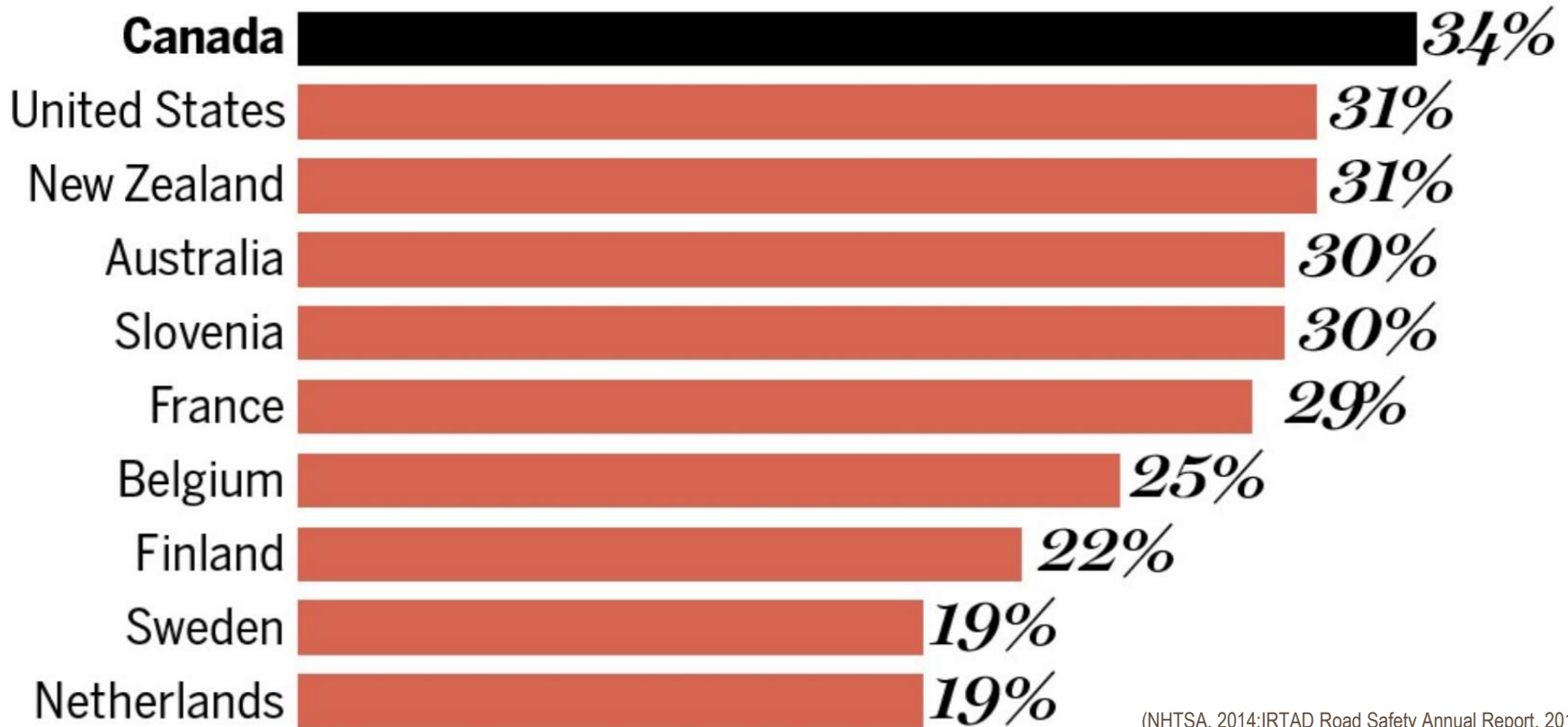


Driving While Impaired Offender Typologies and Treatment Outcome Following Brief Intervention

N. Moxley-Kelly, M.C. Ouimet, M. Dongier, F.
Chanut, J. Tremblay, W. Marcantoni, T.G. Brown

Background

- Fatal crashes involving DWI
 - **On the rise!**



(NHTSA, 2014; IRTAD Road Safety Annual Report, 2015)

Background

- **Recidivism**
 - **30% at 5 years**
 - **One prior conviction, 7 times more likely**



A critical target for intervention !

(NHTSA, 2014; Rauch et al., 2010)

Previous Research Projects

Brief Motivational Interviewing for DWI Recidivists Who Abuse Alcohol and Are Not Participating in DWI Intervention: A Randomized Controlled Trial

Thomas G. Brown, Maurice Dongier, Marie Claude Ouimet,
Jacques Tremblay, Florence Chanut, Lucie Legault, Ng Mien
Kwong Ng Ying Kin

(Brown et al., 2010)

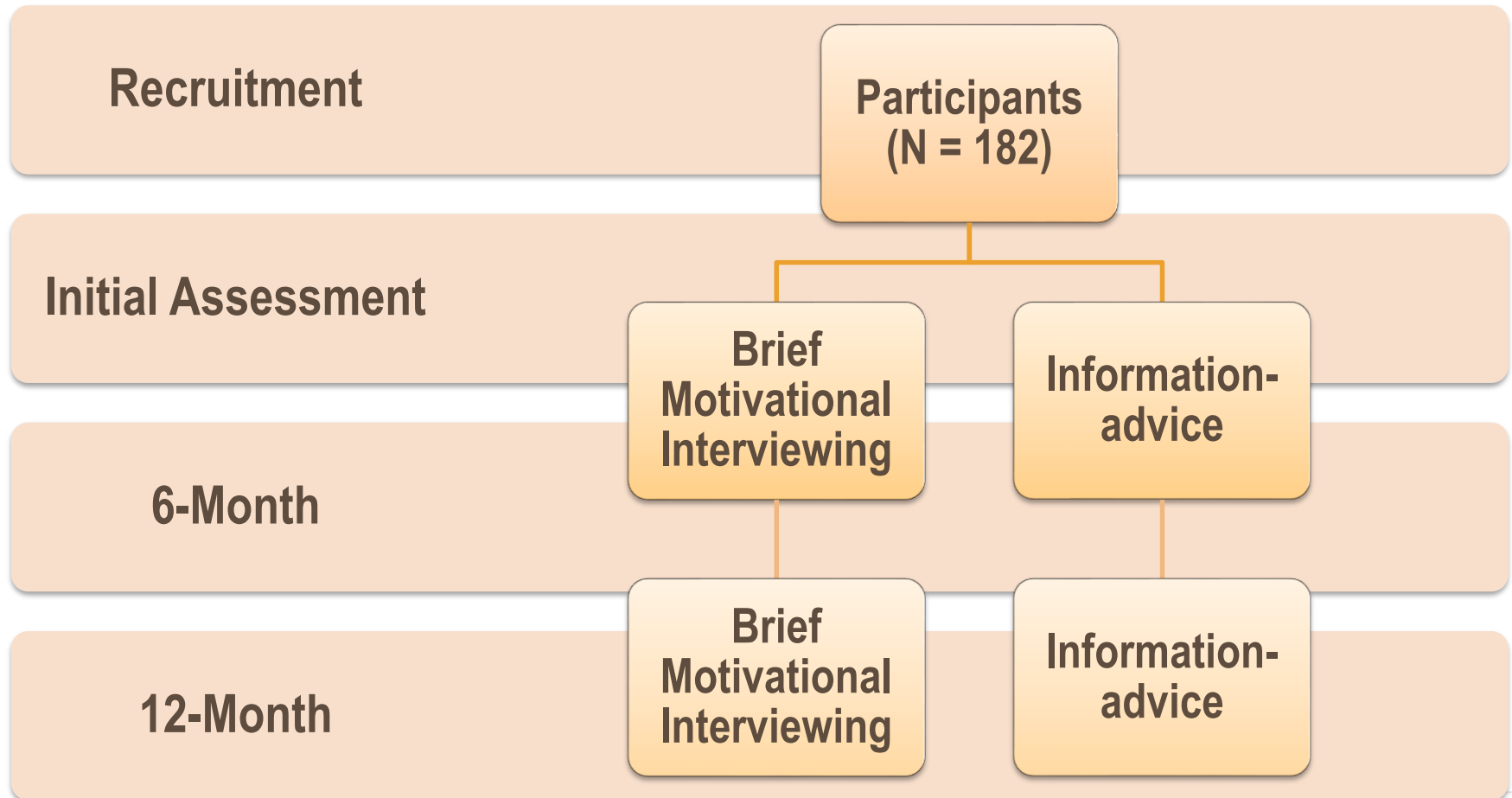
Brief Motivational Interviewing

- Effective **fast** (i.e. 30 minutes)
 - Large scale implementation
- Internal motivation to change
 - Ideal for resistance



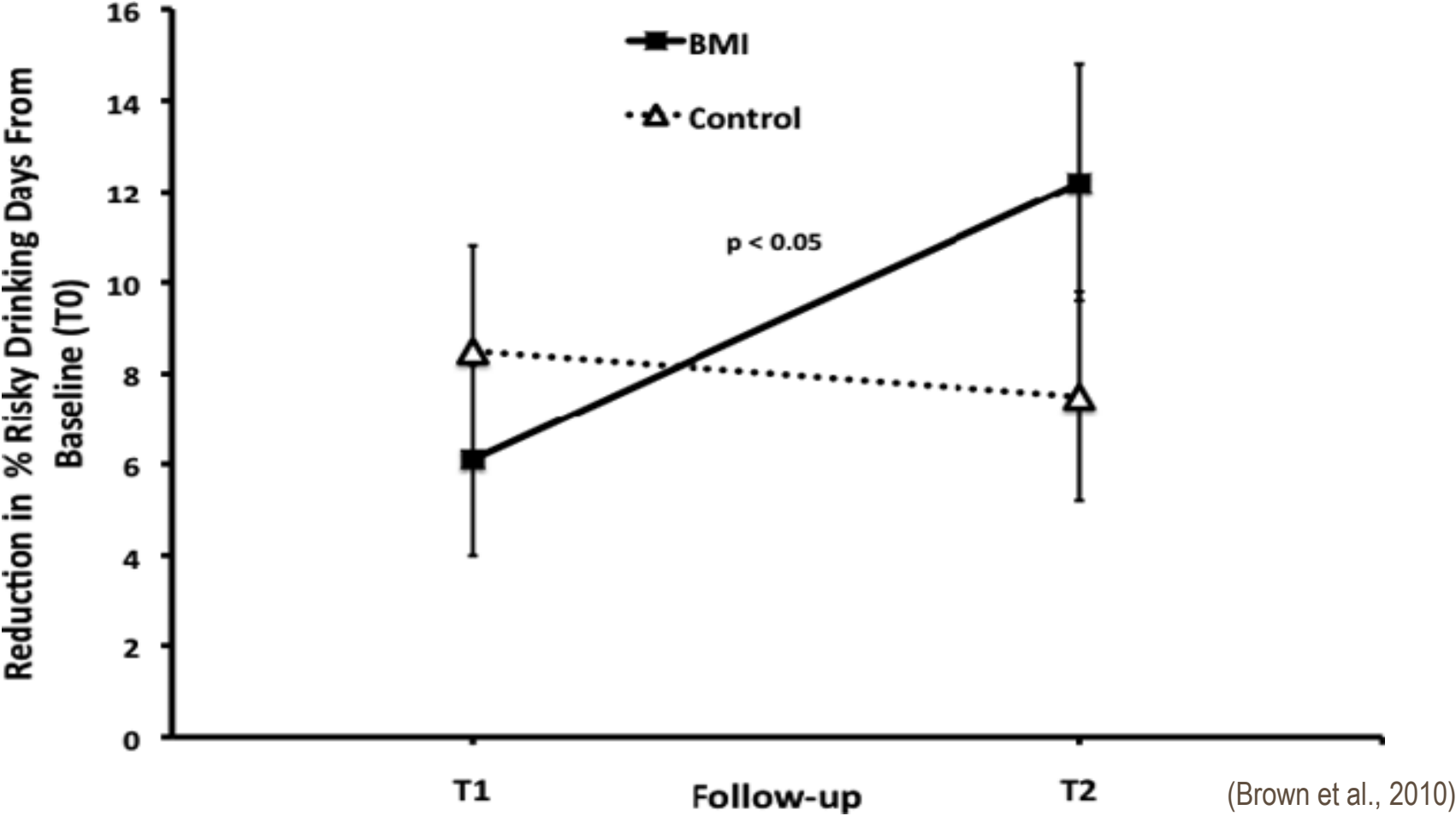
(Rollnick & Miller, 1995; Miller, Curtis, Sønderslund, Day, & Droste, 2014)

Previous Research Projects



(Brown et al., 2010)

Reduction in Risky Drinking Days



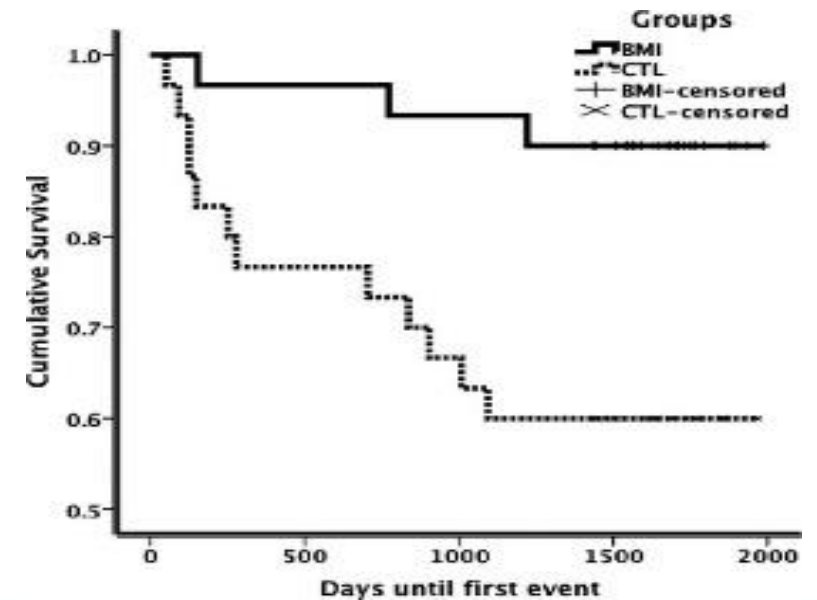
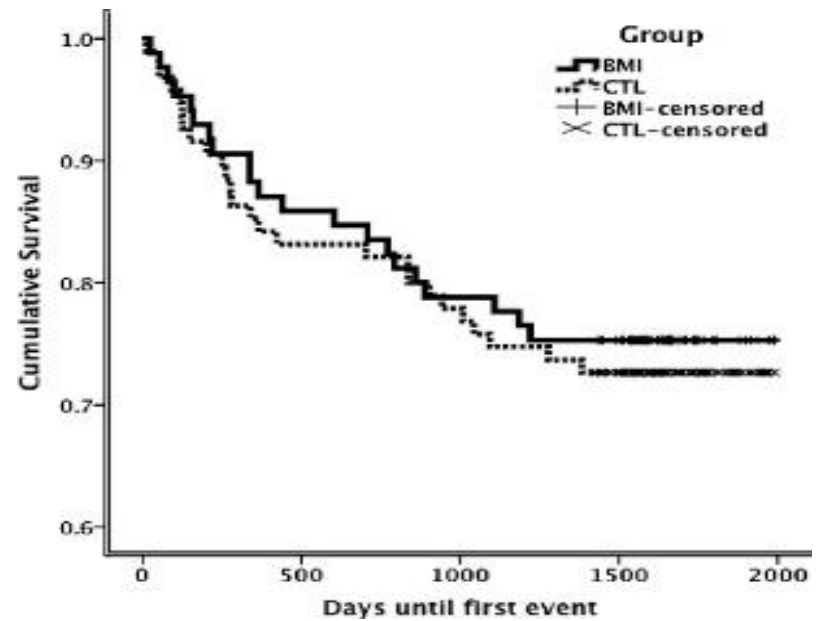
Previous Research Projects

A Randomized Controlled Trial of Brief Motivational Interviewing in Impaired Driving Recidivists: A 5-Year Follow-Up of Traffic Offenses and Crashes

Marie Claude Ouimet, Maurice Dongier, Ivana Di Leo, Lucie Legault, Jacques Tremblay, Florence Chanut, and Thomas G. Brown

(Ouimet et al., 2013)

- **Five-year follow-up**
 - Youngest third (<43) displayed a significant reduction
- **A heterogeneous response to treatment**
 - Treatment more appropriate for young people!



(Ouimet et al., 2013)

Previous Research Projects

- Brown and colleagues (2016) identified two candidate **DWI subtypes/phenotypes**
 - Defined by their unique driving, personality, cognitive, neuroendocrine stress response profiles



(Brown et al., 2016)

Previous Research Projects

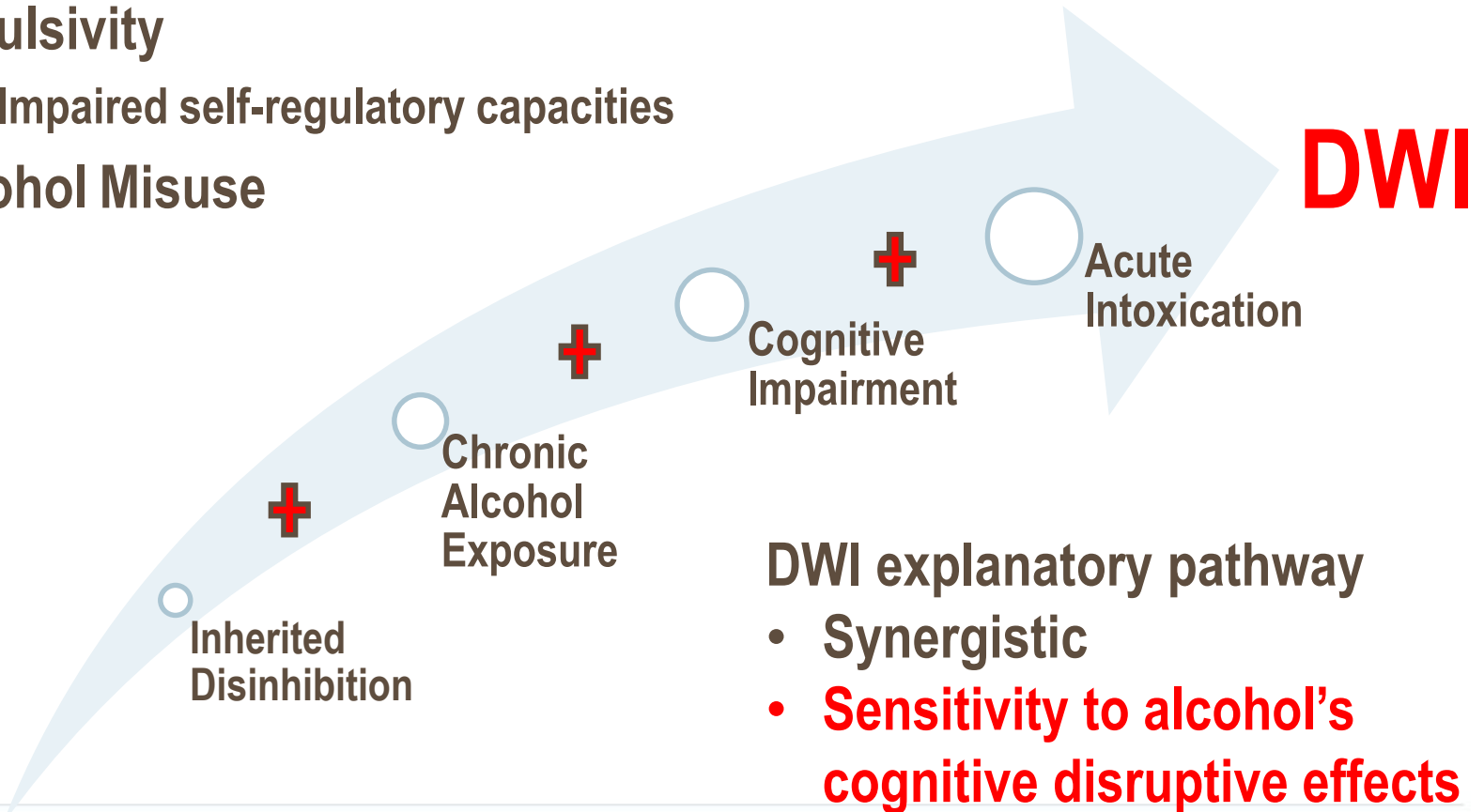
- **Mixed risky driving profile (MIXED)**
 - Blunted cortisol stress response
 - Callous-unemotional traits
 - Elevated arousal seeking
 - Poly-substance abuse
 - Criminal behaviours
- **DWI explanatory pathway:**
 - **Fearlessness**



(Brown et al., 2016)

Previous Research Projects

- Pure DWI risky driving profile (pDWI)
 - Impulsivity
 - Impaired self-regulatory capacities
 - Alcohol Misuse



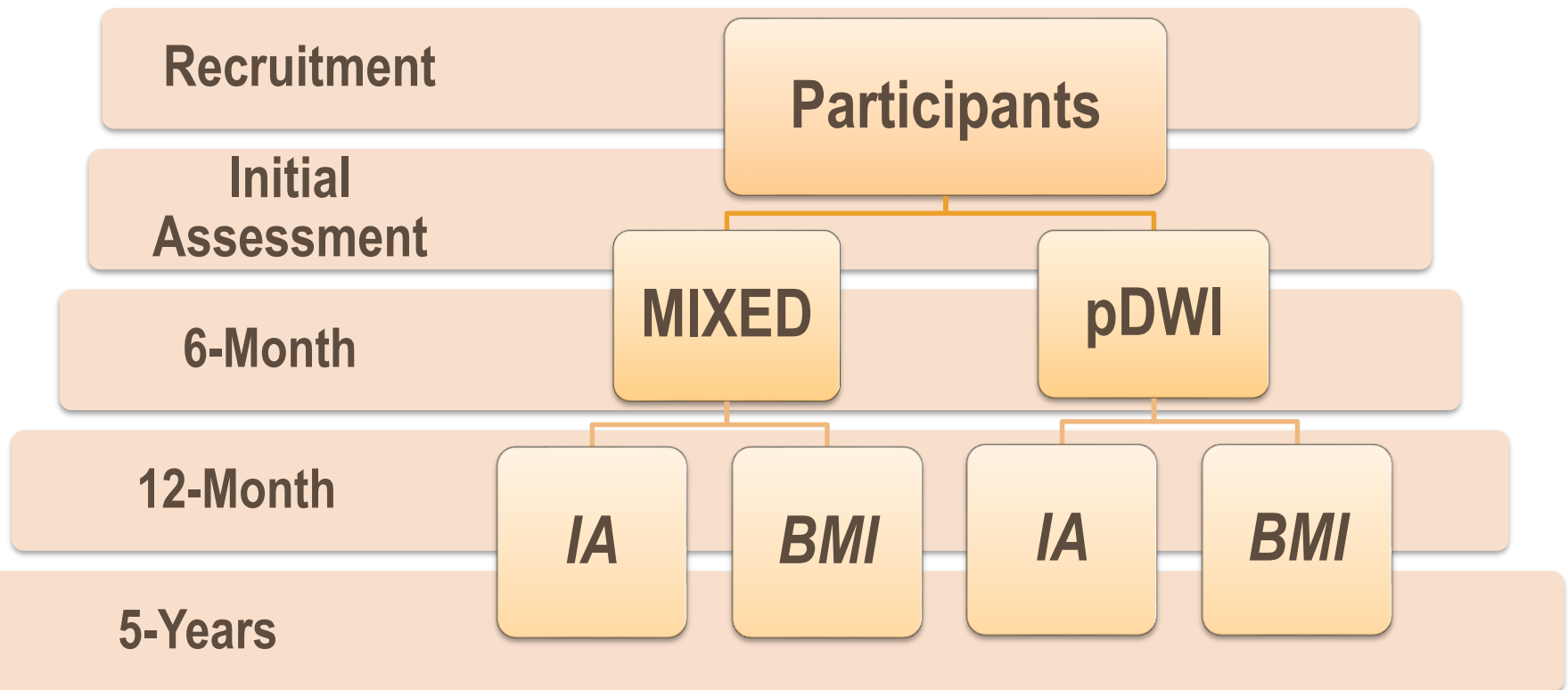
(Brown et al., 2016)

Current Project



Methods

- **Randomized, controlled, and blinded secondary analysis**



Methods

- Recruitment
 - Quebec licensing authority
 - Local newspapers
- Participants
 - Predominantly male (90.0%)
 - Middle-aged ($M = 46.1.6$, $SD = 8.8$)
 - Single (66%)
- Generalizability
 - Compared to Quebec DWI demographics:
 - Less predominantly male (90% as compared to 94%)
 - More likely to be single (66% as compared to 44%)



Methods

Outcome Measures

- **Timeline Follow-Back (TLFB)**

Intake → 6-Months → 12-Months

- Guides participants through calendar estimating previous drinking
- Utilizes methods to improve recall

- **SAAQ Driving Records**

Intake → 5-Years

- Driving While Intoxicated



Hypothesis:

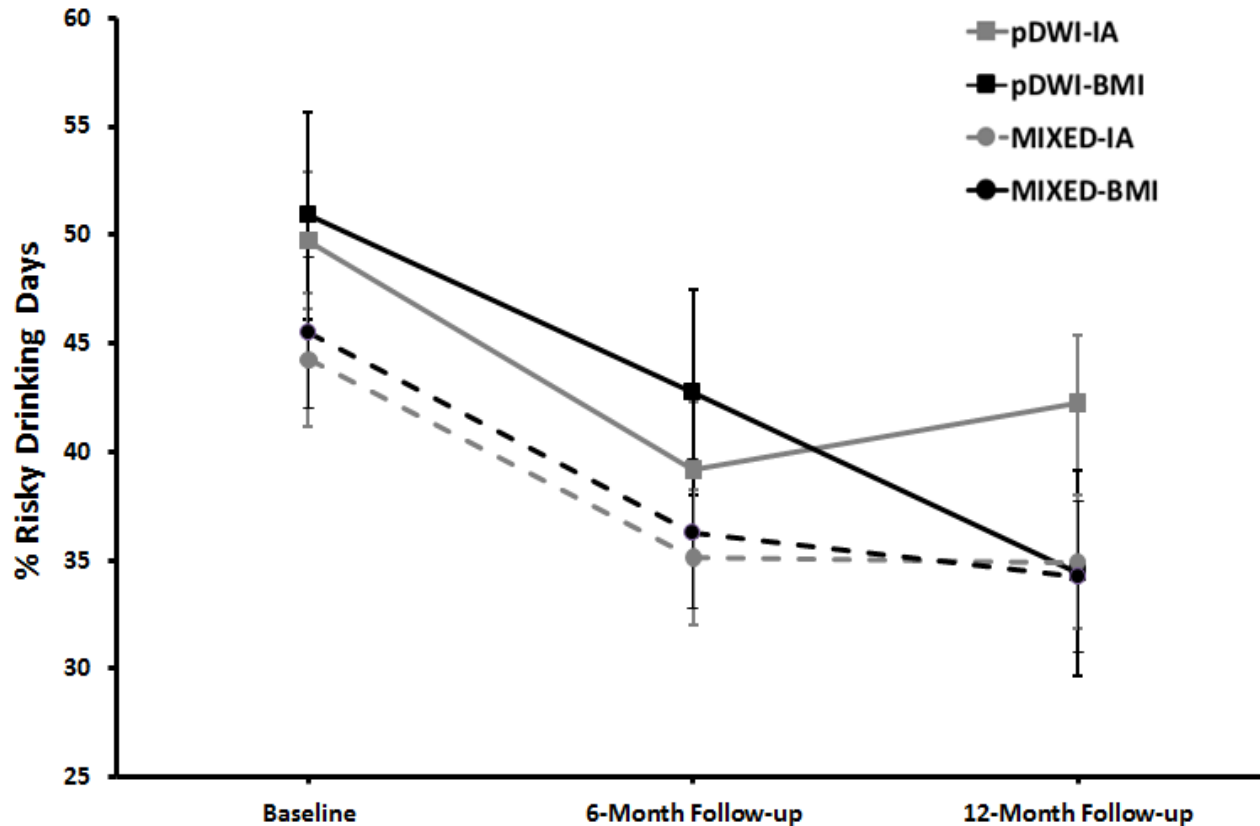
**pDWI typology shows
selective treatment
responsivity to BMI.**

Results: MIXED 1-year

Small effects from BMI

Non-significant effects from IA

- $F(2,83) = 3.8, p < .03, \eta^2 = .03$



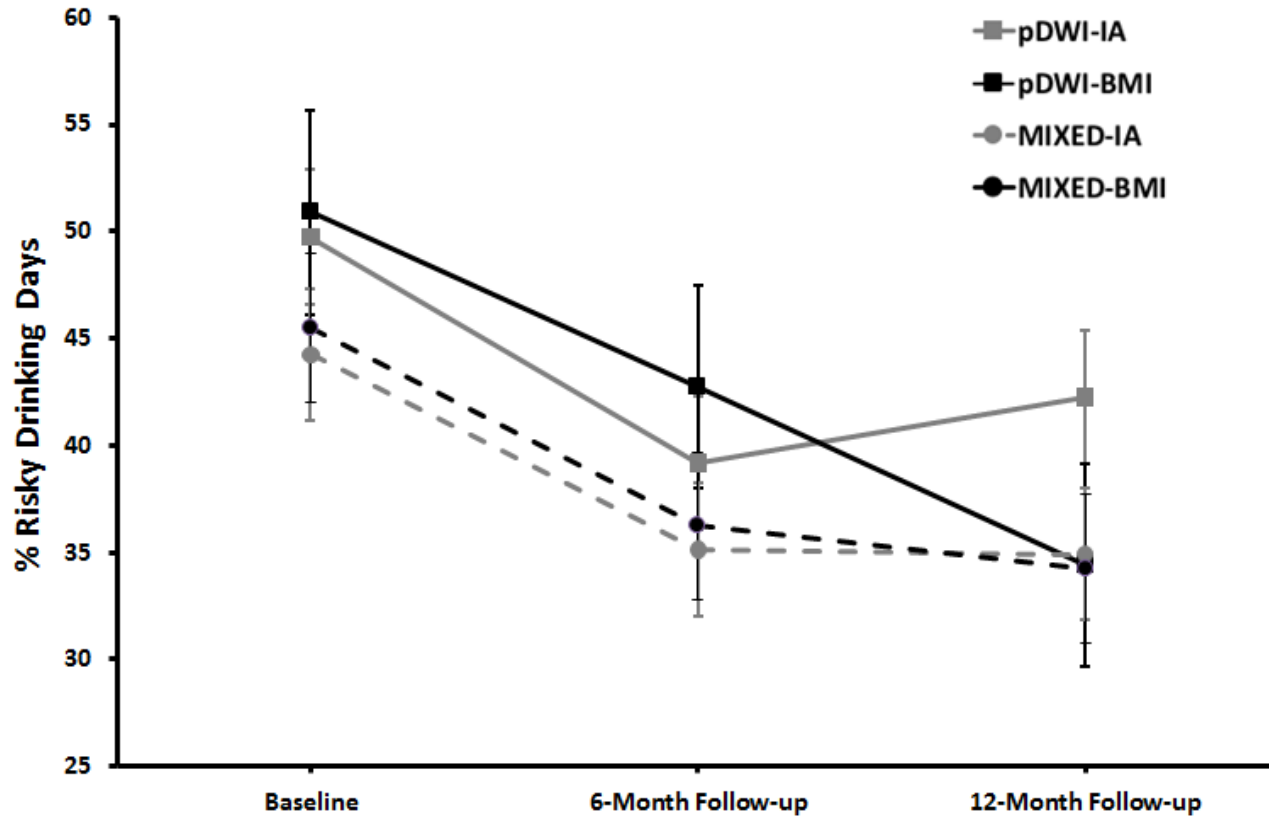
Results: pDWI 1-year

Large effects from BMI

- $F(2,93) = 9.1, p < .001, \eta^2 = .16$

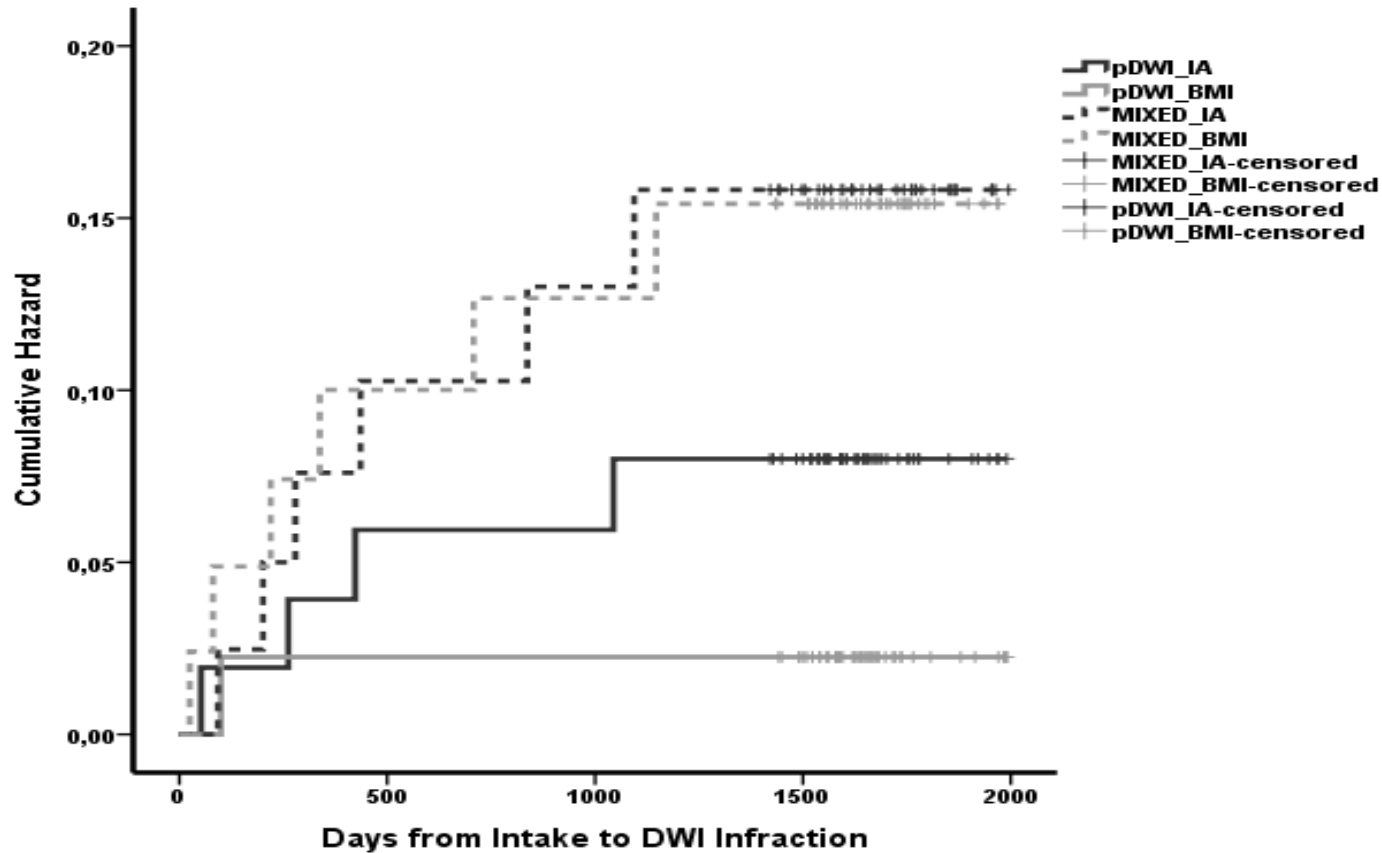
Medium effects from IA

- $F(2, 93) = 4.1, p = .02, \eta^2 = .08$



Results: 5-year

- No treatment based effects
- **MIXED offenders had higher risk** ($\chi^2(1) = 4.5, p = .04$)



Discussion

▪ Limitations

▪ Secondary analysis

- Retrospective classification
- Typologies identified using measures not selected for that purpose

▪ Generalizability

- DWI prevention approach differs significantly depending on jurisdiction
- Sample is older and more severe in alcohol misuse compared to population statistics



Conclusion

- **pDWI offenders derive greatest benefit from BMI (12-months)**
 - Potential to increase intervention efficiency with targeted treatment
 - Reduces alcohol use, the necessary antecedent of DWI, and a major public health concern it self
- **Main effect of typology (5-years)**
 - Classification supported
 - MIXED typology predicts higher recidivism risk
 - A treatment challenge



Thank You!



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