days of alcohol use during the 90 days preceding the six month follow-up interview. We found significant reductions of one or two self-reported drinking days at the point of assignment, depending on the severity criterion used. These data suggest that more intensive treatment for alcohol problems may improve results for individuals with more severe problems.



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Characteristics and predictors of recidivist drink-drivers

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ABSTRACT

Objective: The current study compared characteristics of nonrecidivist versus recidivist drink-drivers and of recidivists in their first versus second appearance at Back on Track (BOT), the remedial measures program for impaired drivers in Ontario, Canada.

Methods: Information from 59,154 convicted drivers who participated in BOT between 2000 and 2010 was examined to identify drivers who completed the program a second time following reconviction.

Results: A total of 586 recidivists were identified. Compared to nonrecidivist drivers, recidivists at first attendance were more likely to be male and had higher scores on measures of alcohol dependence and adverse legal consequences of substance use. Compared to nonrecidivist drivers, recidivists at second attendance were significantly older, had a higher income, were more likely to be retired, and were less likely to be employed part-time. They had fewer legal problems. Recidivists reported fewer drinking days and fewer drinks per occasion but greater use of benzodiazepines than nonrecidivists and had higher scores on a measure of future risk of alcohol- and drug-related problems. Comparison of recidivists' characteristics at first versus second attendance confirmed many of these findings, with second-time recidivists reporting fewer drinks per drinking day and greater use of benzodiazepines and having higher scores on a measure of future substance use problems than first-time recidivists.

Conclusions: Results suggest that identification of drivers at increased risk of recidivism may be possible at first program attendance by examining indicators of increased alcohol-related problems. In addition, recidivists appear to show a greater readiness to change at second attendance. Implications for remedial program development and recommendations for future research are discussed.

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Alcohol; drugs; interventions; drink drivers

Introduction

Outcomes of remedial programs

The aim of remedial programs is to reduce risk behaviors and the risk of drink–driving recidivism and collisions among those previously convicted with a drink-driving offense. Not all remedial programs are the same; they differ based on the approach taken to rehabilitation (Health Canada 2004; Mann et al. 1983). Education programs inform participants about safe drinking levels, the effects of alcohol on the body, safe driving techniques, and so on; drinking problems, whether present or not, are not a direct focus of the program. Treatment programs are aimed to reduce drinking problems. There is well-documented evidence for the efficacy of both education- and treatment-focused remedial programs. Randomized experimental trials have identified beneficial effects on knowledge, attitudes, drinking behavior, recidivism, collisions, and health-related measures, including mortality rates (e.g., Brown et al. 2010; Health Canada 2004; Mann et al. 1983, 1988, 1994; Wells-Parker et al. 1995).

Wells-Parker et al. (1995) conducted a meta-analysis of a large number of studies evaluating the impact of remedial programs (including active probation, education, psychological treatments, victim impact panels, and ignition interlocks) on drink-driving recidivism. Studies included in the meta-analysis compared different types of remedial programs to no remediation or to two or more forms of remediation. In their final analysis, the authors indicated that, on average, remedial programs reduced recidivism by 7 to 9% when compared to standard punitive models (such as license suspension), which offered no treatment at all. They also observed that when they looked at the impact of programs that combine education, treatment, and supervision, these programs reduced recidivism by an average of 24%.

Ontario's Back on Track program

Back on Track (BOT) is the remedial measures program for impaired drivers in Ontario, Canada. Following a period of mandatory license suspension, completion of BOT is required. The structure of the program is determined by provincial mandate. Convicted drink-drivers are required to first complete an assessment that measures the severity of their substance-related problems. Individuals whose problems are determined to be less severe, as determined by the web-based assessment protocol, are assigned to an 8-h education workshop. Those whose problems are determined to be more severe are assigned to a 16-h treatment workshop. Finally, 6 months following completion of the 8- or 16-h workshop, the individual must complete a

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Associate Editor Kathy Stewart oversaw the review of this article.

Predicting Repeat Attendance

- Strongest predictors of re-entry to BOT were sociodemographic, problem screening, previous conviction, and adverse consequence measures. (Wickens et al, 2016)

Multiple Warn Range (MWR) vs Criminal Code (CC) Offenders: Similar groups

- MWR offenders share a similar demographic profile to 1st-time CC offenders and report significantly higher recidivism risk than CC offender groups.
- Suggests that MWR offenders may include high-functioning problem-drinkers who are likely to continue their drink-driving behaviour and may escalate to a CC drink-driving offence. (Wickens et al, 2018)

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Multiple "Lower BAC" offenders: Characteristics and response to remedial interventions☆

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ABSTRACT

Background: In recent years, there has been increasing attention to "lower BAC" drinking drivers, typically those whose blood alcohol content (BAC) is under the legal limits defined in criminal law. In 2009, legislation was enacted in Ontario, Canada that enabled police to issue roadside license suspensions to individuals caught driving with BAC between 0.05% and 0.08%, known as the "warn range". Multiple warn range (MWR) offenders are required to attend the Back on Track (BOT) remedial measures program. This study aimed to provide: (1) a preliminary characterization of MWR drivers charged under warn range legislation; and (2) an initial assessment of outcomes associated with BOT participation among MWR offenders.

Methods: A subsample of 727 MWR offenders was drawn from program records, and compared to samples of 3597 first-time *Criminal Code* (CC) offenders (those caught driving with a BAC of 0.08% or higher) and 359 second-time CC offenders. To provide an initial assessment of outcomes associated with BOT participation, another subsample consisted of 394 MWR participants from whom pre- and post-workshop questionnaires were collected and successfully matched using probabilistic matching processes.

Results: Similarities in demographic profile and driving history between MWR and first-time CC participants were apparent. MWR offenders scored higher on risk of problem drinking and drink-driving recidivism than either of the CC offender groups. Second-time CC offenders scored higher on those measures than first-time CC offenders. Following BOT participation, MWR participants demonstrated positive change including improved knowledge of and intentions to avoid drink-driving.

Conclusions: MWR offenders share a similar demographic profile to that of first-time CC offenders and they report significantly higher risk of problem drinking and recidivism. MWR offenders may include high-functioning problem drinkers who are likely to continue drink-driving and who may escalate to a CC drink-driving offense. Like CC offenders, MWR offenders benefited from BOT participation.

1. Introduction

Per se laws set specified legal limits on blood alcohol content (BAC) permissible when operating a motor vehicle. *Per se* legislation is considered the foundation of deterrence-based approaches to the prevention of alcohol-impaired driving (Voas and Lacey, 1990; Wickens et al., 2013). The introduction of *per se* legislation in many jurisdictions around the world followed years of scientific efforts dedicated to developing a reliable measure of alcohol in the body, and linking this measurement to impairment of driving-related skills and increased collision risk (Heimel, 1988; Ross, 1982). Canada established its current and federally applicable *Criminal Code* (CC) BAC limit of 0.08% in 1969 (Chamberlain and Solomon, 2002). Since the introduction of Canada's *per se* legislation, condemnation of alcohol-impaired driving has become engrained in mainstream culture, and evidence suggests that the law has been effective in reducing impaired driving and resulting harms (Asbridge et al., 2004).

Subsequent research has established that alcohol impairment of driving-related skills and increased collision risk begin at BAC levels lower than the CC level of 0.08% (Chamberlain and Solomon, 2002; Mann, 2002). Drivers at these lower BAC levels (i.e., less than 0.08%) are often referred to as "lower BAC" drivers. In recognition of the

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An In-Depth Look at Evaluation in Action: In-Person vs Videoconference Delivery of BOT

- Prior to COVID-19, the BOT Assessment and Workshop were done in-person only.
- COVID-19 pandemic forced us to shift to online delivery, with no knowledge of its effectiveness.

In-Person vs Videoconference Delivery of BOT: Research Program

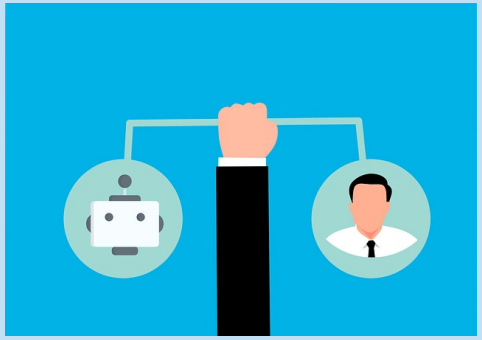
Purpose: To examine the benefits, drawbacks, and overall effectiveness of delivery of the BOT program via videoconferencing technology

Interview Study

One-on-one interview study with BOT facilitators

Randomized Controlled Trial

Comparing program outcomes of in-person vs online BOT participants



Facilitator Interviews

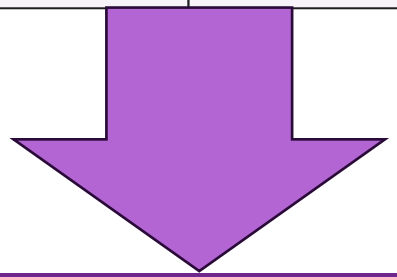
- Conducted via Webex between December 7th and 29th, 2022
- Ranged in length from 5 to 45 minutes
- Audio recorded and fully transcribed; identifying info stripped from transcripts

Sample

Semi-Structured Interview Guide

Posed six scripted questions covering the following topics:

Experiences facilitating BOT online and in-person	Advantages and disadvantages of delivering BOT online versus in-person	Whether online participants benefit as much as in-person participants	Recommendations for an improved online program experience



Unscripted follow-up questions allowed participants to elaborate on or clarify their previous statements

Analysis

- Data managed and analyzed using NVivo 12.0 software
- Data thematically analyzed following Braun & Clarke's (2006) approach
- Preliminary codebook developed by primary and secondary analyst based on research questions, memos, and review of three interview transcripts
- Initial codes were generated in an iterative manner.
- Inductive approach was used to connect responses across interviews; then themes and subthemes were identified based on open coding of the transcripts.
- Regular meetings were held with the study team to discuss emerging themes, and the codes and themes were subsequently refined.
- Themes, subthemes, and descriptions were further revised until they reflected the dataset.

Facilitator Interviews about Online Workshops

Theme 1: Increased Program Accessibility and Ability to Accommodate More Clients

Theme 2: Easier to Maintain a Safe and Comfortable Learning Environment

Theme 3: Potential Challenges with Technology

Theme 4: Difficult to Build Connections / Rapport and Coordinate Interactions

Theme 5: Challenges with Observing Client Body Language and Managing Distractions

Theme 6: Opinions and Recommendations for Program Improvement

Methods

Randomized Control Trial

- Blinded trial with participants randomly assigned to either in-person or online delivery of the BOT 8-hour workshop
- Blinded = Participants were advised that we were interested in their experiences of the program and they would complete in-person or online.
  - Not advised that we were comparing experiences of in-person to online participants

Outcome Measures – Workshop Surveys

- Consistent with standard BOT procedures, and regardless of group assignment, all workshop surveys completed ONLINE
- **Attitudes toward Impaired Driving**, **Behavioural Intentions** (to avoid impaired driving), **Negative Affect**, **Self-Efficacy** (ability to avoid impaired driving)
- **Client Satisfaction**
- **Clarity of Presentation**
- **Learning Engagement**: adapted from a standardized educational engagement scale (Skinner et al, 2009)
  - 27 items rated on 5-point Likert-type scale ("1=Strongly Disagree" to "5=Strongly Agree")
  - High scores denoted greater learner engagement (negative items reverse-coded)
  - Subscales: (1) Behaviour Engagement, (2) Emotional Engagement, (3) Behavioural Disaffection, (4) Emotional Disengagement

Outcome Measures – 6 and 9-12 Month Follow-Up Interviews

- Completed via telephone by all participants
- Some questions are identical to questions asked during the BOT assessment.
- **In the preceding 90 days:**
  - # of drinks per drinking day
  - # of drinking days
  - # of days using other drugs (e.g., cannabis, prescription opioids)

Participant Characteristics

Participant Characteristics	In-Person (n=71)	Online (n=74)	*p* [a]
Age (years)	41.9	38.2	**0.06**
Gender (%) Female	12.50	13.70	1.00
Male	87.50	86.30	
Marital Status (%) Married	36.11	37.00	1.00
Single	51.40	52.10	
Previously married	12.50	10.96	
Income (%) <$20,000	6.94	9.59	0.21
$20,000-$$49,999	30.60	38.35	
$50,000-$79,999	34.70	28.80	
$80,000+	7.00	14.00	
Years of Schooling	14.31	13.30	0.35

[a] Based on χ^2- and t-tests.

Analyses of Workshop Data

Pre- and Post-Workshop Data

- Calculated percentage of participants demonstrating positive, no, and negative change from pre- to post-workshop survey on each item.
- Fisher's exact test assessed equality of proportions between groups.

Post-Workshop Only Data

- To increase the # of observations per cell, responses to questionnaires were re-coded from 5 to 3 categories: e.g., Strongly Agree or Agree, Neutral, Strongly Disagree or Disagree
- Examined total and subscales (detail not as valuable)
- t-tests conducted on mean total and subscale scores

Acute Change from Pre- to Post-Workshop: Attitudes

Pre- and Post-Workshop Questionnaire Items	In-Person (n = 71)			Online (n = 74)			p [a]
	Positive Change (%)	No Change (%)	Negative Change (%)	Positive Change (%)	No Change (%)	Negative Change (%)	
Attitude							
1. Driving after drinking is a dangerous behaviour.	8.57	91.43	0	5.48	94.52	0	0.53
2. Driving after drinking is a major safety problem.	11.43	88.57	0	8.22	91.78	0	0.58
3. Driving after cannabis use is a dangerous behaviour.	18.57	81.43	0	8.22	90.41	1.37	0.09
4. Driving after cannabis use is a major safety problem.	20.00	80.00	0	8.22	90.41	1.37	0.054

[a] Based on Fisher's exact tests.

Acute Change from Pre- to Post-Workshop: Behavioural Intentions

Pre- and Post-Workshop Questionnaire Items	In-Person (n = 71)			Online (n = 74)			p [a]
	Positive Change (%)	No Change (%)	Negative Change (%)	Positive Change (%)	No Change (%)	Negative Change (%)	
Behavioural Intentions							
5. Once I get my license back, I would probably drive if I had only three drinks at a party.	5.88	89.77	4.35	5.48	93.15	1.37	0.65
6. Once I get my license back, I would probably drive if I had only one drink at a party.	18.57	70.00	11.43	15.07	80.82	4.11	0.19
7. I plan to reduce how much I drink to avoid driving after drinking.	25.71	71.43	2.86	19.18	75.34	5.48	0.48
8. I plan to reduce how much I use cannabis to avoid driving after cannabis use.	26.09	69.56	4.35	16.44	76.71	6.85	0.36

[a] Based on Fisher's exact tests.

Acute Change from Pre- to Post-Workshop: Affect & Self-Efficacy

- Few participants demonstrated negative change post-workshop.
- No significant differences between the in-person and online groups in the proportion demonstrating negative, no, or positive change.

	In-Person (n = 71)			Online (n = 74)			
			Negative Change (%)	Positive Change (%)	No Change (%)	Negative Change (%)	p [a]
A							
9		4	14.29	19.18	65.75	15.07	1.00
1		6	11.43	15.07	71.23	13.70	0.30
1		8	11.43	16.44	68.49	15.07	0.50
1		9	10.00	16.44	71.23	12.33	0.41
S							
1 a		1	4.29	6.85	90.41	2.74	0.66
1 driving after drinking in the future.	5.71	90.00	4.29	2.74	95.89	1.37	0.35

[a] Based on Fisher's exact tests.

Post-Workshop Questionnaires

	Minimum Possible Score	Maximum Possible Score	In-Person Mean (SD)	Online Mean (SD)	p [a]
Client Satisfaction Scales [b]					
Total Score	14	70	64.4 (5.27)	64.4 (6.77)	0.31
Satisfaction with Service	6	30	27.0 (3.02)	27.0 (3.66)	0.49
Negative Quality of Facilitators	4	20	18.3 (2.31)	18.4 (2.21)	0.68
Positive Quality of Facilitators	4	20	18.9 (1.62)	18.8 (1.87)	0.90

[a] Based on t-test of group means.
[b] Negative items reverse-coded such that high scores denote greater overall satisfaction.

- Satisfaction was high, with no less than 70 percent of participants Agreeing or Strongly Agreeing with all items in either the in-person or online group.
- No significant differences between the in-person and online groups.

Post-Workshop Questionnaires

	Minimum Possible Score	Maximum Possible Score	In-Person Mean (SD)	Online Mean (SD)	p [a]
Clarity of Presentation Scale					
Total Score	22	110	107.6 (6.87)	106.6 (9.95)	0.50

[a] Based on t-test of group means.

- Presentation clarity for all components, regardless of presentation mode, was rated as clear or very clear by at least 91% of participants.
- No significant difference between the in-person and online groups.

Post-Workshop Questionnaires

	Minimum Possible Score	Maximum Possible Score	In-Person Mean (SD)	Online Mean (SD)	p [a]
Learner Engagement Scale [b]					
Total Score	27	135	122.70 (11.70)	124.00 (12.54)	0.54
Behaviour Engagement	5	25	23.60 (1.80)	23.64 (1.94)	0.89
Emotional Engagement	5	25	22.85 (2.58)	23.23 (2.74)	0.41
Behavioural Disaffection	5	25	22.40 (3.11)	22.22 (3.26)	0.74
Emotional Disengagement	12	60	54.56 (6.46)	55.01 (6.62)	0.69

[a] B
[b] N

- The proportion of participants indicating Agreement or Strong Agreement with learner engagement items was high.
  - Most items received agreement from more than 90% of participants, regardless of condition.
- No significant difference between the in-person and online groups.

Analyses of 6- and 9- to 12-Month Data

- Responses at Follow-up were compared to responses at Assessment.
- Pooled and Satterthwaite t-tests were used to compare mean # of days using each substance between the two groups for each timepoint.
- Generalized linear mixed-effects modeling, treating participants as a random factor and time (assessment, 6-month, 9-12-month) and condition (in-person, online) as fixed factors, with number of days of substance use as the outcome measure.
  - Age and sex included as covariates.
  - Effect of interest was interaction of condition by time, examining in change in drug use over time was moderated by condition.
- Post-hoc tests used to identify which group mean changes differed significantly from others.
- Full information maximum likelihood approach to address missing data.

Substances Reported

- Few if any participants reported use of cocaine, amphetamines, benzodiazepines, barbiturates, heroin, prescription opioids, codeine, hallucinogens, or glue.
- Thus, only analyses reported are:
  - # of drinks per drinking day
  - # of days using alcohol
  - # of days using cannabis
  - # of days using tobacco

Mean (SD) Days in Past 90 Days Using Substance at 6 Months and 9 to 12 Months Following Workshop

- No significant differences in substance use between groups at baseline.
- At 6 months, participants in the in-person condition reported using alcohol on more days and consuming more drinks per drinking day than participants in the online group.
- No significant differences seen at 9 to 12 months.

In-Person	Online	p [a]
2.70 (2.26)	2.40 (2.11)	0.411
2.74 (2.20)	**1.95** (2.00)	**0.030**
1.70 (2.12)	1.53 (1.96)	0.645
9.51 (15.38)	6.89 (12.71)	0.267
8.17 (13.42)	**4.17** (6.09)	**0.026**
4.90 (7.63)	3.47 (5.63)	0.242
5.79 (14.47)	5.21 (16.55)	0.822
3.41 (9.61)	2.89 (11.41)	0.772
4.33 (16.96)	5.27 (20.16)	0.782
35.08 (43.17)	25.56 (39.12)	0.167
25.78 (40.21)	24.47 (39.21)	0.845
17.92 (35.30)	15.07 (32.89)	0.647

ite t-test reported if variances unequal.

Mixed Models Parameters for Past 90 Day Substance Use

- No significant interactions between condition and time.
- Time was significant for drinks per drinking day, and days using alcohol and tobacco.

Substance	t	p
Drinks per drinking day		
Time	**11.87**	**0.00**
Condition	2.46	0.12
Condition x Time	1.15	0.32
Sex	2.97	0.09
Age	2.03	0.16
Alcohol		
Time	**6.27**	**0.00**
Condition	3.22	0.08
Condition x Time	0.55	0.58
Sex	3.08	0.08
Age	0.51	0.48
Cannabis		
Time	1.72	0.19
Condition	0.02	0.89
Condition x Time	0.76	0.46
Sex	1.57	0.21
Age	2.17	0.14
Tobacco		
Time	**6.45**	**0.00**
Condition	1.40	0.24
Condition x Time	0.66	0.52
Sex	3.00	0.09
Age	1.25	0.27

- Post-hoc comparisons revealed improvements from assessment to 6-month follow-up and from assessment to 9- to 12-month follow-up in both the in-person and online groups.

ge in Drug Use from Assessment to oups)

	In-Person		Online	
	Mean Change (SD)	p [a]	Mean Change (SD)	p [a]
	1.50 (1.71)	0.38	**2.77** (1.17)	**0.02**
	4.29 (1.78)	**0.02**	**3.30** (1.23)	**0.01**
	2.80 (1.79)	0.12	0.52 (1.24)	0.67
Assessment vs Follow-up 6	0.01 (0.25)	0.98	0.41 (0.23)	0.08
Assessment vs Follow-up 9-12	**0.90** (0.26)	**0.01**	**3.30** (0.24)	**0.00**
Follow-up 6 vs Follow-up 9-12	**0.89** (0.26)	**0.01**	0.52 (0.25)	0.12
Tobacco				
Assessment vs Follow-up 6	7.50 (4.92)	0.13	0.70 (4.63)	0.88
Assessment vs Follow-up 9-12	**14.28** (5.12)	**0.01**	**10.37** (4.91)	**0.04**
Follow-up 6 vs Follow-up 9-12	6.78 (5.13)	0.19	**9.60** (4.93)	**0.052**

[a] Based on t-test.
SD = Standard deviation.

What can we conclude about the online BOT workshop?

- Our facilitators were right!
- No major differences were found on acute measures of change, client satisfaction, clarity of presentation, or learner engagement
- Improvement in alcohol use at 6-month follow-up, and in alcohol and tobacco use at 9- to 12-month follow-up
- No differences in improved substance use found between in-person and online groups
- This study provides support for continued online delivery of BOT
  - Increases program accessibility

- **Good example of importance of program evaluation**

Coming Attractions

Men and Women Self-Reporting Impaired Driving

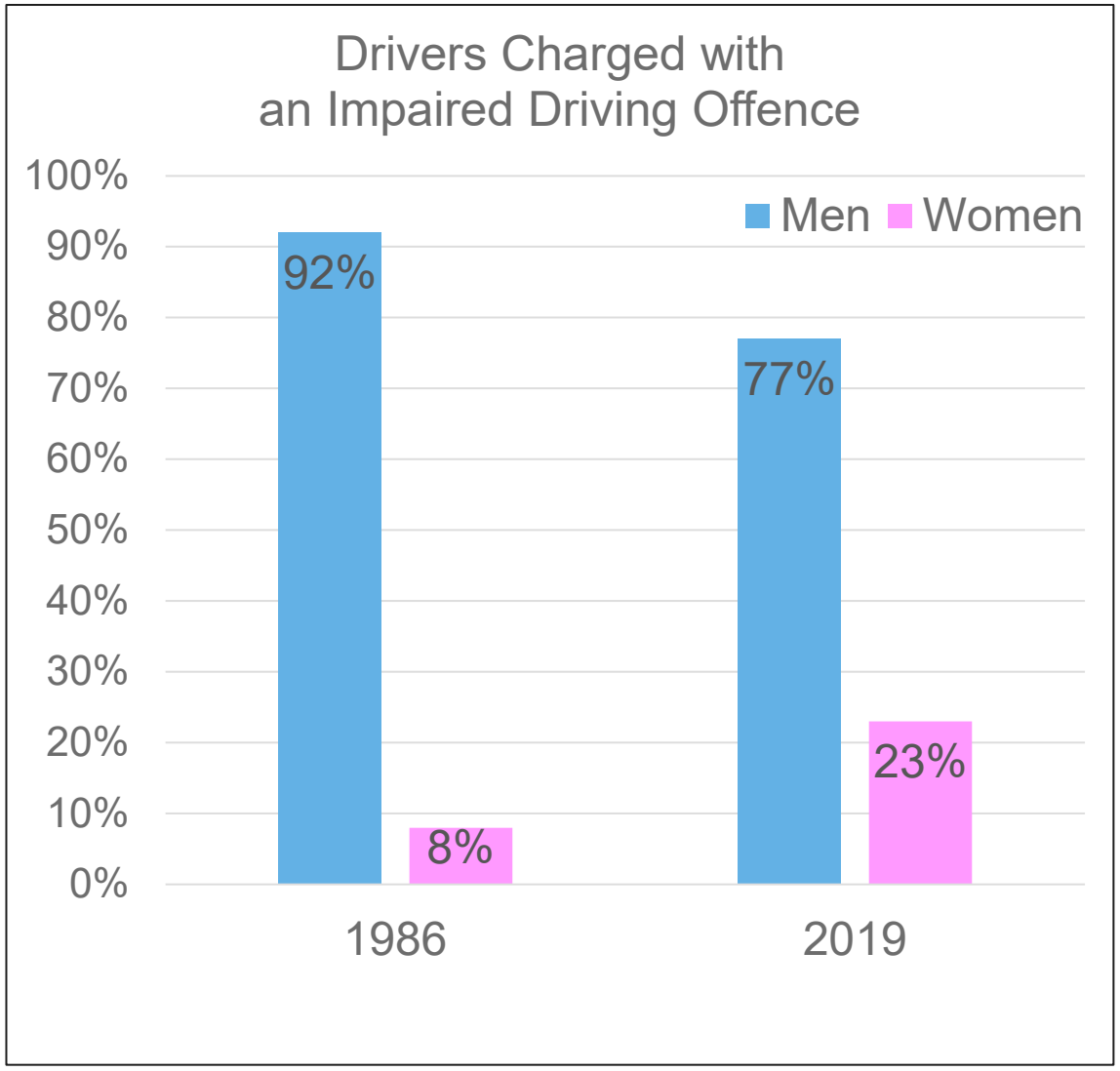
Men are more likely than women to self-report impaired driving

- **CCHS 2014:** 7.5% of men vs 0.8% of women admitted driving impaired (Statistics Canada, 2016)
- **CAMH Monitor 2022:** 6.0% of men vs 2.0% of women admitted driving within an hour of having 2+ drinks (Nigatu & Hamilton, 2023)

Men self-report engaging in impaired driving more frequently than women

- **CCHS 2014:** 6 times in the past year among men vs 4 times in the past year among women (Statistics Canada, 2016)

Men and Women Charged with Impaired Driving



- In Canada, the proportion of drivers charged with an impaired driving offence who are women has risen from 8% in 1986 to 23% in 2019.
- The number of men facing impaired driving charges has dropped by approximately 70% since 1986.
- The number of women charged with impaired driving has declined only slightly.

(Statistics Canada, 2016, 2021)

The Problem:

- Sex and gender differences are seldom considered when road safety initiatives are developed.

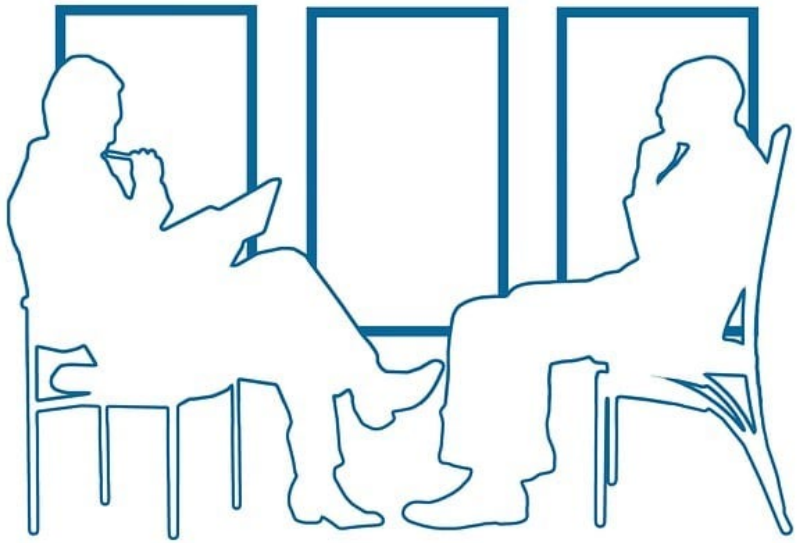
CAMH Research Program Examining Sex/Gender in Impaired Driving and Remedial Education

1) Systematic Review of remedial programs including brief intervention(s), examining sex/gender effects

2) One-on-One Interviews with BOT participants:

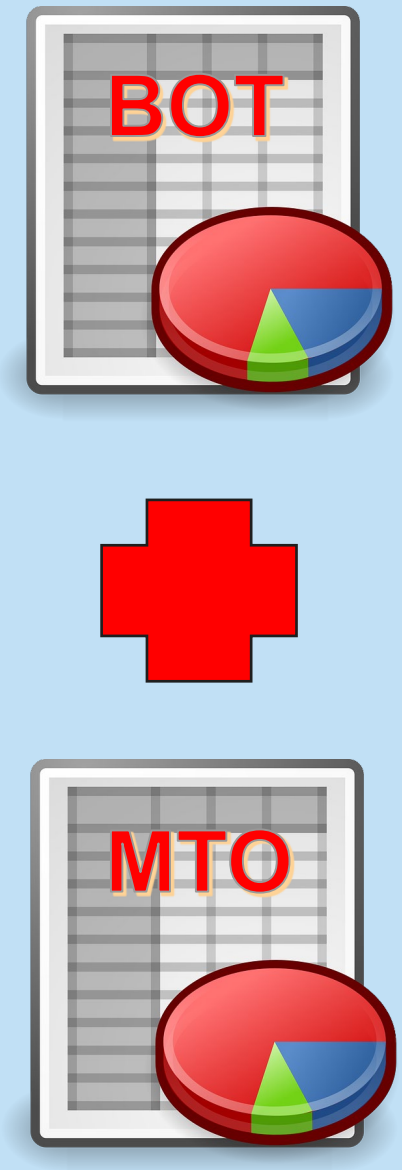
- How might gender influence participants' experience of BOT?
- Would single-gender workshop be beneficial?

3) Secondary Analyses of BOT – MTO linked dataset



BOT – MTO Linked Dataset

- BOT participants' assessment and follow-up data is matched to their Ministry of Transportation Ontario (MTO) driver record data.
- MTO data includes:
  - Moving violations, criminal driving offences, Highway Traffic Act violations, and total collisions
  - 5 years before and 5 years after their BOT participation
- Dataset will include data from mid-1999 to 2019.



CAMH Research Program Examining Sex/Gender in Impaired Driving and Remedial Education

3) Secondary Analyses of BOT – MTO linked dataset

a. Compare risk-enhancing and driver record **differences between male and female impaired driving offenders (IDOs) before remedial program participation**;

b. Explore **sex as a potential moderator** of the relationship between **these pre-program characteristics of IDOs and their post-program driving behaviours**;

c. Assess evidence for '**telescoping**' among women IDOs, where the transition to serious and hazardous substance misuse may occur more rapidly than for men IDOs, and;

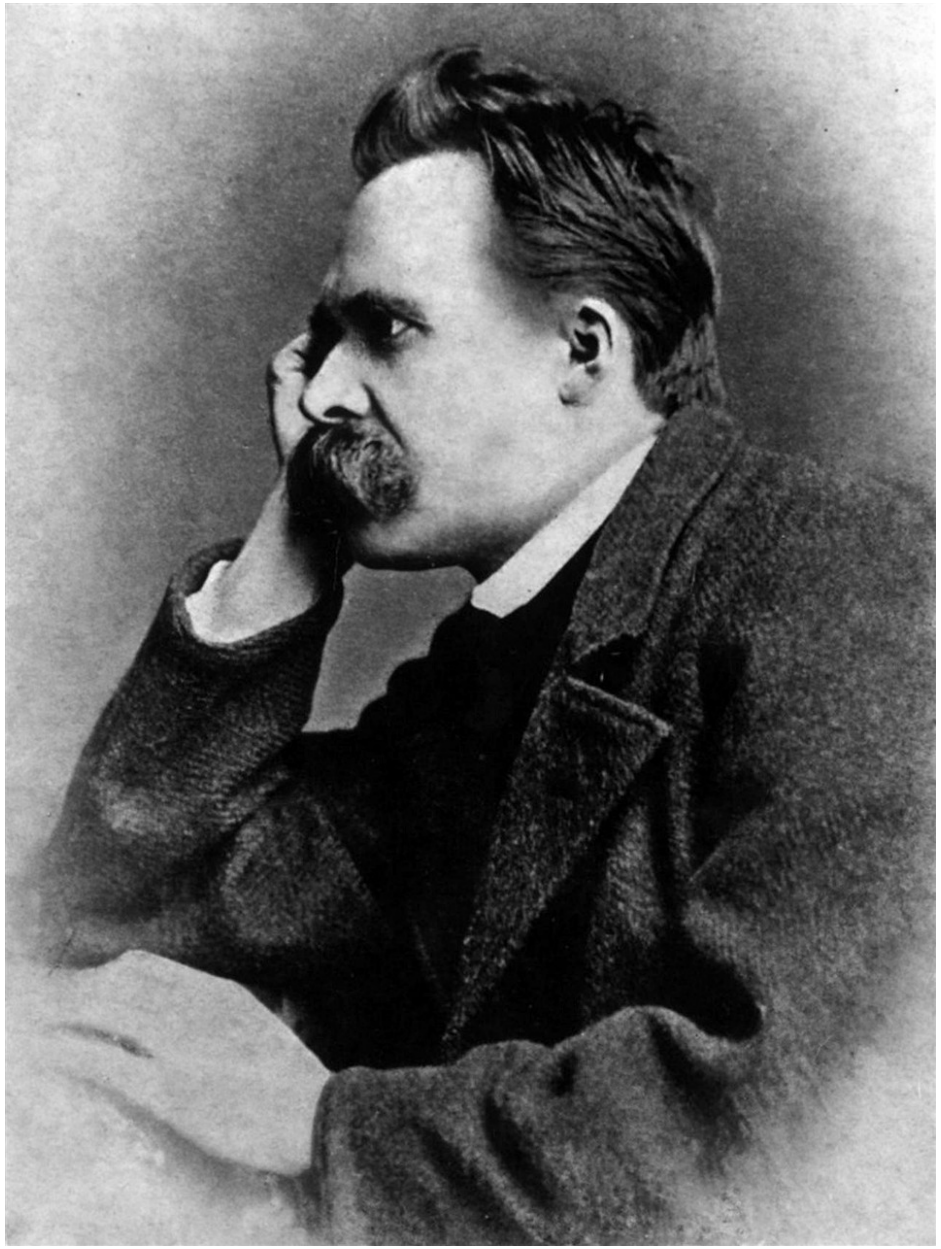
d. Assess whether the benefits of the BOT program may be enhanced by using **sex-specific assignment procedures** to either the 8- or 16-hour workshop.


STAY TUNED

Friedrich Nietzsche

(1844-1900)

“It is only through evaluation that value exists.”



Funding

We are very grateful for funding received through:

Transport Canada Enhanced Road Safety Transfer Payment Program (ERSTPP)

for research examining:

1) Online Delivery of BOT, and 2) Sex & Gender in Remedial Education.

Conflict of Interest

Dr. Christine Wickens serves on the **Executive Committee of the International Council on Alcohol, Drugs and Traffic Safety (ICADTS)** and on the **Canadian Society of Forensic Science's Drugs and Driving Committee**, which acts as an advisory body to Canada's Department of Justice with respect to issues of drug impaired driving. She also served on the **Board of Directors of the Canadian Association of Road Safety Professionals (CARSP)** from 2015 to 2024.

Dr. Christine Wickens

Centre for Addiction and Mental Health

Email: Christine.Wickens@camh.ca

EXTRA SLIDES AS NEEDED

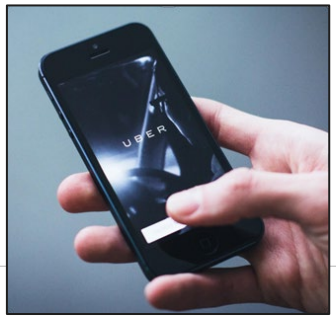
Prevention

Primary Prevention

- Prevent disease or injury before it ever occurs

Secondary Prevention

- Reduce impact of a disease or injury that has already occurred



Tertiary Prevention

- Soften impact of an ongoing illness or injury that has lasting effects

Distance Delivery of Psychotherapeutic Interventions for Substance Use Disorders (SUDs)

According to reviews and meta-analyses of videoconferencing-based interventions…	
Advantages	**Disadvantages**
Distance delivery treatments can be as effective as face-to-face (Barak et al, 2008)	Limited access to non-verbal behaviour and absence of spontaneous clarifications can result in misunderstanding and misinterpretations (Rochlen et al, 2004; Sanchez et al, 2019)
Disinhibition, encouraging therapeutic expression, self-reflection, and ownership of the therapeutic process (Rochlen et al, 2004; Suler, 2004)	Difficult or impossible for therapist to adequately address client in crisis (Rochlen et al, 2004)
Therapist and client still able to foster therapeutic relationship (Cook & Doyle, 2002)	

Distance Delivery of Psychotherapeutic Interventions for Substance Use Disorders (SUDs)

According to reviews and meta-analyses of videoconferencing-based interventions….	
Methodological Weaknesses	**Research Gaps**
Confounded results: mixed diagnostic groups, did not control for use of medication (Antonacci et al., 2008)	Few focused on treatment of alcohol use problems (Antonacci et al., 2008; Lin et al., 2019)
Few randomized trials (Antonacci et al., 2008; Lin et al., 2019)	

To our knowledge, no studies have addressed remedial programs for impaired drivers.

Facilitator Interviews

Recruitment and Data Collection

- Purposive sampling
  - Facilitators from different regions across Ontario
  - Male and female facilitators
- BOT management sent an email invitation to eligible facilitators

Inclusion Criteria

- Experience leading the 8-hour BOT workshop both in-person and online

- Smart phone, tablet, or computer with Internet access

Inclusion Criteria

(1) Has received a Criminal Code impaired driving conviction and required to participate in BOT as a condition of full relicensing following mandatory period of licence suspension or restriction;

(2) Screened in the assessment to the 8-hour workshop;

(3) Willing to participate in either the in-person or videoconferencing version of the program;

(4) Has a mobile device, such as cell phone or tablet, and access to a private computer with internet access;

(5) Able to understand English;

(6) Willing to provide consent to participate in the trial.

Exclusion Criteria:

(1) Not meeting inclusion criteria

(2) Intoxicated or impaired by alcohol or drugs during the assessment or the intervention

Facilitator Interview Slides

Theme 1:
Increased Program Accessibility and Ability to Accommodate More Clients

Increased Program Accessibility

"[T]he weather didn't play a part into um doing the workshop…You know, people didn't have to worry about traveling on those roads…the icy roads. Um, so we didn't have to do any kind of cancellation or rescheduling, so that's always handy…all of our, our clients, you know, they don't have a driver's licence so they do have to depend on other people to take them."

– Participant 5

Accommodate More Clients

"It allowed us to expand and allow the participants to, um, to have more options with regards to getting their, um, their steps to the Back on Track program done quicker because they can join [any] group."

– Participant 10

Theme 2:
Easier to Maintain a Safe and Comfortable Learning Environment

Reduce Participant Anxiety

"I wondered sometimes what their experience was, like, of coming to an addiction agency to attend this workshop… The feeling of shame the feeling of, like it was evident sometimes when people were in the group, you know, we tried to create as positive as human as non-judgmental a space to say like, this is learning, you know, this is helpful. And yet, I think coming to the building. I think it was hard for a lot of people."

– Participant 7

Complete Content Delivery More Manageable

"It feels much more manageable to be like, I have to get through this much today, versus I got to get through everything today. When there is something unexpected um that comes up in a workshop. When there is a client who is um, in distress, someone has been using substances, someone who is um having- really disengaged, cameras turned off, falling asleep… Usually like, that takes some time away from the group. I think, in a 2-day virtual workshop, it feels like there's just more buffer."

– Participant 7

Theme 3:
Potential Challenges with Technology

Steep Learning Curve

"So, at the beginning, like, getting to the technology and all the security and all the information and stuff. But now, I'm I mean, I'm pretty comfortable. Even our participants. They're great. Because some have more technology information, or, smarts I guess than I do, so they can say they can share that with other participants 'oh try this, or y'know try this, or, you know, do that.' So, it was really, I think that was the biggest challenge was being more confident to be able to offer that service." – Participant 10

Equity

"Not everybody has knowledge, not everybody has the ability to, um, to use the technology or have, even have access to the technology, right?"

– Participant 1

"Some of the population and I shouldn't kind of stereotype, but, older, the older population that's not quite as familiar with technology, I think has a lot of anxieties um with doing it [the workshop] virtually."

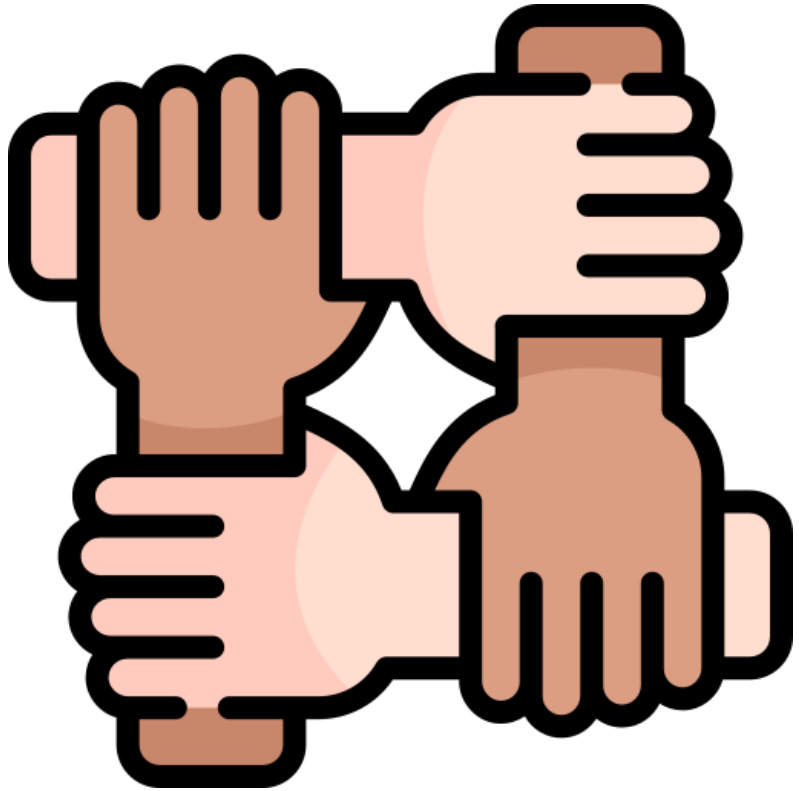
– Participant 5

Theme 4:
Difficult to Build Connections/Rapport and Coordinate Interactions

Difficulty Building Connections

"Yeah, I think the only thing that they [participants] don't get, and this is probably one of the like the, one of the things that's not great about virtual is the beauty of connecting with other people when you walk into a room and finally have people that you kind of go. Oh, yeah. Like you get it. You've been through this without judgment or pain or consequence. Right? And and connecting with people on that front, that's doable in person."

– Participant 1



Theme 5:
Challenges with Observing Client Body Language and Managing Distractions

Observing Body Language

"It would be easier for somebody to get away with substance use while they're in the course. Can't smell booze on someone's breath on Zoom… it is more challenging to know if somebody is drinking or using… And this isn't good right? And so we have had to remove people and of course, they get pissed off and they claim that they aren't and whatever else and, like, how are we going to prove it? And it's like, well, you know, we're uh we work in the field of addictions… So, there is more challenge in that."

– Participant 3

Managing Distraction

"There is the distractions in your own home. Uh, it can make it hard for some people to engage. Um, but I feel on the whole most people engage very well… It's easier to know if somebody's really engaged [if] they're sitting in front of you in a classroom, than if they're sitting at home, but after a while you do learn, like, we've learned what those little signs or signals are."

– Participant 3

Theme 6:
Opinions and Recommendations for Program Improvement

Overall Value Equivalent Across Modes

"A lot of my initial concerns have not been realized. One of my major concerns was client engagement. I worried that, knowing people were often coming to Back on Track with a very low expectation, and sometimes a fairly negative expectation of what was to unfold, I worried that somehow the screen wouldn't be enough to engage people. That fear hasn't been realized because over, over time, I think, we have been able to provide the same workshop, just in a different format."

– Participant 7

In-Person, Online, Hybrid Delivery

"If we have somebody who's very technical with it [videoconferencing], it's, uh, absolutely … no problem whatsoever. I do believe that offering the services and continuing to offer them online in um a hybrid kind of way would be extremely beneficial. Especially for those people who have not told anybody about the impaired driving, live in remote areas, no transportation, things like that."

– Participant 6

Conclusion

- From the perspective of Back on Track facilitators, videoconferencing is a viable delivery method.
- Challenges and drawbacks must be acknowledged.
- However, these can be overcome and are outweighed by the many benefits of virtual program delivery.

Limitations & Future Directions

- May not generalize to 16-hour workshop for clients with higher risk of recidivism
  - Conduct similar study with facilitators of 16-hour program
- May not generalize to other remedial education programs
  - But insights may be adaptable

Distance Learning RCT Slides

Client Satisfaction

- Most participants agreed/strongly agreed with Client Satisfaction items.
- Only one significant difference between the in-person and online groups:
  - More in-person participants reported satisfaction with workshop facilities than online participants reported satisfaction with videoconferencing platform.
  - May reflect technical issues with online medium or lack of familiarity with platform used.

In-Person		Online		
n	% Agree	n	% Agree	p [a]
68	100.00	69	97.18	0.50
56	82.35	64	90.14	0.26
68	100.00	69	97.18	1.00
64	94.12	63	88.73	0.58
65	95.59	65	91.55	0.55
54	79.41	57	80.28	0.67
66	97.06	69	97.18	0.18
53	77.94	54	76.06	0.84
60	88.24	60	84.51	0.87
64	94.12	67	94.37	0.88
68	100.00	68	95.77	0.50
67	98.53	69	97.18	1.00
64	94.12	69	97.18	0.52
55	80.88	56	78.87	0.27
63	**92.65**	58	**81.69**	**0.05**

Based on Fisher's exact test.

* Items 2, 4, 5, 8, 9, 13, 14 were recoded indicating that participants disagree or strongly disagree with the statement.

Clarity of Presentation

	In-Person		Online		
	n	% Clear	n	% Clear	p [a]
1. Introducing of the workshop	65	95.59	68	95.77	0.84
2. Warm up: What leads to impaired driving	65	95.59	68	95.77	1.00
3. How alcohol is processed by the body?	66	97.06	69	97.18	1.00
4. Factors that affect blood alcohol concentration (BAC	66	97.06	69	97.18	0.80
5. What is a standard drink?	65	95.59	68	95.77	1.00
6. Estimate BAC	67	98.53	69	97.18	1.00
7. How alcohol and other drugs can affect your life	66	97.06	68	95.77	1.00
8. The health effects of alcohol use	67	98.53	68	95.77	0.75
9. Guidelines to reduce the risks of drinking	65	95.59	69	97.18	0.81
10. Identifying substance use problems	66	97.06	68	95.77	1.00
11. How alcohol and other drugs affect driving skills	68	100.00	70	98.59	1.00
12. Impaired driving laws and penalties	66	97.06	67	94.37	0.81
13. Financial cost of impaired driving	67	98.53	68	95.77	1.00
14. Coping skills: Dealing with stress	67	98.53	69	97.18	1.00
15. Positives and Negatives of substance use	67	98.53	68	95.77	1.00

Clarity of Presentation

- Most participants rated workshop components as Clear/Very Clear.
- No significant differences between in-person and online groups in percentage of participants rating component Clear/Very Clear.

	In-Person		Online		
	n	% Clear	n	% Clear	p [a]
16	66	97.06	68	95.77	1.00
17	67	98.53	68	97.14	1.00
18 M	67	98.53	68	95.77	1.00
19	62	91.18	67	94.37	0.69
20	66	97.06	68	95.77	1.00
21	67	98.53	69	97.18	1.00
22 g	67	98.53	68	95.77	1.00

[a] p

Learner Engagement

	In-Person		Online		
	n	% Agree	n	% Agree	p [a]
Behaviour Engagement					
1. I tried hard to do well in the workshop.	66	97.06	67	95.71	0.62
2. In the workshop, I worked as hard as I could.	67	98.53	68	97.14	0.50
3. In the workshop, I participated in workshop discussions.	67	98.53	64	91.43	0.16
4. In the workshop, I paid attention.	68	100.00	70	100.00	.
5. In the workshop, I listened very carefully.	67	100.00	70	100.00	.
Emotional Engagement					
6. I felt good in the workshop.	64	94.12	65	92.86	1.00
7. When we worked on something in the workshop, I felt interested.	67	98.53	66	94.29	0.62
8. On the whole, the workshop held my attention.	65	95.59	66	94.29	0.71
9. I enjoyed learning new things in the workshop.	63	94.03	67	95.71	0.84
10. When we worked on something in the workshop, I got involved.	63	92.65	65	92.86	0.87
Behavioral Disaffection					
11. In the workshop, I just acted like I was working.	56	82.35	54	78.26	0.73
12. I didn't try very hard in the workshop.*	66	97.06	67	95.71	0.62
13. In the workshop, I just did enough to get by.*	65	95.59	66	94.29	1.00
14. When I was in the workshop, I thought about other things.*	59	86.76	59	84.29	0.75
15. In the workshop, my mind wandered.*	60	88.24	56	80.00	0.38

[a] Based on Fisher's exact test.
*Items 12 to 15 were reverse coded indicating that participants disagree or strongly disagree with the statement.

Learner Engagement

- Most participants agreed/strongly agreed with each Learner Engagement item.
- Only one significant difference between the in-person and online groups:
  - More online participants agreed/strongly agreed with ‘When I got stuck on a problem, I felt worried.’
  - May be related to technical difficulties that are unique to online delivery of program.

	In-Person		Online		
	n	% Agree	n	% Agree	p [a]
	63	92.65	62	89.86	0.28
	64	94.12	65	92.86	0.32
	65	95.59	67	95.71	1.00
	63	92.65	63	90.00	0.89
	62	91.18	67	95.71	0.49
	65	**95.59**	62	**88.57**	**0.02**
	66	98.51	65	92.86	0.37
	56	83.58	63	90.00	0.46
	54	79.41	60	86.96	0.52
	63	94.03	67	97.10	0.46
	59	86.76	66	94.29	0.24
	65	95.59	67	95.71	1.00

r strongly disagree with the statement.

Attrition & Substances Reported

6-Month Follow-Up

- 139 participants (in-person n = 68; videoconference n = 71)

9- to 12-Month Follow-Up

- 123 participants (in-person n = 62; videoconference n = 61)

Substance Reporting

- Few if any participants reported use of cocaine, amphetamines, benzodiazepines, barbiturates, heroin, prescription opioids, codeine, hallucinogens, or glue.

Limitations

- Participants may not be representative of the broader BOT clientele
  - E.g., likely that few participants were uncomfortable with technology
- Sample was restricted to Criminal Code offenders assigned to the 8-hour workshop
  - Do results generalize to clients with multiple administrative licence suspensions?
  - Do results generalize to clients assigned to the 16-hour workshop, who are at higher risk of recidivism?