



Chairwoman Rapp, Chairman Frankel and members of the Pennsylvania House Health Committee,

The opioid epidemic has highlighted the need for wider access to pharmacological and behavioral treatments for substance use disorders (SUD), and this has been exacerbated in Pennsylvania during the COVID-19 crisis.

Prescription digital therapeutics (PDTs) deliver clinically validated disease treatments via mobile devices and can mitigate many treatment barriers by offering accessible and consistent evidence-based treatments, available to patients 24/7. Specifically, the 2 first FDA Authorized PDTs (reSET® and reSET-O®), available in both English and Spanish include as part of their three mechanisms of action: addiction-specific cognitive behavioral therapy, fluency training, and delivery of contingency management to treat SUD and opioid use disorder (OUD), respectively.^{1,2}

The clinical evidence supporting reSET® and reSET-O® as PDTs for SUD and OUD is as follows- reSET® and reSET-O® are PDTs that provide cognitive behavioral therapy (CBT) as an adjunct to a contingency management system for adult patients in outpatient treatment under the supervision of a clinician^{1,2}. Behavioral therapy lessons are modeled on the Community Reinforcement Approach which is a specific form of CBT designed for patients with SUD. Contingency Management is an evidence-based behavioral therapy for the treatment of substance abuse in which patients are rewarded for adherence to their treatment plan.

Contingency management is one of the most efficacious interventions to support patients in their reduction of substance use, their retention in treatment and movement into recovery. Since the early 1970s, hundreds of experimental studies and randomized controlled trials (RCTs) have demonstrated the effectiveness and versatility of contingency management (CM) interventions^{3,4}. Several systematic reviews have concluded that CM is effective in the treatment of substance-use disorders^{5,6,7}, CM is one of the most rigorously tested and broadly successful application of behavior analytic principles in randomized controlled trials⁸. While the federal agency, Substance Abuse and Mental Health Services Administration (SAMHSA), recommends contingency management as an evidence-based practice, and the American Society of Addiction Medicine (ASAM) strongly recommends Contingency Management as a component of behavioral treatment, many patients who could benefit are unable to get access^{15 16}.

reSET® is indicated as a 12-week prescription only treatment for patients with SUD, who are not currently on opioid replacement therapy, who do not abuse alcohol solely, or who do not abuse opioids as their primary substance of abuse¹. reSET® is intended to increase abstinence from a patient's substances of abuse during treatment and increase retention in the outpatient treatment program. The therapeutic content of reSET® was validated in a pivotal, randomized clinical trial¹ of 399 patients seeking treatment for SUD in ten nationwide community treatment programs. Patients were randomized to either treatment as usual (TAU) consistent with intensive outpatient treatment, or reduced TAU and reSET®. Patients treated with reSET® (n=206) had higher rates of abstinence in the final 4 weeks of treatment (40.3%) than those in TAU (17.6%; n=193; p=0.0004). There was also increased treatment retention at the end of the 12-week study in the reSET® group (76.2%) compared to TAU (63.2%; p=0.0042). reSET® did not demonstrate a significant difference in unanticipated adverse events.

Advances in digital and behavioral technology may increase access and cost effectiveness and may further optimize technology-based CM. Digital tools permit remote reporting of substance use, but also remote delivery of incentives and provide new ways to deliver contingency management to promote abstinence from substance use. One barrier to PDT treatment is access. Innovations in digital and information technology may permit unprecedented access to some forms of CM treatment. Over the past 14 years,

technology-based CM has been applied successfully to a range of problem health behavior such as cigarette smoking, alcohol misuse, physical inactivity, and medication nonadherence^{9,10}.

reSET-O[®] is intended to increase retention of patients with OUD as an adjunct to outpatient treatment that includes transmucosal buprenorphine and contingency management, for adults patients currently under the supervision of a clinician^{2 14}. The pivotal trial of reSET-O[®] randomized 170 adults with OUD to treatment as usual (TAU: buprenorphine maintenance therapy plus contingency management) or TAU plus the digital therapeutic for 12 weeks^{2 14}. 82% of patients in the reSET-O[®] group (n=91) stayed in treatment vs. 68% of those in the TAU group (n=79), and this was significantly different (p=0.0224). The AEs observed were not adjudicated to be device related.

A real-world observational study evaluated reSET-O[®] in 3,144 individuals with OUD. 80% completed at least 8 of 67 possible therapeutic modules, 66% completed half of all modules, and 49% completed all modules.¹¹ 74.2% of patients were retained through the last 4 weeks of treatment. A recent claims data analysis of the first reSET-O[®]-treated patients (n=351; 82.6% Medicaid enrollees) showed a 33% reduction in the incidence of all-cause inpatient stays, emergency department visits, partial hospitalizations, and inpatient observation events, in the six months post-reSET-O[®] initiation vs. the six months prior to reSET-O[®] initiation (IRR:0.67; p<0.05).¹² Concomitant decreases in clinician services were observed although there was an 8% increase in case management services. The reduction in hospital and medical services utilization, coupled with an increase in case management services (indicative of greater engagement with recovery services) is in line with previous independent observations. Together with the robust pivotal data, the RWE data support the engagement and clinically meaningful outcomes associated with PDTs in this difficult to treat population.

As the state continues to look at how to address the growing opioid epidemic, we would ask that you consider expanding access to Prescription Digital Therapeutics as viable a treatment option for patients.

Thank you,
Angie Gochenaur
Director of State Government Affairs – Pear Therapeutics

References

1. reSET® Clinician Directions for Use;
2. reSET-O® Clinician Directions for Use;
3. Davis, D. R., Kurti, A. N., Skelly, J. M., Redner, R., White, T. J., & Higgins, S. T. (2016). A review of the literature on contingency management in the treatment of substance use disorders, 2009–2014. *Preventive Medicine*, 92, 36-46. doi:10.1016/j.ypmed.2016.08.008
4. Higgins, S. T., Silverman, K., & Heil, S. (2008). Contingency Management in Substance Abuse Treatment. *Drug and Alcohol Review*, 27(5), 572-573. doi:10.1080/09595230802089933
5. Dutra, L., Stathopoulou, G., Basden, S. L., Leyro, T. M., Powers, M. B., & Otto, M. W. (2008). A meta-analytic review of psychosocial interventions for substance use disorders. *American Journal of Psychiatry*, 165(2), 179-187. doi:10.1176/appi.ajp.2007.06111851
6. Lussier JP, Heil SH, Mongeon JA, Badger GJ, Higgins ST. A meta-analysis of voucher-based reinforcement therapy for substance use disorders. *Addiction*. 2006
7. Prendergast, M., Podus, D., Finney, J., Greenwell, L., & Roll, J. (2006). Contingency management for treatment of substance use disorders: A meta-analysis. *Addiction*, 101(11), 1546-1560. doi:10.1111/j.1360-0443.2006.01581.x
8. Dallery, J., Defulio, A., & Meredith, S. E. (2015). Contingency management to promote drug abstinence. *Clinical and Organizational Applications of Applied Behavior Analysis*, 395-424. doi:10.1016/b978-0-12-420249-8.00016-2
9. Kurti, A. N., Davis, D., Redner, R., Jarvis, B., Zvorsky, I., Keith, D. R., . . . Higgins, S. T. (2016). A review of the literature on remote monitoring technology in incentive-based interventions for health-related behavior change. *Translational Issues in Psychological Science*, 2(2), 128-152. doi:10.1037/tps0000067
10. Kurti, A. N., & Dallery, J. (2013). Internet-based contingency management increases walking in sedentary adults. *Journal of Applied Behavior Analysis*, 46(3), 568-581. doi:10.1002/jaba.58
11. Maricich et al. (2020) *Curr. Med. Res. Opin.*, DOI: 10.1080/03007995.2020.1846023;
12. Velez et al. (2020) *Expert Rev. Pharmacoeconomics Outcomes Res.*, DOI: 10.1080/14737167.2021.1840357
13. Trends in the Use of Methadone, Buprenorphine, and Extended-Release Naltrexone at Substance Abuse Treatment Facilities: 2003-2015 (Update). https://www.samhsa.gov/data/sites/default/files/report_3192/ShortReport-3192.html Last accessed on 2/22/2021
14. Maricich YM et al. Safety and efficacy of a prescription digital therapeutic as an adjunct to buprenorphine for treatment of opioid use disorder. *Curr Med Res. Opinion*. 2020. DOI: <https://doi.org/10.1080/03007995.2020.1846022>
15. Substance Abuse and Mental Health Services Administration (SAMHSA): Treatment of Stimulant Use Disorders. SAMHSA Publication No. PEP20-06-01-001 Rockville, MD: National Mental Health and Substance Use Policy Laboratory. Substance Abuse and Mental Health Services Administration, 2020
16. The American Society of Addiction Medicine (ASAM) National Practice Guideline for the Treatment of Opioid Use Disorder.

