

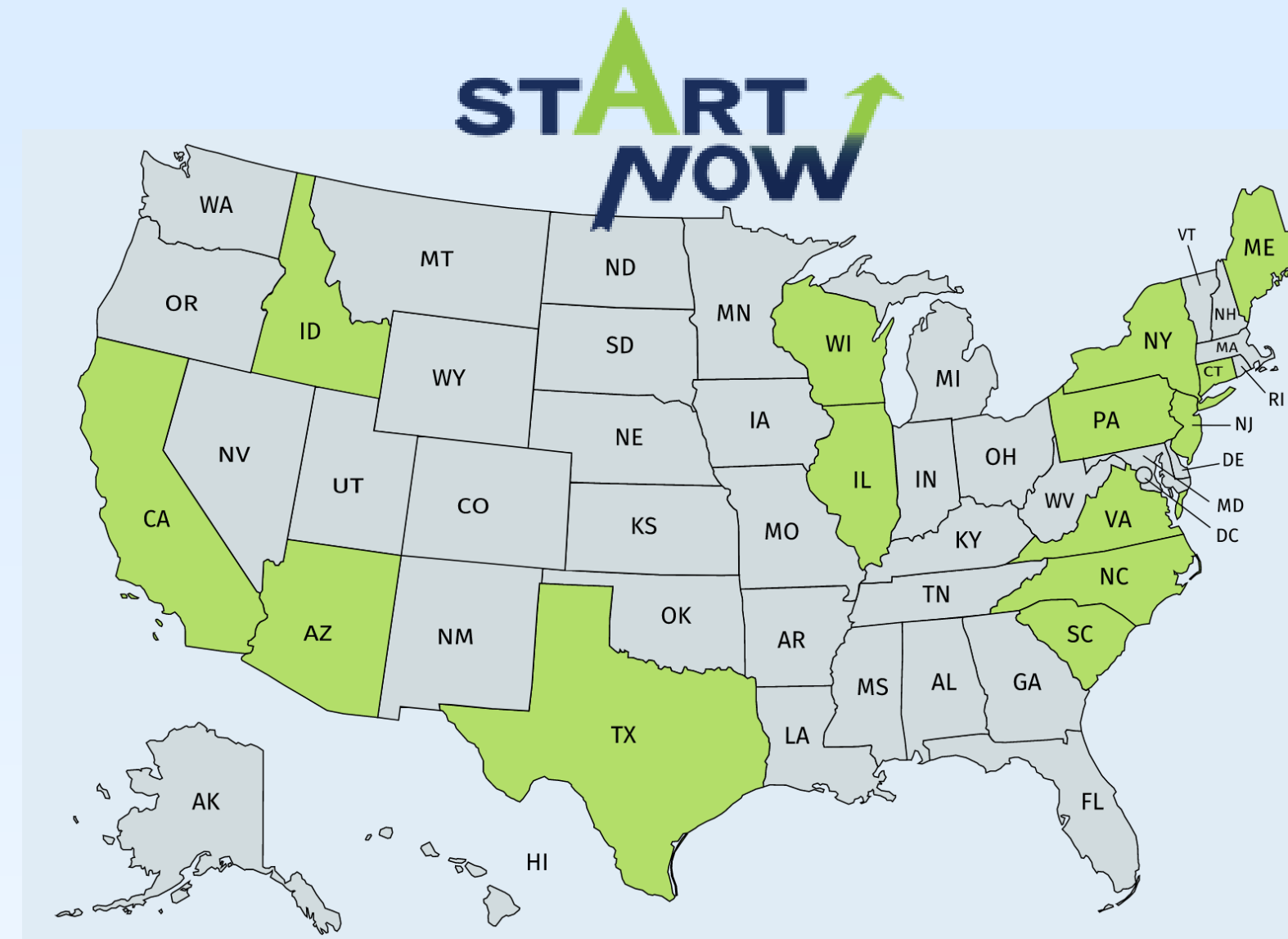
# Adapting **START NOW**, a Novel Psychotherapy, to Different Populations: From Corrections to Forensic Psychiatry to Opioid Use Disorder and Beyond

Albert Y. Truong, BS; Anita S. Kablinger, MD, CPI; Robert L. Trestman, PhD, MD

Carilion Clinic Psychiatry & Behavioral Medicine; Virginia Tech Carilion School of Medicine

## Introduction

- **START NOW** is a free, manual-guided skills training psychotherapy that integrates cognitive behavior therapy, motivational interviewing, trauma-informed care, and elements of cognitive neuro-rehabilitation.
- Entirely available in the public domain, START NOW was originally designed for low-resource settings and as a psychotherapy for incarcerated individuals who present with mood dysregulation, impulsivity, aggression, and interpersonal discord (NIJ 2002-IJ-CX-K009).
- This program utilizes the “**ABC system**” for functional analysis of behavior, teaching participants to analyze their behavior in a systematic way from the initiating **Activator** → to the **Behavior** → and the resulting **Consequences**.
- Here, we discuss the available research evaluating START NOW in various settings and the process by which START NOW is currently being adapted for other settings and patient populations.



## Opioid Use Disorder

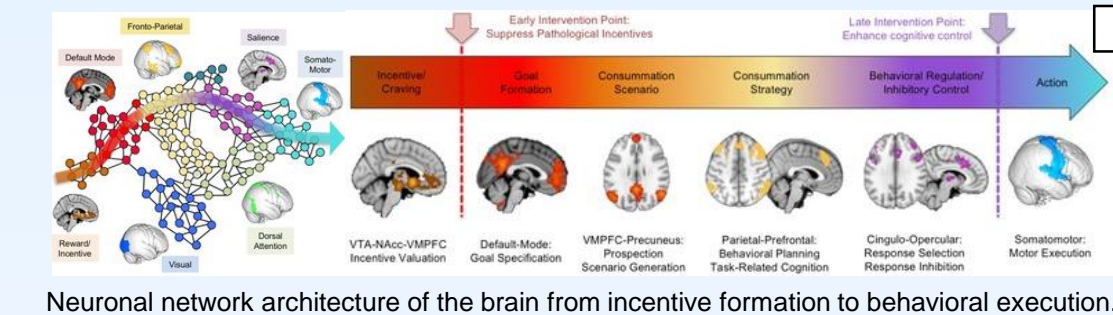
### RTC Evaluating START NOW for OUD

Carilion Clinic; Virginia Tech Carilion; Fralin Biomedical Research Institute

In addition to tracking clinical outcomes such as abstinence rates through weekly urine drug screens, this investigation is using:

- Clinician assessments of disease severity (**Clinical Global Impression of disease severity and improvement**)
- Researcher evaluated tests of **delayed discounting**, a behavioral marker for impulsive decision-making and devaluation of delayed rewards
- Self-report surveys: **Barrett Impulsiveness Scale**, **Buss & Perry Aggression Questionnaire**, **Inventory of Interpersonal Problems**, and other measures to capture the patients’ sense of progress in treatment in regards to their substance use, health, lifestyle, and community
- **functional magnetic resonance imaging** to compare the neural correlates associated with

delayed discounting  
task performance  
between treatment  
groups



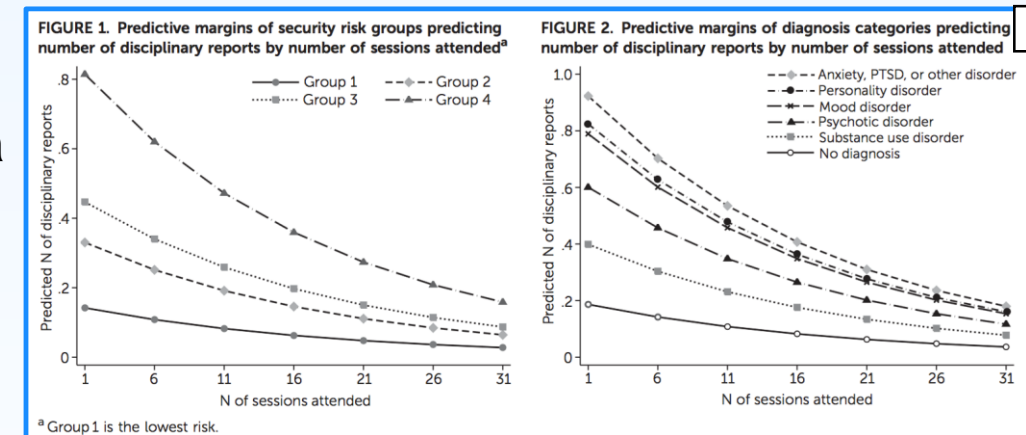
## Correctional and Forensic Psychiatry

**START NOW is currently implemented in correctional and forensic psychiatric institutions internationally and in more than a dozen states in the United States. See map to the right.**

### START NOW for Inmates in Correctional Systems

Connecticut Department of Correction

A retrospective cohort analysis of 850 patients in state prison demonstrated a significantly reduced risk of disciplinary infractions and future psychiatric inpatient days with a dose response effect.<sup>1,2</sup>



Furthermore, START NOW has been associated with reduced risk of criminal recidivism in an evaluation of a specialized alternative-to-incarceration program for individuals with serious mental illness and co-occurring substance use disorder.<sup>3</sup>

<sup>1</sup>Kersten L, Cislo AM, Lynch M, Shea K, Trestman RL. Evaluating START NOW: A Skills-Based Psychotherapy for Inmates of Correctional Systems. *Psychiatric Services*. 2016, 67(1):37.  
<sup>2</sup>Cislo AM, Trestman RL. Psychiatric hospitalization after participation in START NOW. *Psychiatric Services*. 2016;67:143.  
<sup>3</sup>Frisman, LK, Lin, H-J, Rodis, ET, Grzelak, J, Aiello, M. Evaluation of CT’s ASIST program: Specialized services to divert higher risk defendants. *Behav Sci Law*. 2017; 35: 550–561.

## Oppositional Defiant Disorder / Conduct Disorder

### European Multi-Centre RCT Evaluating START NOW for ODD/CD

University of Basel

- In Germany, Switzerland, and the Netherlands, START NOW is being used in a cluster-randomized, multi-center controlled trial testing the effectiveness of adapted START NOW for treating 128 female adolescents with ODD and/or CD in youth welfare settings.<sup>4</sup>
- Primary endpoints are the pre-post change in number of CD/ODD symptoms as assessed by a standardised, semi-structured psychiatric interview (Kiddie Schedule for Affective Disorders and Schizophrenia for School-Age Children–Present and Lifetime, CD/ODD section) between baseline and the end of intervention, as well as between baseline and a 3-month follow-up point.
- This trial will conclude in 2019, and the results will be available shortly thereafter.

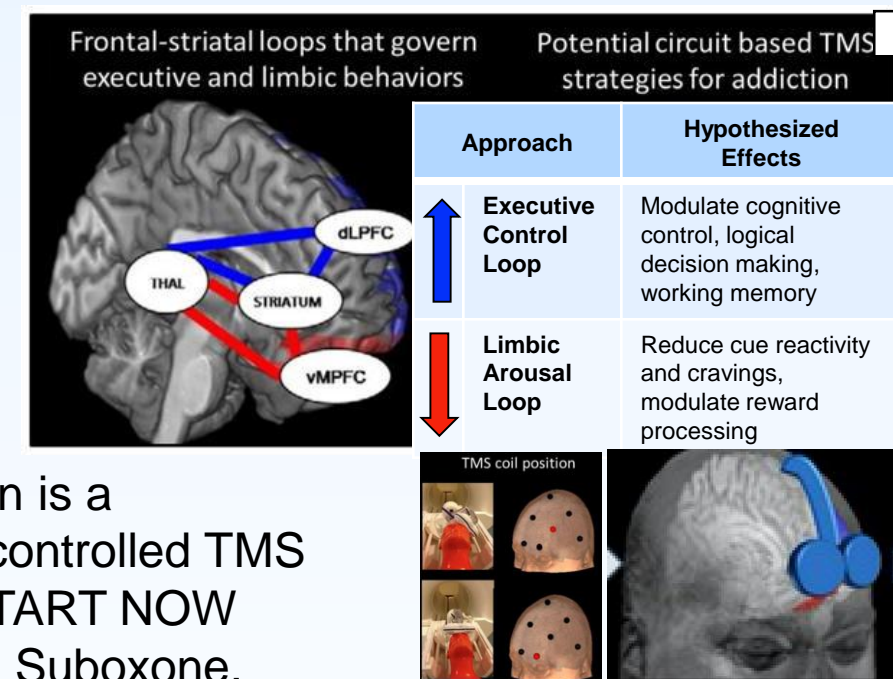
<sup>4</sup>Kersten L, Prätzlich M, Mannstadt S, et al. START NOW - a comprehensive skills training programme for female adolescents with oppositional defiant and conduct disorders: study protocol for a cluster-randomised controlled trial [published correction appears in *Trials*. 2017 Mar 2;18(1):95]. *Trials*. 2016;17(1):568. Published 2016 Dec 1.

### Evaluating Adjuvant Transcranial Magnetic Stimulation for Treating OUD

Carilion Clinic; Virginia Tech Carilion; Addiction Recovery Research Center

Transcranial magnetic stimulation (TMS) is a non-invasive brain stimulation technique to modulate neuronal activity. This investigation is a randomized, double-blind, sham-controlled TMS protocol for patients enrolled in START NOW office-based opioid treatment with Suboxone.

To our knowledge, this will be the first investigation to evaluate TMS for treating OUD while tracking long-term clinical outcomes and measures for delayed discounting and drug craving. All participants will receive 24 sessions of either real or sham TMS targeted towards the **ventromedial prefrontal cortex (VMPFC)-caudate circuit** over the course of 12 days (3 times per week) during one month.



<sup>5</sup>Dunlop K, Hanlon CA, Downar J. Noninvasive brain stimulation treatments for addiction and major depression. *Ann N Y Acad Sci*. 2016;1394(1):31–54.  
<sup>6</sup>Hanlon CA, Kearney-Ramos T, Dowdle LT, et al. Developing Repetitive Transcranial Magnetic Stimulation (rTMS) as a Treatment Tool for Cocaine Use Disorder: a Series of Six Translational Studies. *Curr Behav Neurosci Rep*. 2017;4(4):341–352.