PROJECT TITLE: Improving Driving Performance of Teens with ADHD

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Project Description

The proposed research will test the efficacy of the FOcused Concentration and
Attention Learning (FOCAL) intervention, which targets reducing the number of
extended glances away from the roadway, among teens with ADHD. The PC-based
FOCAL training provides teens with an operational understanding of the
dangers of extended glances away from the roadway and trains them on limiting
the length of their glances. Tested with typical teens, FOCAL significantly
attenuates the number of extended glances away from the roadway. To date,
FOCAL has not been tested in teens with ADHD. Because of the magnitude of
ADHD-related driving deficits and their difficulty with generalization of
skills to natural environments, we have enhanced the FOCAL intervention (now
termed FOCAL+) to include multiple training sessions and to integrate
practice on a driving simulator with immediate feedback regarding extended
glance behavior. In the proposed randomized trial, teens with ADHD will be
randomly assigned to receive either FOCAL+ or a sham placebo group.
Immediately after 1 month of training sessions and 4-, 8- and 12-months post-
training, teens’ driving skills will be assessed using a driving simulator, a
road test, and driving records. Using this data, we will examine the short-
and long-term efficacy of the FOCAL+ intervention on 1) decreasing rates of
extended glances away from the roadway among teens with ADHD, and 2)
 improving driving performance among teens with ADHD. The public health impact
of improving the driving behavior of teens with ADHD cannot be overstated.
MVCs are the leading cause of death among teens. The 2- to 3-fold increased
risk of MVCs among teens with ADHD significantly contributes to these
figures. By targeting teens with ADHD, we are targeting one of the highest
risk groups of drivers on the road. Were our interventions to normalize
driving among teens with ADHD, the potential impact on rates of MVC injuries
and deaths would be substantial.
Interested students will be involved in administering research assessments with research participants including intelligence and cognitive testing. Students will also help with coding driving data. In particular, each participant has a camera installed in their car. Ten second events are recorded daily and these videos require coding. The trainee will be supervised by Dr. Epstein and a post-doctoral fellow. Mentors will meet with the student regularly.